

THE FRANCESTOWN HERITAGE MUSEUM

Newsletter



May 2020

AN OIL MILL

OIL

Black gold? - no, we are not going to tell you that during the expansion of the museum into the lower level we struck oil. The April Fools edition was last month. This month's newsletter deals with a different kind of oil, that being flax seed oil. Like the kind made in Stephen Cram's Oil Mill here in town from 1793 to 1812. This mill was located on the South Branch of the Piscataquog River (#7 on your mill map).

Flax seed oil is derived from the flax plant (which likes "cooler" climates so we had a lot of it). It had a wide variety of uses with the fibers from the plant itself being used in textiles such as linen. The seeds of the plant contain flax seed oil which was also widely sought after as a food additive, for medicinal purposes and other uses.

The seeds were separated from the plant using flailing sticks. You do of course remember the 12/2019 edition of the newsletter where we discussed flailing sticks? Use of these resulted in a whole lot of seed, but what you want is the oil. So off you go to Cram's Oil Mill with your seeds.



Cram only operated the mill until 1812 at which time it passed through several owners and uses. This photo dates to ~1880.

Now we all know you can't get blood from a stone, so how do you get oil from a seed? You just know you are about to learn. **CONTINUED ON PAGE #2**

FIRE MARKS

While recent events have heightened our awareness and appreciation for many front line professionals, the history of dedication of our fire fighters had its roots in colonial times. In colonial times fire protection was not an automatically provided service by the towns. The fire departments were generally volunteer organizations. Property owners might subscribe to the department and pay an annual fee. Also, as is the case today, property owners had fire insurance. The property owner who subscribed to a fire department or had fire insurance often received a Fire Mark indicating the fire department or insurance company.



In many instances the fire insurance companies would pay a monetary "reward" to the first fire department who "put water on the fire" at a building bearing the insurance company's fire mark. This is one source of the rivalry and competition between fire companies. This competitiveness continues today as we see area fire departments meeting to hold firemen's musters where they can compete in various fire-fighting related activities. In colonial times the competitiveness resulted in the first company to arrive getting a cash reward from the insurance company. Today the top company is pretty much limited to bragging rights.

FLAX SEED OIL

So why have you all gone through this process. Back in the day there were a number of known benefits to flax seed oil in the diet. It was high in fiber and used in the preparation of food, medicine, et al.

Getting oil from a seed is only slightly easier than getting blood from a stone. On a good day a two-man crew could extract approximately 14 gallons of oil from 10 bushels of seed. The business was also seasonal and mainly a wintertime activity starting in October or November after the flax harvest.

Assuming that you haven't seriously injured yourself with the flail sticks, you are now at Cram's mill with the sacks of flax seed in your wagon. This is a multi-step process that starts with ensuring the seed is dry. It was spread out on the loft floor of the mill to air. Once thoroughly dry the process began in earnest.

STEP #1 - CLEANING

Cleaning to get rid of coarse and fine impurities. Seed is cleaned in a fanning machine or sieving machine. You can of course surmise that the Frankestown Heritage Museum has a fanning mill for you to view. A short description of which can be found on Page 4 of this newsletter. A sieving machine operates in much the same way and is similar in appearance.

STEP #2 - CRACKING/CRUSHING

In order to prepare the seed, it must be cracked so that it will more easily give up the oil it contains (which is 25%+ of its weight). Over the years several ways to do this were developed. In ancient times they used a timber stomper where heavy timbers were suspended over a mortar bowl of seed and the timber repeatedly lifted and dropped onto the seed. A more recent method and the one most likely employed in Cram's Oil Mill was to use mill stones. Unlike those which were used to mill grain for flour which were mounted horizontally, those used to crack flax seed were mounted vertically. They were then rolled around and around over the flax seed which was placed in a large stone mortar. The rotating stones were powered by the water wheel on the mill. No actual photos of the interior of Cram's Mill were found but the picture to the right quite likely closely approximates what was used by Cram.

STEP #3 - HEATING

Flax seed oil can be obtained through either a "hot press" or a "cold press" method. The hot press method results in a higher yield from the seed. However, the cold press method yields a better quality, lighter color oil which is preferred. Another short-coming of the hot press method is the need to constantly stir the roasting seed to prevent charring and oil loss. All indications are that the Cram Mill was a cold press operation and this step was not necessary.

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FANNING MILL



CRUSHING MILLS



STEP #4 – PRESSING

So your seed has been dried, cleaned and cracked but still you have no oil. Step #4 will take care of that for you and is where the seed is pressed to squeeze out the oil. As with the cracking process a number of methods were developed but one of the most common was the use of a screw press.

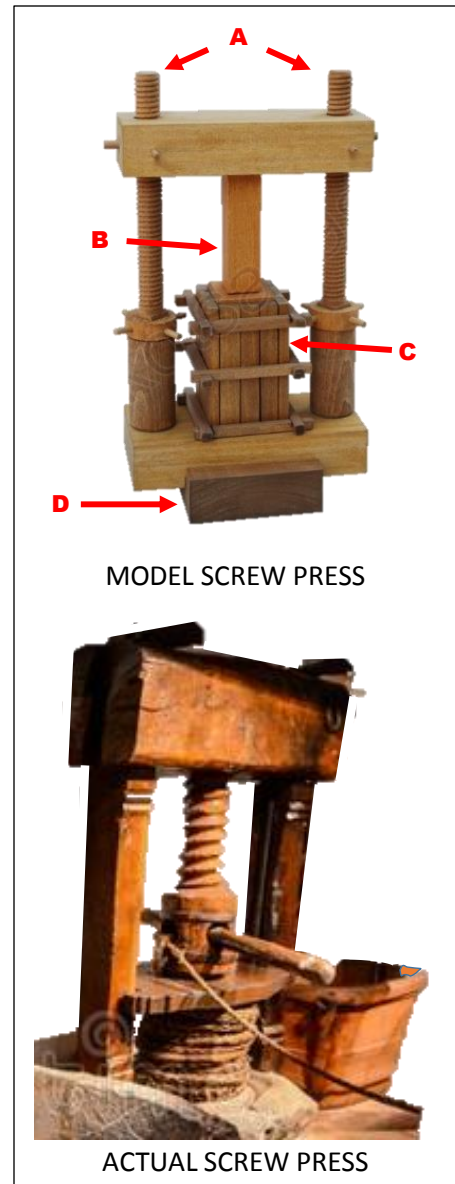
The seeds were wrapped in a leather-backed horsehair mat and placed in the press (see diagram to right). Turning the screw(s) "A" tightened down the ram "B" compressing the seed "C". This caused the oil to trickle out and drain into a collector "D" below. The oil produced was placed in wooden casks for storage or shipping.

Now you know our ancestors were not prone to waste, so what to do with the old seed. It was now in a brittle pressed "cake" form which was sent back to the cracking mill and reprocessed to recover any remaining oil. After a second pressing the cake was then ground and used as cattle feed or fertilizer.

The over-all process has ancillary steps to finish the oil but they are not necessary. These include filtering by passing the oil through layers of filter cloth to remove any suspended particles.

So the next time you go to AMAZON.COM and order your small bottle of flax seed oil for \$10 for delivery to your home, remember what your ancestors went through down at Cram's Oil Mill to get their bottle.

Don't let the small bottle diminish its value as it is said to reduce the risk of diabetes, fight cancer, reduce cholesterol, et al. The wonder drug of colonial times. Maybe we should all try a bottle – maybe it will reduce the risk of getting COVID-19.



FRANCESTOWN SESTERCENTENNIAL CELEBRATION

1772 - 2022



COMMEMORATING OUR HERITAGE

This is our chance as a community to join together and celebrate our 250 years as a town. What would you like to see included?

Contact our Town Administrator, Jamie Pike at 547-3469 or by e-mail at

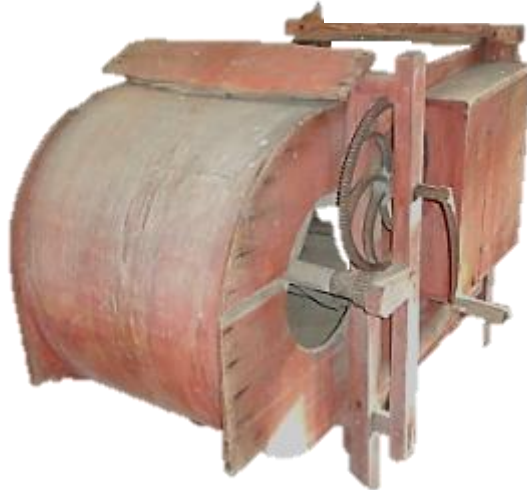
selectmensoffice@Francetown.org

FRANCESTOWN HERITAGE MUSEUM

FANNING MILL EXHIBIT

Fanning mills removed straw, chaff, stones, dirt and dust, weed seeds, and light immature seeds from grain. It was important to remove contaminants for better preservation during storage.

Heritage Museum Exhibit #236



Fanning mills have shaking sieves (screens) over which the threshed grain kernels mixed with bits of straw, stone and soil were rattled. This mill has a fan operated by the crank on the side that blows air across and upward through the screens to float off the lighter debris.

Our ancestors harvested grain, stalks and all, which were then brought to the barn and had to be cleaned. In ancient times, the grain and chaff were placed in winnowing pans and tossed in the air where the wind would blow the chaff away and the heavier grain would fall back into the chaffing pan. All in all a very labor intensive and tedious job that required a good deal of skill to get all the grain to fall back into the pan. Over the centuries various attempts were made to improve on this process.

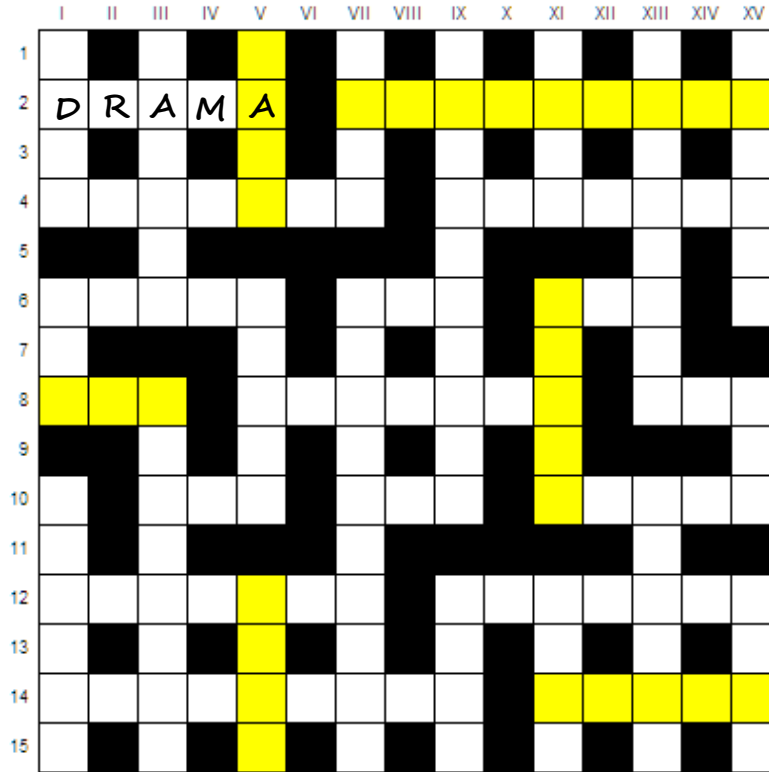
It is said that the Chinese developed a winnowing machine (a rotary fan in a box) as far back as 200 BC. The Dutch East India Merchants brought this back to Europe in the 1500's where finally in 1710 a Scottish millwright developed a hand-operated winnow. The clergy railed against these devices as the "Devil's Wind" the thinking being that "wind should only be solicited through prayer". In spite of this, the winnow (or fanning machine as it was called) was very popular and by the 1760's the millwright was commercially producing these fanning mills.

The fanning mills used in the old grain mills had 3 screens used interchangeably for the different kinds of grain.

The above information is from a page in our visitor's manual which contains a similar page(s) for each of our exhibits.

THE MAY THEME CROSSWORD

This is a French grid crossword (it's not that hard – we have done these before so you should be an old hand at them by now). There are no numbers in the cubes but rather along the margins. Therefore any one line or column can have multiple words in it. For example line 1 has no three or more open adjoining spaces so there are no words in this line. However, line 2 has 5 adjoining open spaces and also has another 9 adjoining open spaces. This line has two words and in looking at the clues you see there are 2 clues for 2 across – “A style of literature” would be “Drama”. The second nine letter word clue is “FLAXSEED OIL PROCESSING METHOD” and the answer also happens to be one of the theme words. All clues for theme words are in capital letters.

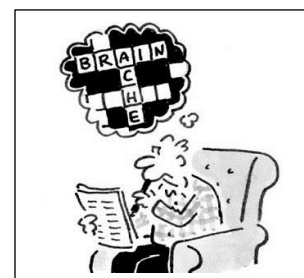


Across

2. A style of literature
FLAXSEED OIL
PROCESSING METHOD
4. Is not tightly fixed
Waterproofed cotton cloth
6. Intended on purpose
Nonamateur
Pastry
8. PRODUCED FROM
FLAXSEED
Treat as celebrity
Drink or eat
10. Cleaning item
Short for camshaft
Spicy tomato sauce

12. Powerline worker
Cause of COVID-19
14. Portender of conflict
ITEM USED IN MAKING
FLAXSEED OIL
- Down**
- I. Graven image
Bovine utterance
Relatives by marriage
- III. Fried Pastry
Prominent expert
- V. PRESSED SEED REMAINS
Spring flowering bulb
WHERE CRAM WORKED
- VII. In need of Aspirin
Part of a theater stage

- IX. Over indulgence
Untidiness
- XI. Gem of the outback
YIELDS FLAXSEED OIL
A mace
- XIII. Lack of strength
One who steals during a riot
- XV. Early computer network
Caused royal unrest
Wide mouth jug



WHERE IS THIS PLACE?

With our apologies to folks who do not live locally.

Now lots of newsletters and magazines have a photo that readers are supposed to identify. So wouldn't you just know that we would have to add a twist to this. So Number #1 – where is this barn located?



Below is a photo of the same barn from a side that a traveler would not see.



For those of you who immediately know where this barn is, how many of you know it has a basement level (which you see in the picture)?

The property remains in the family and while the farm is no longer as active as in the past the barn is being impeccably maintained.

Bear in mind that the winner of this quiz will receive a coveted Life Time free membership pass to the museum (not diminished by the fact we do not charge anyone admission).

So here is the twist: ~40 years ago there were a

a rash of thefts of old weathervanes from barn roofs. They had become a really hot item in antique circles and some of the thieves became so enterprising that they were using helicopters to swoop down and take the vanes. So as not to lose this valuable old antique, the owner had it removed and replaced with a replica (which is what you see today).



The winner(s) of this month's contest not only have to identify the location of this barn but also correctly say what happened to the original weather vane? HINT: It did not go to the **Francetown Heritage Museum** as we were not around ~40 years ago or rest assured we would have tried to be the lucky recipient.



- The solution to this month's crossword -

