

# PART OF THE PAST

## Harrisburg Area Museum

### REAPERS AND REAPING (POWERED)

Issue 2019-2

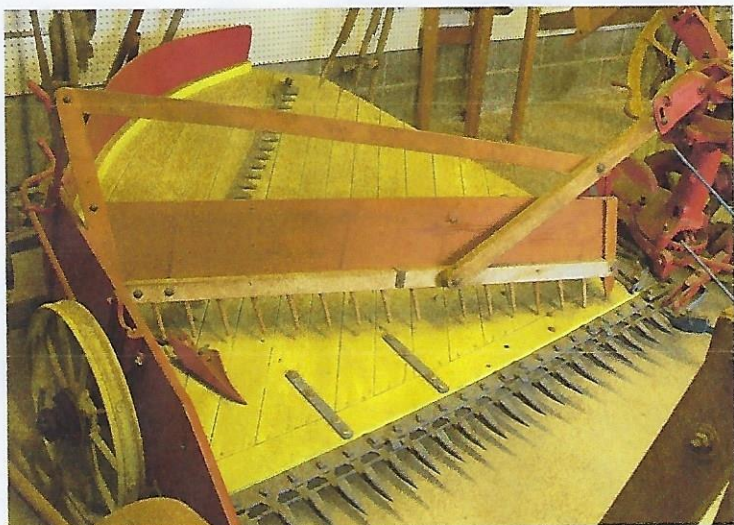
The earliest harvesting tools...the grass hook and scythe...took many generations to evolve. In contrast, the powered reaper evolved much faster. Powered (horsepower) reapers were first designed in the early 1800's. After the concept was proven it was very popular in the farming community since it allowed the harvesting of many more acres. A fair number of companies designed and built the machines and were serious competitors. Often creating violence at the field trials held to showcase their wares. Two of the main ones...McCormick Harvesting Machinery Company and Deering Harvesting Company...fought sometimes bloody battles on the demonstration fields and in the courts. This was particularly keen during the late 1800's and finally resulted in a merger in about 1902. The merger created the largest farm equipment company in the world with some 85% of the US market. It was a dynasty that added many lines beyond the reaper and dominated the market for some 50 years.

The early machine were not simply an evolution of the scythe but a whole new concept. While, in present day technology they seem very rudimentary, they were a remarkable development. See a pic below of a very early machine. Note that the grain was cut with some



sort of sickle bar and reel and dropped onto a platform where a man walking alongside would rake it into a windrow for drying or bundling. Two men and a horse. I suppose they could cut and windrow about 1 acre per hour in good going. A vast change from the 'maybe 1 acre per day' that a good scythe man could cover. This model proved the concept and improvements soon followed.

The difference is clear in some respects. The 1870 model does not need the extra guy walking alongside to rake the crop into a windrow. It uses a mechanical rake that moves the crop to the side. It also appears to have eliminated the reel shown on the earlier model. The sickle bar on the 1870 looks much like one from the 1940's. Guards, (Those pointed things that the sickle runs in and the sickle (shown laying on the platform) differ greatly from current production.



*The Museum's 1870 McCormack Reaper. Part of Bob Nixon's collection.*

The earliest reapers appeared in about 1830. Oddly, there were several models from different inventors that showed up nearly the same time and apparently with little or no coordination. In fact, there was even one in France developed by a French Dentist! And 3-4 in

the USA. All claimed to be the originator! Some began patenting their ideas. Deere apparently had a superior cutting bar design while McCormak was superior in some other ways. But it wasn't until the Deere patent on the cutting mechanism ran out that McCormak was able to build the clearly superior machine. I have not been able to discover what the preferred cutter bar design involved. Very early machines used a stripper bar instead of a cutter bar. I doubt that such lasted long so there must have been some other feature that was patented by Deere.

The rakes were a major innovation. There are 4 of them. They lay on top of the platform and rotate clockwise. At the end of the platform an ingenious cam arrangement lifts the rake to a vertical position for rotation around to the front again. The rakes and the cutter bar are driven from the Bull Wheel on the right through a series of gears. The drivers seat is just out of the picture to the right. It was pulled by a team of horses. The sickel was driven from a crank with a short pitman. It had a ball joint on the sickel end which was pretty much standard up into the 1940's. Eliminating one operator with the rakes was a big innovation...



*Rake behind cutter bar. 1870 McCormak from Bob Nixon collection. Bull Wheel on right*



*A horse drawn mower. Not OSHA approved!*

At left a Mower used mostly to cut hay, not grain. The long, brown lever shown in front and to the right of the seat was used to raise and lower the cutter bar by about a foot. This was when the cutter bar plugged or for short transport. To raise the cutter bar to vertical for transport as shown required one to dismount and raise it by hand, fastening it in place. The cut was usually 5-6 feet. I remember a tractor pulled mower similar but considerably heavier. I think it had an 8 foot cut. Later...1940's mowers were mostly 7 foot cut and, with a swather attachment were used for about a decade to winnow seed crops around Harrisburg. This was during the transition from binders and threshers to

swathers and combines.

I guess I am too wordy since I have run out of space. Next issue will feature binders. The Binder was invented by Charles Baxter Withington in 1872. They are still made for some areas of the world...China and England and maybe some other areas. The Museum does not have a binder on exhibit. The one shown here is a fairly new one working in England. But it looks much like what we used in the 1930's. I'll tell a bit about those harvest days and then, if I haven't used all my space, talk about more current swathers. Some remarkable changes, even in just the last few years.



**COME VISIT THE MUSEUM TO SEE THE DETAILS.** Charlie Kizer, Editor