

Westford Recollections

by Mrs. Charles S. Kennedy
The Ice Storm of November, 1921

The ice storm of November 27, 28 and 29, 1921, stands out as one of the most disastrous on record in the territory affected. Even in the memory of the oldest inhabitants, there had never been a storm of its character or its severity.

Fortunately for New England, the territory over which it spread was not large, only sections of southern New Hampshire, central and north-eastern Massachusetts and northern Rhode Island and Connecticut being visited by the storm.

In the seventy-two hours during which the storm lasted, there was not only a series of changes in the temperature of the atmosphere near the ground, but almost opposite changes in the temperature far above the earth near the clouds. Variations in temperature in either belt of air are of course frequently occurring but the sequence of changes and their duration which together were responsible for the severity of the storm, are fortunately rare.

On Sunday, November 27, there was a fairly heavy fall of damp snow driven by a strong wind. This snow adhered to all objects it struck particularly trees and poles. On Sunday evening, following a slight rise in temperature, the snow changed to a fine rain. There was not sufficient rain however, to melt the snow which had previously fallen although there was enough to saturate that particularly on the trees. During Sunday night the temperature near the ground dropped below the freezing point but it still remained warm up in the clouds and the saturated snow on the trees and poles was frozen where it lay.

Early Monday morning, November 28, the rain began to fall heavier although the temperature of the belt of air nearest the earth still remained below the freezing point. The icy covering on limbs, poles and wires began to build up due to the rain which froze as it struck. The larger the diameter of the ice-encased limbs and wires the greater was the surface presented for the accumulation of more ice and this condition continued for at least 48 hours.

The equivalent amount of rainfall during the entire storm was nearly four inches. In one respect it may be fortunate that this was not all snow for its equivalent in snow is about four feet. In this narrow belt which of course included Westford and the entire Lowell area every twig, branch, tree, wire and pole which was exposed to the rain and snow was after a few hours coated with a load of ice far beyond anything which Nature had provided against and man had met in his experience. And, as if Nature was trying to outdo herself, on Tuesday morning, November 29, there was a thunder storm.

Branches laden with tons of ice were snapped off like pipe stems and in falling carried

with them any poles, wires or structures that were underneath. The wires were coated with ice weighing over a pound on each foot, which load was too great to be supported by the wire itself and in very many cases causing it to break. The wires in breaking brought about an uneven strain on the poles many of which consequently fell.

At 7:30 a.m. on Monday morning, November 28, the first electric power feeder owned by the Lowell Electric Light Corporation to show the effects of the accumulated ice was the long line to Forge Village and Westford. The feeder to North Chelmsford soon became affected and from then on, for two consecutive days, reports of trees, wires and poles down or in dangerous condition came in as fast as five clerks in the Electric Office could handle them.

By Monday night every street light circuit in Lowell and surrounding towns with the exception of those in the central part of the city of Lowell was broken. It was estimated that on the night of November 28, seven thousand customers in the Lowell territory were without electric service. Two hundred thousand homes in the central part of Massachusetts were without electric lights on that night.

Linemen were recruited from every possible source. The first work to be done was to clear the streets of fallen wires and poles. Over four tons of wire were cut down and returned to the store room and one hundred or more poles removed out of streets where they were obstructing traffic. Within the city of Lowell the first work attempted was the restoration of service to hospitals and house lighting. It was not until December 14 that the work on the various city feeders were sufficiently completed to permit crews to systematically push on beyond the city limits.

Among the very important installations that were affected was the pumping station supplying the town of Westford with water. The power feeder supplying this plant was the first one to be interrupted on the morning of November 28. It was impossible to attempt any restoration work on that day but on Tuesday morning the 29 a crew of eight men were assigned to the work of clearing the lines to North Chelmsford and by night had cleared through to that town. The roads beyond North Chelmsford were almost impassable due not only to deep snow and ice but to fallen trees. However by night on the following day with a reinforced crew by chopping away hundreds of fallen trees and branches the party had pushed through to Forge Village. Most of the way the electric power line follows the Lowell & Fitchburg St. Ry. track and the day's work included seven miles of travel on foot.

Word had been received that the stand pipe in Westford was

rapidly emptying and the men were spurred on in their efforts to reach the pumping station before the supply of water was exhausted. Leaving the city long before daylight on Thursday, December 1, the crew arrived in Forge Village early in the morning intent upon clearing the last section of the line before dark. Although for practically the entire distance from this town to the pumping station, the wires were completely covered with fallen branches and in many places, wires and poles were on the ground. Late in the afternoon, the line was cleared and the electric current sent through to pumping station. Investigation showed that there were only a few inches of water left in the stand pipe but the electric driven pumps were started in time to avert a serious condition resulting from shortage of water.

It had been hoped that by Christmas eve that the work of restoring lighting service to all the affected would have been completed and although there were several days during which little work could be done on account of bad weather conditions the holiday found comparatively few homes in which electric service had not been restored. Most of these were located in outlying sections in the towns and a few isolated places in the city. It was not until New Year's Day, however, that it could be said that the lighting system had been put back to normal conditions.

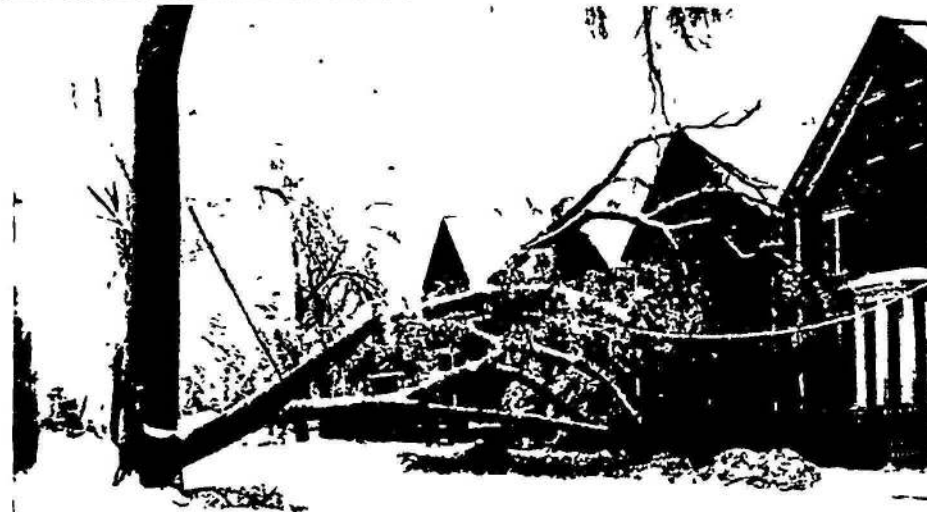
Between the day following the storm and January 21, 1922 there were set two hundred and forty-four poles. Of this number forty-five were telephone poles on which electric light wires were run jointly with those of the Telephone Company. This work alone is equivalent to the construction of five miles of new pole line and if this task had been undertaken by one ordinary line crew the time required to build the line complete with all fixtures would have been three months.

Besides the erection of the new poles there was strung approximately twenty-eight miles of new wire and over one hundred and fifty miles of line were patrolled, cleared of fallen branches, broken wires repaired and slack wire taken up. This latter task represents nearly a year's work of one ordinary line crew.

In the city proper twenty-five street arc lamps fixtures were replaced, one hundred incandescent street lamp fixtures were remounted and innumerable shades on street lamp fixtures were replaced having been torn off by the heavy load of ice. Appreciating thoroughly the discomfort and inconvenience of those who were without electric service, the Electric Co. worked diligently and efficiently every daylight hour. Sundays included until it could be said that the work of restoring service was finished. A first hand impression was given to me by Mrs. Alice Day, who vividly remembers the crackling and snapping of limbs and the ruts in the roads as this was before the days of snowplows. And she said THE COASTING WAS GREAT.



Tyngsboro Rd., North Chelmsford, showing ice on trees and wires



View on Bartlett Street, Lowell. Hundreds of trees and broken limbs fell on poles and wires



Line of Poles down on Varnum Ave