

prisoned vapour. Sometimes, however, they are repeated during days, and even months. The destructive earthquake which warned the Pompeians of their approaching doom, and gave them a foretaste of it, preceded the eruption six years.

More puzzling and perilous than the propulsive is the rotatory style of agitation. We may well believe that notes from calm and curious observers of



TEMPLE OF SERAPIS.

this phenomenon are not plentiful. The soil is described as whirling like the surface of coffee when stirred with the spoon. It seems to be liquid. The land-waves may be regular or irregular. The results of both astonish, whether with ruin or the inexplicable arrest of ruin. Cultivated fields slide one over the other. In the Calabrian earthquake above mentioned the pedestals of two obelisks in front of the church of St. Etienne del Bosco maintained their normal position, but the

capstones were twisted some inches upon the centre. Still greater is said to have been the wrench undergone by a tower in Majorca in 1851. The base turned sixty degrees upon its axis, while the upper part stood firm.

Of numerous and equally disastrous earthquakes in more recent years, none have eclipsed in the general mind that of Lisbon, November 1, 1755. The attack and instantaneous reduction of a European capital by a new and terrible invader made an impression that will yet be long in dying out. The accounts of eye-witnesses are abundant and full. Even in our day, a hundred and twenty years later, new ones are discovered in private letters written at the time, and since buried in desks and chests. Many English were in the city or on vessels in the Tagus who could describe the event in its two aspects on land and water.

In this case there was no warning. At half-past nine in the morning a tremendous noise was followed by a shock which prostrated the most solid structures of Lisbon in an instant. Some minutes after the movement was renewed in a kind likened to that of a chariot rolling with extreme violence over a rugged surface. First and last, the terrible blow occupied six minutes. The bed of the river rose in several places to the level of its waters, and the great quay of the Prada was swallowed up with a crowd who had sought safety upon it. For a brief space of time the harbour was left almost dry, but the water returned in a billow fifty feet high, which swept many walls left standing. Toward noon another shock, more feeble than its predecessors, closed the tragedy, which was not confined to Lisbon. Oporto, Cadiz and Madrid felt the shock at the same time, almost to a minute. Other towns and some of the loftiest mountains of the Peninsula experienced it with more or less