

# The Friends of the Pine Creek Grist Mill

## Restoration Progress Report 96 October, 2017

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As I write this the 2017 restoration season is over. The mill is running well and the new LED lighting system is installed. In September the crew continued to work on the three roller corn mill. I purchased the steel stock that I needed to make the replacement bolts and nuts for the machine and they were installed.

We also looked into the machine's lubrication. Each bearing had a rectangular oil cup on the top of it. The cups are packed with wool felt cylinders with one end of a piece of the felt passing through a hole in the bottom of the oil cup and rubbing against the rotating steel shaft.

Over the last 127 years the cups and felt had become packed with dirt. New felt was ordered, the cups cleaned and the new felt installed. Hopefully this improve the mills lubrication.

Once we had the roller mill in good working order Clarence Klauer spent quite a bit of time tuning the machine. To obtain good grinding the adjustment of the mill is critical. We ground up a lot of ear corn in the process of learning how to get the ratio of grinding on the top and bottom pass through the rollers correct.

We also encountered an old problem with the mill. There is a large cast iron spring loaded lever on the side of the machine that is used to spread the rollers to clear jams. If it slips out of your hand while moving it the lever will snap forward. When it hits its stop, the level breaks! This happened to us while tuning the mill. It is the forth time this has happened. All I can say is that the cast iron that the lever is made from is very brittle.

This winter after the mill closes I plan to fabricate a new lever for the mill. This time the lever will be made from steel to eliminate the breakage problem. We will install the new lever in the spring.

There are always little repairs and improvements to be made in the mill. One I have wanted to do for a long time is to devise a safer way to lift the runner stone on the mini-mill. The runner weighs around 150 pounds and lifting it is neither easy or safe when you are a man with a bad back. The solution was to build a frame to hold the runner while lifting it with a come-a-long attached to an over head beam.

Hank Mann and I assembled the lifting frame and it worked just like we wanted. This led us to the next issue, the mini-mill was not grinding very well, it needed to be dressed (sharpened).

Dick Stoltenburg did the dressing of the mini-mill's stones using an angle grinder a vastly easier way then using a traditional mill pick. After dressing the stones we discovered that the corn is feeding into them at an excessive rate. Next spring we are going to add a gate inside of the runner's eye to slow the feed rate. The mini-mill should make good grist then.

Heather Shoppa requested that we move the big corn sheller over to the kids area so the staff can better watch the kids playing with it. When we did this Dick Stoltenburg added a box to the base of the machine to catch the shelled corn so it does not spread all over the floor.

Speaking of corn Dick reports that we have used most of the gravity wagon of corn that he picked for us last year. He plans to run the remaining corn through his combine this harvest and then refill the wagon with fresh ear corn.

Something new this fall is that we had a crew of volunteers from Bridgestone do a fall cleaning of the mill. This project was organized by the Muscatine United Way as part of their Day of Caring / Day of Sharing program. They did a great job and afterwards the mill looked a lot better. It will also be a lot easier to clean next spring.





At left Dick Stoltenburg is adding a box to catch the shelled corn from the big sheller.



At right Clarence & Dick Klauer are installing the new adjusting bolts on the three roller corn mill.



At left Hank Mann testing the new runner stone lifting frame that we built.



Above Dick Stoltenburg is dressing the mini-mill's bed stone. He is using a special stone cutting blade in the angle grinder.

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