

REMARKABLE SEA-WAVES,

OBSERVED IN MOUNT'S BAY, CORNWALL, APRIL 24TH, 1868.

BY JOHN JOPE ROGERS.

ON the afternoon of Friday, the 24th of April, in this year, I was driving from Helston to Penrose, and was surprised to see the spray of the sea dashing high above the horizontal line of the Loe Bar—a bank of shingle which alone separates the waters of the Loe from those of the Atlantic.

This phenomenon is usually not observable except on the rare occasions of the heaviest south-westerly gales happening at high water of the spring tide. As the wind had been very moderate for twenty-four hours previously, from E.S.E. (*i.e.* off shore), and scarcely any wind was perceptible at the time, I left the carriage at the door, and, taking one of my boys as a companion, hastened to the Bar to ascertain the cause of so unusual a disturbance.

We arrived at the sea-shore shortly before six p.m. New moon had occurred two days before; *i.e.* on 22nd April, at eight p.m., and the time for high water on the 24th was shortly after six. This was the fourth tide after the new moon, and therefore one of the highest of that spring. A magnificent sight rewarded us. There was very little wind, even

at the shore; but the sea was a raging ocean of huge waves, such as are never seen except in the heaviest gales on that coast. We stood rivetted to the scene for nearly an hour. During the whole time, and long after high water, wave after wave beat home against parts of the cliff where I had never seen it reach before; and for the first time in my life I saw the whole line of the Loe Bar (half a mile long) frequently covered from end to end by sea waves, which poured their foaming volume into the Loe. It was not one giant wave, followed by others of less formidable bulk (as has been usually the case on occasions of volcanic disturbances of the ocean), but a succession of hundreds of great waves for more than an hour continuously, and only varied in size as is usual with the seventh or eleventh wave in ordinary tides.

The Bar had been cut during the previous winter for the purpose of setting free the swollen waters of the Loe, and the channel thus made through the shingle of the Bar had been kept open to the tide a longer time than usual, causing the scour of the tide to deepen and widen the channel to an unusual extent, leaving a deep indentation or creek on the inner shore of the Bar when it became again closed up. This deep creek was speedily filled with shingle, thrown up by the big waves; and on the following morning it was difficult to believe that there had been a channel or creek at all, so completely was all appearance of it obliterated.

Much damage was done to the coast for some

miles round the bay, the sea-waves eroding the soft earth at points rarely touched, and bringing down masses of superincumbent soil. Seeing the inroads thus made upon the coast, I began to fear for the safety of a sea-wall which had been completed at Porthleven a few months previously, but scarcely yet consolidated. We were anxious to return to Penrose by way of Porthleven, in order to see if my apprehensions were realized, but the hour and the increasing darkness warned us that we must hasten home by the shorter route. On enquiry next day, I found that my fears were justified.

The sea-wall was sixteen feet high and sixteen feet thick at the base, built of dry quarry stones, hard clay slate, set on edge, and well keyed-in together at the back, presenting a slightly concave plane towards the sea, with a vertical batter; yet the waves, repeatedly following a curved hollow offered to them by a spur of rocks jutting seawards at right angles to one end of the wall, and thus concentrating their force upon one point of attack, scooped out from that part of the foundation a hole about ten feet wide by twelve feet high, breaking up and scattering in confusion the largest stones of which the wall was formed.

I was assured by some of the oldest fishermen in Porthleven (and there are some very old ones) that they had never known such a sea with so little wind, and never but once knew the sea "come home" with such violence in a gale, *i.e.* in the winter of 1865-6.

The agitation of the sea was so continuous and

protracted that I quite expected to hear of a heavy gale in the Atlantic to account for it; but I do not remember to have heard of its being traced to such a source.

A considerable disturbance of the barometer was noticed by me on the day in question; for it fell on the 24th half an inch (to 29.25), and rebounded a full inch during the next twenty-four hours: wind on 23rd, E.S.E., wind on 25th, W.N.W.

I shall be interested to know if the observations of more accurate persons support this brief notice. I should also like to know if any signs of subsidence of the coast have been noticed in Mount's Bay during the past half century, as I am persuaded that at Porthleven the recent encroachments which the sea has made cannot be attributed to any other cause.

October 20th, 1868.