

CURIOUS LIGHTNING FREAK.—BY WATSON L. BISHOP,
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Read, 9th December, 1912.

On July 26th, 1903, a report came to me that our main twelve-inch water-pipe of cast iron, supplying the town of Dartmouth, Nova Scotia, with water, had burst and that a large quantity of water was flowing from the break. At this place, about two miles from the town and one from the reservoir lakes, where the pressure would be about twenty-five pounds per square inch, the pipe-line was carried east and west, five feet deep, along an old road, the side of which was lined by a low rough stone wall. Several larch (hackmatack) trees were growing along this wall, some through its centre and others close along the sides. The pipe-line here is six feet from the wall.

On examination I found that one of these trees growing in the side of the wall had been shattered by lightning. The stump (or what remained of it) was three to four feet high, and was split in several pieces with the top ends well apart, showing that the great pressure was from the centre outward. The trunk of the tree, which was about ten inches in diameter, was shattered for a length of fifteen feet or more, and was scattered over a radius of about one hundred feet from the stump.

The remainder or top of the tree was left intact and fell vertically until the largest end was about six feet from the ground. In this position it was held by the branches of the other trees growing near by. The lower end was six inches in diameter and a stone weighing about twelve pounds was found firmly held in a cleft in this end, and appeared to have been driven by the lightning up through the centre of the

tree until the force was spent, leaving the stone in the split as in a vice. The body of the trunk was so completely shattered into slivers that it took two men nearly half a day to collect the fragments from the unmowed hay-field on the other side of the wall.

The water-pipe was broken at a point nearest the shattered tree, nine feet distant. When the broken pipe was taken out it was found to be strongly magnetic. So strong is the magnetism even at the present time (December, 1912, nine years afterwards), that a handful of nails held to it will be drawn quite firmly to the edges of the break. A piece of steel rubbed a few times on this piece of pipe becomes so strongly magnetized as to pick up pieces of iron. The opposite ends of the break have opposite polarities as demonstrated by the magnetic compass and steel magnets.

The inference is that the electric current burst from the pipe-line to the tree, and on leaving the pipe broke it, and on entering the tree at its roots carried the stone up through the bursting trunk until, the force being spent, it remained in the split of the unshattered top.