

# THE FRANCETOWN HERITAGE MUSEUM

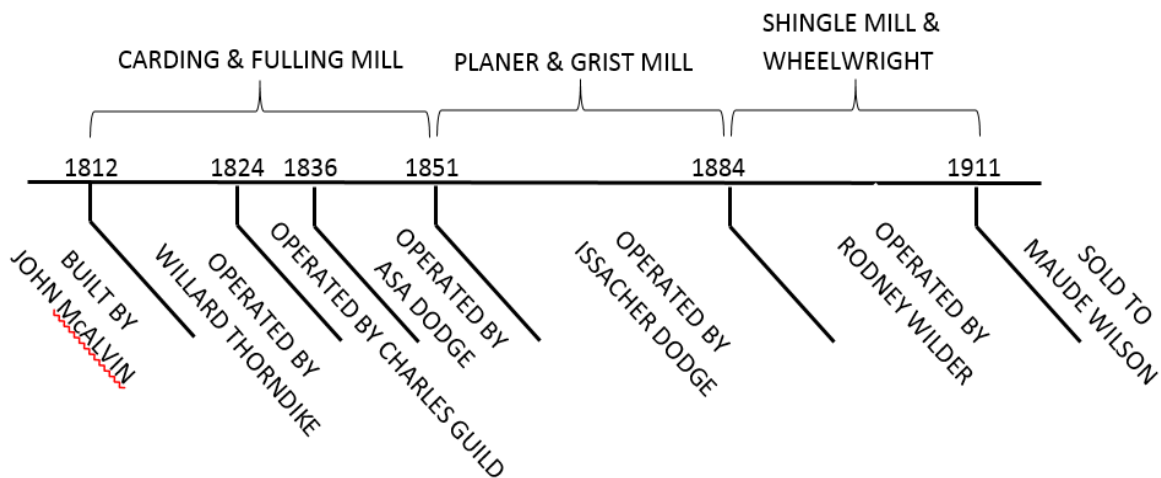


Newsletter

July 2019

## The Mills #2 - II

In this issue we will continue where we left off in the June issue with Mill #2 on the map – The McAlvin Carding and Fulling Mill. While this was built as a Carding and Fulling mill it was converted to several other uses during its lifetime. This newsletter will focus on the mill's first conversion from a carding and fulling mill to a planer and grist mill. This conversion took place in 1851 when the mill was sold to Issacher Dodge who ran it until 1884.

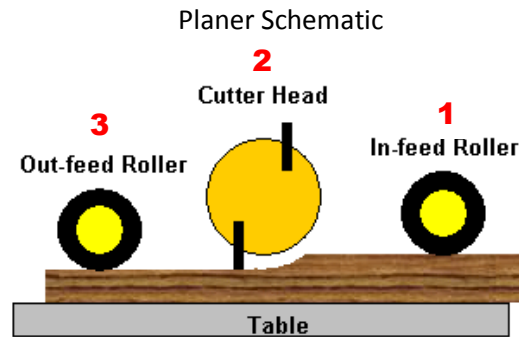
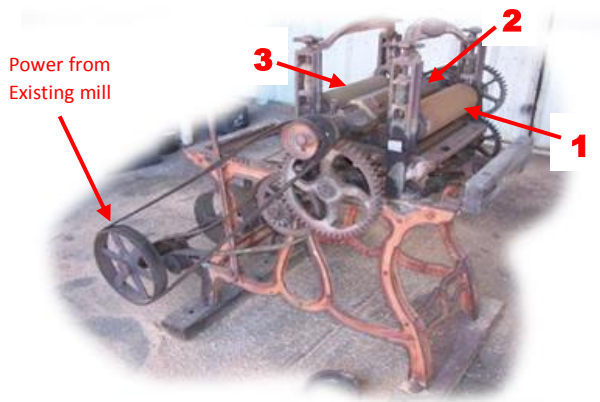


We have discussed the impact of the Industrial Revolution and the construction of the Manchester Amoskeag Mills as a factor in the decision to cease operating this McAlvin mill for carding and fulling of wool. It was only necessary to change the equipment in the mill as the entire water power assembly was also suitable for this new use as a planer and grist mill. While many are familiar with what takes place in a grist mill, a planer mill was not as common.

### PLANER MILL

The boards that come from a sawmill bear little resemblance to those you would purchase at a lumber yard. Sawmill boards are referred to as "rough cut" or "full" dimensional stock. They have no smooth finished surfaces and the size corresponds to the exact dimension of the board – i.e. a 1x6 which is a full 1"x6" in size. Frequently the customer wanted a board that had smooth surfaces rather than the rough texture of the sawmill board. The planer mill is where the board was sent to be planed or smoothed from "rough cut lumber" to "finished lumber". One other thing occurred during this process. In order to finish the board and get a smooth surface some of the rough outer wood had to be removed from the rough cut board and doing this reduced the original dimension of the board. In our example a 1"x6" rough cut board was now only 3/4"x 5 1/2" so it was no longer referred to as "full dimensional" stock but rather finished dimension. Other factors affect this dimension such as air drying, etc. but these steps had nothing directly to do with the mill process and will not be reviewed here.

While we have no photos of the McAlvin Mill interior, this photo depicts a planer of the proper vintage and the likes of which might well have been found in the McAlvin, or certainly one of similar appearance.



Note the belt driven apparatus which could easily be connected to the existing water powered drive when this was a carding and fulling mill.

## GRIST MILL

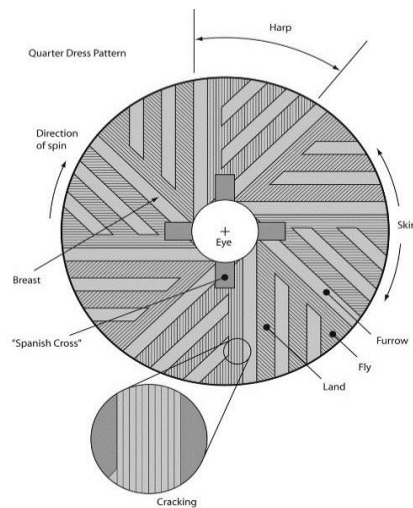
Grinding grain into flour dates to ancient history with a grist mill dating to 71 BC being discovered near the palace of king Mithradates VI at Cabira, Asia Minor.

Before that grain was ground by hand using two rocks.

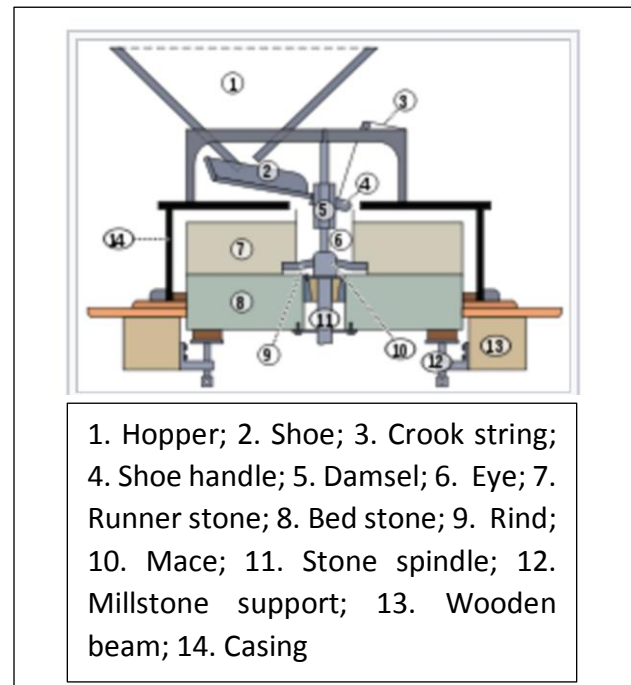


The term grist mill refers to any mill that grinds grain. In New England the term is used in reference to a local mill where farmers could bring their own grain and receive back the ground meal or flour, minus a percentage for the miller called the "miller's toll". These early mills were most always built in small farming communities. Most towns and villages had one or more mills so that local farmers could easily transport their grain there to be milled. Grist mills in this area such as the McAlvin Mill, were most always powered by water.

The heart of the mill equipment was the mill stone. Mills used two stones. A bottom stone, called the *bed*, is fixed to the floor. A top stone, called the *runner*, is mounted on a spindle, driven by the main shaft powered by the water wheel.



In most water wheel-driven mills, the main driveshaft from the wheel turns a pit wheel that drives the milling equipment main shaft that is mounted vertically and turns the runner stone. This pit wheel assembly also increases the speed of the water wheel (which turns about 10 RPM) to approximately 120 RPM for the mill stone. Once again we thank [Sanborn Mills Farm](#) for these photos of their working grist mill. Can you identify the numbered items in the diagram with the Sanborn Mills Photos?

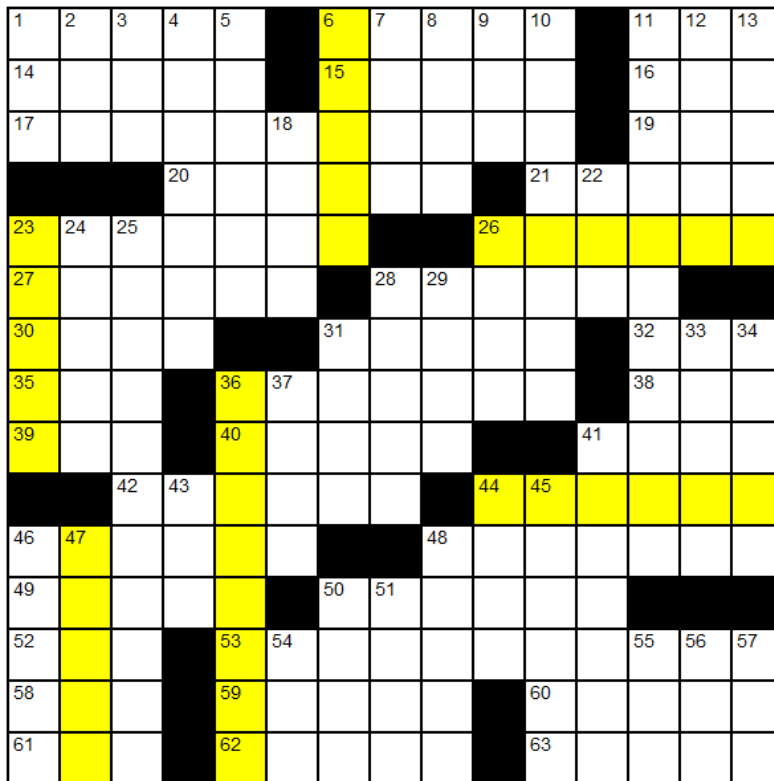


So well you may ask, with all this in place, how does the grain get milled?

Grain is fed by gravity from the hopper (1) into the feed-shoe (2). The shoe is agitated by a shoe handle (4) running against an agitator k/a Damsel) (5) on the stone spindle (11), which also powers the runner stone (7). The runner stone (7) is supported by the spindle mace head (10). This mechanism regulates the feed of grain to the millstones by making the feed rate dependent on the speed of the runner stone. This feed rate is further finely adjusted by use of the crook string (3) which alters the angle of the shoe. From the feed shoe the grain falls through the eye (6) which is the central hole of the runner stone. Here it works its way outward between the runner stone (7) and the bed stone (8) to be ground. The now flour exits from the side between the stones (7 & 8) into the casing (14). This stone casing prevents the ground flour from falling on the floor, instead directing it to the meal spout (not shown) from where it can be bagged or processed further. This entire apparatus is supported by the millstone support (12) and wooden beams (14) which are part of the mill structure.

Next month we will review the final chapter in this mill's life – it's conversion in 1884 to a shingle mill and wheelwright shop.

Our theme crossword follows. As always, the theme words are in yellow.



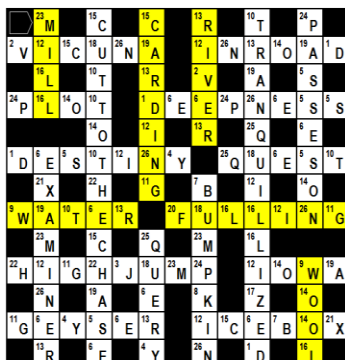
**Down**

1. Increase, with "up"
2. "Seinfeld" uncle
3. Building addition
4. An oceanic bird
5. Regarding this point
6. Ground grist
7. Advanced
8. Arch type
9. "Dear" one
10. Needles
11. Theological college students
12. Furious
13. Debaucher
18. Airy
22. Uninvited picnic guest
23. Kind of mill
24. Isuzu model
25. Enfranchised citizens
26. Bring down
28. Alternative to a coupe
29. Sword handle

**Across**

- |                                    |                              |
|------------------------------------|------------------------------|
| 1. First letter of Hebrew alphabet | 36. Illegal monies           |
| 6. Dentist's advice                | 38. Babysitter's handful     |
| 11. "___ boom bah!"                | 39. "Sesame Street" watcher  |
| 14. Donnybrook                     | 40. Distinction              |
| 15. Lawful                         | 41. ___ Bell                 |
| 16. Baseball stat                  | 42. Decree                   |
| 17. Cowardice                      | 44. Rough cut board finisher |
| 19. "Welcome" site                 | 46. Exit                     |
| 20. Esteem                         | 48. Firmly determined        |
| 21. Parishioners                   | 49. A boat or ship           |
| 23. Walmart employee               | 50. Depressed, upset         |
| 26. A grist mill stone             | 52. Feed for a horse         |
| 27. Deodorant type                 | 53. Repeatedly               |
| 28. Cascades peak                  | 58. Deception                |
| 30. Bad day for Caesar             | 59. Japanese-American        |
| 31. Capture                        | 60. A-list                   |
| 32. A thing in law                 | 61. ___ and outs             |
| 35. "Hold on a ___!"               | 62. Continue dining          |
|                                    | 63. Chart anew               |

31. Arias, usually
33. Host
34. Physical recreation
36. Another grist mill stone
37. Wood sorrels
41. Larval stage of a frog
43. Chief sports official
44. \_\_\_ Station
45. Big name in cosmetics
46. May cause food poisoning
47. Silo contents
48. Sewer
50. Makeup, \_\_\_\_\_
51. Three layer treat
54. \_\_\_ Appia
55. Enthusiasm
56. In-flight info, for short
57. Corded fabric



**LAST MONTHS PUZZLE**



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# THE FRANCESTOWN HERITAGE MUSEUM

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**SUPPLEMENT**



*HAPPY 4<sup>TH</sup> OF JULY*



Got friends and relatives coming over for the holiday and you aren't sure of how to keep them entertained? The Francestown Heritage Museum has got you covered – bring the whole gang down for a step back in history. Our displays cover agriculture, domestic life, commerce, firefighting and transportation so surely there is something for everyone. We will be open from Noon until 3 PM on the 4<sup>th</sup>. Come and meet “George” and see all sorts of other great old stuff!

## GEORGE

(A/k/a an Undesignated Dodge Model 124)



If you haven't seen this month's Francestown News, there is a really informative article by Kevin Pobst – “Counting Sheep”. As with all of his articles, the research is meticulous and in this case ties his article directly to last month's Francestown Heritage Museum Newsletter which focused on The McAlvin Carding and Fulling Mill. Kevin's Town Clerk Tax Tables shows a nearly 50% decline in the number of sheep in Francestown from 1845 to 1850 which correlates with the McAlvin Mills cessation of operation as a carding and fulling mill in 1851. Less sheep = Less wool to process.