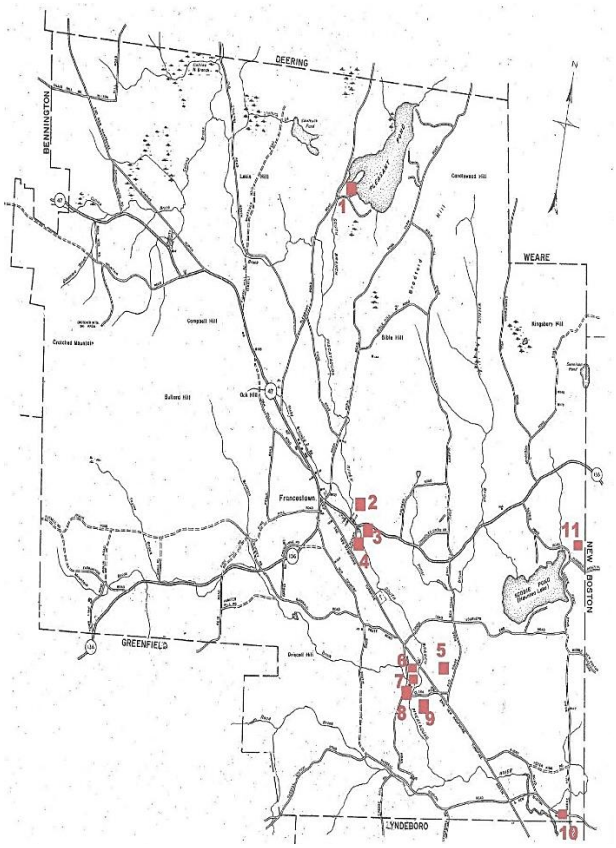
THE FRANCESTOWN HERITAGE MUSEUM

Newsletter **April 2019**

The Mills

Thanks in part to the Second New Hampshire Turnpike providing a way to transport their goods, many mills existed in Francestown in the 1700's & 1800's. Another favorable feature was the Piscataquog River whose water powered these mills. In the coming months the **Francestown Heritage Museum** Newsletter will provide a brief synopsis of the various types of mills. While many small mills came and went in a relatively short period of time, there were a number of significant mill operations. All shared a common source of power – the Piscataquog River branches. The map below shows the location of some of these mills.



The products of these mills were many and varied with some thirteen different types identified. All with the commonality of being powered by the waters of the Piscataquog. Types included:

Sawmill – reduced logs to sawn lumber

Gristmill – ground grain into flour

Pail mill – made wooden buckets and boxes

Oil mill – crushed oil bearing seeds to extract vegetable oils for foods, cooking and other uses

Carding mill – prepared wool for spinning by brushing and aligning the fibers

Fulling mill – cleaned cloth to eliminate impurities and make it thicker

Shingle mill – sliced logs into tapered wedges to make wooden shingles

Planing mill – smoothed rough cut lumber from the sawmill

Wheelwright shop – manufactured and repaired wooden wheels

Soapstone mill – manufactured soapstone products from rock mined from the quarry

Bobbin mill – made wooden bobbins for the weaving and spinning industries

Earthenware mill – manufactured pottery items

Cider mill – crushed apples into juice to make cider, hard cider, and other products derived from apples.

Much of the information concerning these mills has been extracted from a white paper on Francestown Archaeology Sites by Greg Thulander. Yes that would be a son of the man to whom we owe the museum's existence. Also from "The History of Francestown" by Cochrane and Wood. Starting at the north end of town, site #1 was the Sleeper Sawmill. This site was unique not just for its lumber but for the water it controlled. By an act of the State Legislature in 1821 the owners of the mill were "empowered to flow or drain Pleasant Pond as they saw fit". The water from this pond was a significant part of the flow of the Piscataquog River and the many mills located downstream. Hopefully this history lesson has so far not been so dry as to have put all the readers of this newsletter to sleep – we'll try to step it up here with photos as well as text.

This of course begs the question of what photos? All the mills in Francestown are long gone and any photos of them appear to be a rarity. Which brings us to **Sanborn Mills Farm** – a traditional working farm in Loudon, NH. This is a nonprofit organization dedicated to sustainability, creativity, and preserving folk life and agricultural knowledge that is open to the public. Their mills are still operative and open for tours and they provide workshops in everything from blacksmithing to fiber arts. I would like to thank Executive Director Andrew Ingram and his staff for making the sites available to me for photos for this and future newsletter articles. Make time to visit this wonderful resource. Their web site is: www.sanbornmills.org. All you gardeners out there would also be inspired by their grounds and gardens. So with photos from Sanborn Mills Farm here is a synopsis of mill 1 on the Francestown map.

THE SLEEPER SAWMILL

This mill was built in 1806 by Leonard Sleeper, sold to John Sleeper three years later and the mill operated for more than 70 years. So you may ask, how did a water powered sawmill make lumber from logs? Well we are glad you asked and wouldn't you just know that your **Francestown Heritage Museum** happens to have a few of the items used in this process. There are a few basic needs to operate a sawmill – a source of water, a way to control that water and the equipment to do the sawing.

A source of water – this is a photo of the mill pond at Sanborn Mills Farm. Most all sawmills took water from mill ponds or directly from rivers. The Sleeper Mill here in Francestown used Pleasant Pond as its source of water. Many of the other mills in town took power from the running rivers – primarily the Piscataquog River.

To direct the flow of water a sluice would carry the water from the pond or river to the water wheel or water turbine and then away from the mill once it passed through the water wheel or turbine.

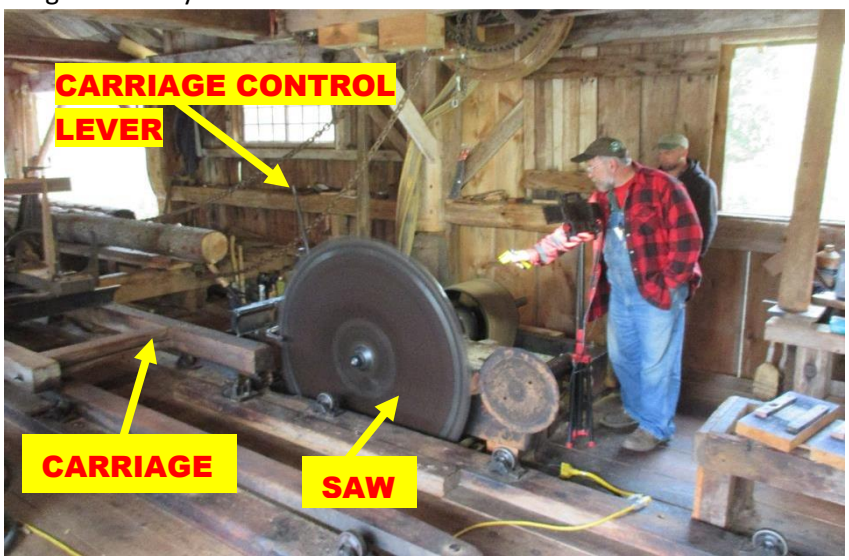
To control the rate of flow of the water a gate, controlled by a hand wheel in the mill, was used to increase or decrease the flow of water to the wheel or turbine that would in turn power the main drive shaft.

The main drive shaft supplied power to the various belts, pulleys and countershafts in the mill as well as the main saw and carriage. The water flowing through the sluice is visible below the drive shaft in the photo.

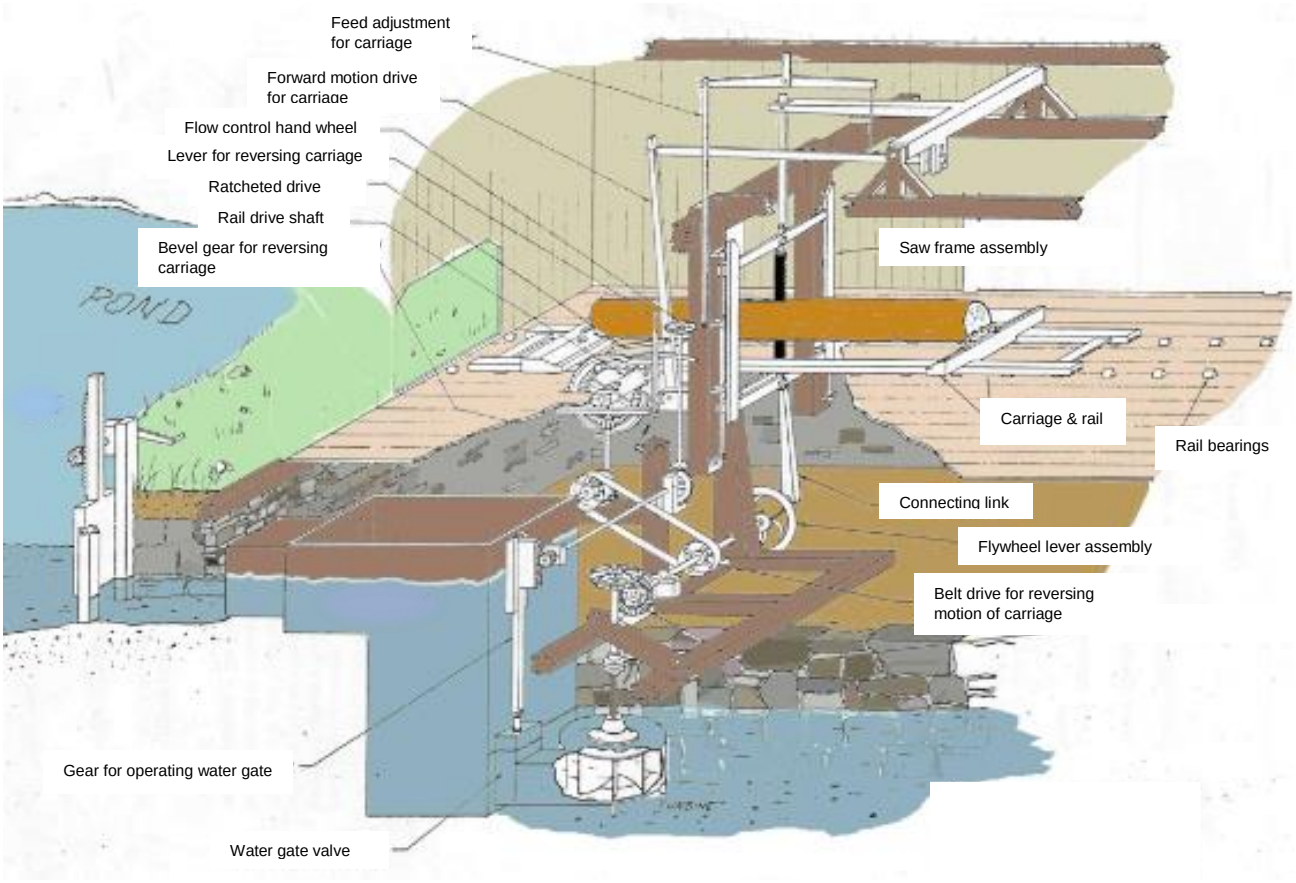
The main component of the mill powered by the main drive shaft was the main saw (or headrig) in the mill which could be either an “up and down” saw or “circular saw”. Another critical item controlled by the same shaft as the saw was the carriage (the moveable rack on which the log sat to be fed through the saw). The only way to shut down the main saw was by closing the gate and shutting off the flow of water.

Also driven by the main drive shaft were the belts and pulleys that supplied power to reverse the carriage once the log had passed through the saw. The saw operator would pull a lever to reverse the carriage and return the log to the starting point where it could be repositioned and readied for the next pass through the saw.

Put all these components together and you have a sawmill interior that resembles this mill at Sanborn Mills Farm.



This is a cutaway depiction of a water powered sawmill (albeit this is an “up and down” vs a circular mill (as in the photos above).



A modern day saw mill operates in much the same way. The log is fastened on the carriage (known as dogging as small metal clamps called dogs are used to hold the log steady and in place). The operator (known as a sawyer) then activates the carriage and the log is moved past the saw which cuts a board from the log. The sawyer then returns the carriage to the starting point, resets the log and again moves the carriage forward so the saw can cut off another board. Of course in the modern mill much of this is now computer controlled.