

The keenest interest was consequently aroused in the subject of earthquakes, and numerous reports from eye-witnesses of the effects of that great disturbance were printed in the 49th volume of the *Philosophical Transactions*. Among the various papers Michell's "Essay on the Causes and Phenomena of Earthquakes" stands out conspicuously as by far the most important contribution to this branch of science that had yet appeared in any language or country. Starting on the assumption that earthquakes are due to the sudden access of large quantities of water to subterranean fires, whereby vapour is produced in sufficient quantity and elastic force to give rise to the shock, the author proceeds to adduce facts and arguments in support of this hypothesis. In the course of the discussion he points to the frequency of earthquakes in the neighbourhood of active volcanoes, and to their usual occurrence as accompaniments of volcanic eruptions. He states that the motion of the ground in earthquakes is partly tremulous and partly propagated by waves which, succeeding each other at intervals, generally travel much further than the tremors. He sees no difficulty in believing that subterranean fires may continue to burn for long periods without the access of air, and he adopts the idea that the spontaneous combustion of subterranean pyritous strata among inflammable materials may be the cause of the fires of volcanoes. If the vapours raised from these fires, and finding an outlet at volcanic vents, are powerful enough to convulse the surrounding region to a distance of ten or twenty miles, what may we not expect from them when they are confined under