

by its rising and covering the surface) occurs only after several days of a temperature considerably below zero.

It also appears that anchor ice does not melt as readily as solid ice, because it is found in banks under the field ice, during the whole winter, even after the current has cut through the surface ice; and in the rapids where it has grown above the surface of the water, or encroached upon the sides of the channel so as to dam back and raise the water, it appears to yield upon the advent of milder weather chiefly by losing its hold upon the bottom, and then only to the main body of the current the lateral spread of which is disputed, inch by inch, by this saturated "snow-ice."

This ice is drawn into mill-races at the head of rapids wherever there is too much current, or a lack of depth, and coming down to the racks is sucked against the grating, completely stopping the water like so much wool. At tail-races, where the same faults of construction exist, it "grows" upon the bottom, setting back the water and stopping the wheels. Many mills are rendered useless during the winter months from one or both of these causes.

Although a sounding pole will pass readily through a bank of anchor ice, it cannot be easily penetrated or displaced by bodies having any considerable base. In order to sink a crib for a bridge pier, below one of the rapids in the Little River, the site was cut out upon the surface ice, the crib framed in its place and filled with stones; after sinking a certain distance its progress was arrested,—although the sounding pole shewed that it was still about ten feet above the bed of the river. No additional weight which could conveniently be placed upon it would force it any lower, for it was found to be resting upon a bank of "frozee" (*frasil*, *fr.*) or anchor ice. The obstruction was only got rid of by the tedious process of detaching, by means of long poles, small pieces at a time from the lower side, which floated down the stream.

In the little which has been written upon the subject of anchor ice, it has been doubted both that it is formed upon the bottom, and that ice so formed rises to the surface; or whether the anchor ice seen upon the surface, was either formed or had rested upon the bottom. Among practical men, millwrights and lumbermen who have been puzzled by the phenomena attendant upon it, there is similar diversity of opinion. It has, however, been observed in situations where it