

When the Earth Begins to Quiver.

THE PHENOMENA OF VOLCANOES AND EARTHQUAKES.

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(Specially written and photographed by the author for "The Weekly Graphic.")

IN discussing such a subject as is set forth in the title of this article, one is confronted at the outset with the necessity of upsetting an idea which appears to be deeply rooted in the minds of a majority of those who take any interest in the phenomena of volcanoes and earthquakes, the idea, namely, that there exists an intimate connection between the two.

When news is received of an earthquake of sufficient intensity or destructiveness to compel public attention to it, the first general inquiry is, where is the volcano that originated the shock? and usually, the only answer is "where indeed," for to those observers who are sufficiently interested to pursue the subject, it is a patent fact, that the volcano is generally non-existent.

An illustration that readily occurs to the mind is furnished by the great San Francisco earthquake which could not by any stretch of imagination be attributed to a volcano, for the disturbance was limited in its area of intensity, and could not have been transmitted from a volcano without the whole intervening stretch of the earth being affected. Other and numerous instances might be quoted, the Lisbon earthquake, the recent Indian shakes, etc., but sufficient has been said to at least state a case for discussion.

To come nearer home, attention is directed to the photographs showing Ngauruhoe in eruption, and the enormous volumes of smoke and steam vomited forth by the mountain. What seems more natural than the idea that the mountain is a safely valve, and that any obstruction of the crater's throat would provoke a general quake about



BEAUTIFUL—BUT OMINOUS.

A snapshot of the clouds of smoke rolling out of the crater, taken about 500 feet from the summit.

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AN ACTUAL PHOTOGRAPH OF NGAURUHOE CRATER IN ERUPTION.

The above photograph, taken from the edge of the Ngauruhoe crater by Mr. C. T. Salmon, of the Government Lands and Survey Department, shows the mud being ejected by the volcano whilst in course of eruption.