

PREFACE.

THE present volume, rather than being regarded as a new publication, may be looked upon as a continuation of a series of volumes published by the Seismological Society of Japan. This Society was founded in 1880, and for many years its meetings were frequent and well attended. At one exhibition, which extended over several days, the visitors were so numerous that it became necessary to admit them in detachments. Of late years, however, partly in consequence of those who took an active interest in Seismological investigations having left Japan, partly because Geological, Engineering, and other publications accepted materials which formerly found a place in the Transactions of the Seismological Society, and for various other reasons, little by little, interest at last so far flagged that it became difficult even to obtain a quorum sufficient for the transaction of the Society's ordinary business. The result was that in 1892 the Seismological Society ceased to exist.

The work it accomplished is contained in sixteen volumes. Seismographs which led to absolute measurements of earth motions were invented and the whole system of earthquake observation was changed. A chair of Seismology at the Imperial University of Japan, and a Bureau controlling a Central Observatory and some 700 outside Stations, together with many Seismological labo-

ratories, were established. The result, as is testified by recent publications in various languages, and by the types of instruments now employed in many parts of the world, being that earthquake investigations are now conducted on lines very different to those which were followed some thirteen years ago.

As examples of results which have proved themselves to be of immediate utility, may be mentioned the adoption of various contrivances, especially those relating to steady points for the measurement of motions like the vibration of steamships and railway trains, and the practical application of principles enabling us to mitigate the effects of earthquakes upon buildings.

Many investigations remain to be carried out, and although the Seismological Society has ceased its existence, the writer trusts that he may have the assistance of those who are interested in problems relating to earthquakes in extending the work which has already yielded satisfactory results.

JOHN MILNE,
14, Kaga Yashiki, Tokyo,
Japan.

1893.