MANITOWOC COUNTY HISTORICAL SOCIETY

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HAYMAKING IN THE EARLIER DAYS

by EDWARD EHLERT

In a brochure which was sent to Germany a German emigrant who settled at Shoto in the early 1840's extolled the virtues of Manitowoc County thus, "A land flowing with milk and honey. Clover grows so luxuriously that cows walk knee high in it all summer long, and when winter comes there is enough left to feed the cows through the winter." Such praise of the agricultural resources of the county was enough to encourage other emigrants to migrate here. They began to arrive in the county from about 1847 on by the hundreds and in the 1850's by the thousands.

The various nationalities seemed to have their own personal preferences as to the part of the county in which they located. They were all alike in that they brought little in the way of personal possessions along. Some of them had some household goods, articles of clothing, and little else. But they had a determination to make good in the new world, employment could usually be found in the saw mills, and in those other occupations that were associated with the conversion of forest land into land for cultivation of crops. They were an ingenious and a resourceful group, willing to make personal sacrifices, and also to work hard to realize the hopes that they had as they came here.

Most of these settlers acquired a team of horses (or a yoke of oxen) very soon, a plow, and perhaps a few cows. A log cabin was not hard to erect as all the materials that were needed were in the nearby forests. In the beginning the cultivated land amounted to only a few acres at best, so usually only hand tools were needed to put in the crop, and later to harvest it. Some of these might be purchased in the community general store; but the tools that could be made in the carpenter shop that seemed to be an adjunct of every barn, were made there. A scythe was one of the first tools to be acquired. It consisted of a steel blade, which might have been brought along from Europe. The handle might have been made here. Then there was a fork, which was used to handle the hay once it was cut. This also was hand-made. Wood for these was gotten from the ash or hickory trees of the forest. The hand rake had a wood piece into which pegs about one-half inch thick and five or six inches long were inserted. The rake usually was about two feet wide. A handle was fitted into the cross piece, and this then became the tool which was used to gather up the hay that was cut. The hand tools had the advantage that they could be used in almost any kind of land, whether rough or smooth, whether devoid of stones and stumps or having many of them.

This was particularly important at the time, because most farmers cut both "tame," or planted, hay and "wild" hay. "Wild" hay grew naturally on the prairie lands, but the fields tended to be wet or rocky, and hay making on such land could have been extremely hazardous if it had been necessary to do it with machinery. Since the acreage in cultivated land was small, every bit of hay grown was harvested, and taken to the barn loft for winter feeding.

August Arnholz, Shoto, Wisconsin, using a scythe in 1914 or 1915.

Hay making is an operation in which dry weather is a necessity if good quality hay is to be put in storage in the barn. Rain destroys the quality of the hay, so the farmer is desirous of preventing ruin of the crop by rain. In the early days, the hay was put into "cocks" after it had been cut, and had lain on the ground for a day or two. These were formed in such a way so that if there was rain before the hay was dry enough to put in the barn, the water would be shed from the hay. Moisture would affect only the hay that was exposed unless the rainfall was very heavy, in which case the moisture would soak into the interior of the cock. With good drying conditions about three days were needed in

order to get hay dry enough to put into the barn. Sometimes it was necessary to scatter the hay again to get the hay completely dry and ready for storage in the barn. A farm wagon with a hay rack of some kind was used to haul the hay to the barn loft.

The barn loft was usually located above the area where the cattle were housed. The loft was an open area under the roof of the barn. Entrance to the barn loft might be through an opening at one end of the barn, or there might be a driveway which led up to barn doors of sufficient size so that the wagon might be pulled into the barn.

To unload the hay from the wagon usually was a hand operation in the very early days. A hay fork was used to lift the hay from the wagon through the opening at the end of the barn. There was another person in the barn loft to receive the hay and place the forage where there was room.

As the acreage under cultivation increased, it was possible to keep more cows, and this required that larger barns be built. This meant larger hay lofts. And it meant also an effort to mechanize farm operations. Among these was the entire hay making operation. Machines that were used were mowers, hay rakes, tedders, and some kind of hay fork or slings to use in the process of storing hay in the barn loft.

The mower was a machine that was pulled by two horses which was operated by a man who was seated between the two wheels of the machine. The most important feature of the mower was the sickle bar. This was the part of the implement which did the cutting of the grass. The bar could be tilted to cut at whatever angle the operator might prefer. When cutting sweet clover, for example, it was advisable to cut the plant several inches above the ground. The entire crop might be killed if the cut was near ground level. If there were small stones on the ground, there was an inclination to tilt the bar at a high angle also.

Mower

The manufacturer of mowers had to design the implement in such a way that the strain placed on the sickle bar while it was cutting would not throw the machine out of alignment. The sickle bar was made up of numerous parts, all of which had to be in good operating condition if clean cutting was to be done. The sickle was the most important part of the machine and the separate blades that made up this cutting device had to be sharpened at periodic intervals. This might be each morning before the cutting of hay began. As a boy on the farm one of the unpleasant chores was to turn the grindstone as my father sharpened the individual parts that composed the sickle. (Some grindstones were foot operated, if the farmer did not have a boy around who could turn the grindstone for him.) It wasn't hard work to turn a grindstone, but it was tedious, for there must have been about two dozen blades to be sharpened, each of which had two cutting edges. The sickle operated through a series of guards on which was fastened a steel piece which served as a cutting edge. When the sickle was not in use it was held in a vertical position; this had the tendency to throw the mower out of gear.

Cutting of hay always began at the outside edge of the field. The swath of hay that could be cut each time around the field was about four feet wide. There was a swath bar at the end of the sickle which threw the hay away from the hay remaining uncut. For clean cu ting it was necessary that there b no cut hay from four to six inche away from the uncut part of th field.

Clover hay was perhaps the mos difficult to cut, for the plant usually grew so close together tha the stand was thick. Timothy wa usually taller than clover. It was coarse type of hay that lacked th nutrients present in clover. Alfalf was not yet a common hay crop i the late years of the 19th century

While cutting hay might seem be a very tedious kind of wor actually the machine operator ha to be very alert to see that ever part remained in good operatin order. His ear had to be tuned t the sound of a rattle or a clatter for this sometimes was an indica tion of some part having becom loose and in need of tightening o adjustment. He had to watch tha nothing had gotten on the sickl bar to prevent the cutting action A clump of hay was the usual ob stacle to clean cutting because th stems would fold under the bar an bend around it in such a way tha the uncut hay would be kept awa from the cutting part of the sickle When this occurred, the operato would need to stop and remove th obstacle that had gotten in th way. Otherwise, there would b uncut hay remaining on the field a testimony of the fact that th machine operator was day dream ing or was something less than th efficient person that he shoul have been. A loose guard or defec

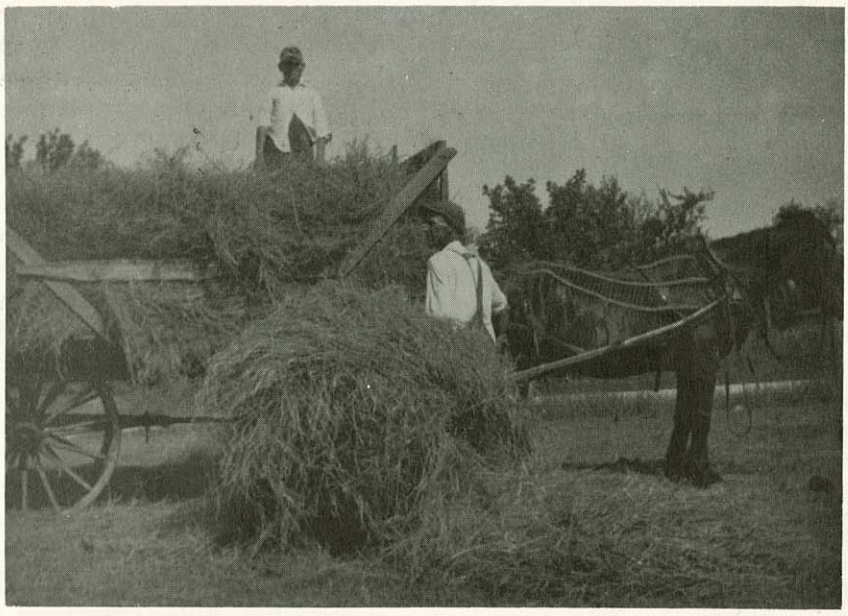
tive sickle could have had the same effect as an obstacle getting in the way of the cutting action.

The operator had to be alert also for the presence of game birds or wild animals in the hay field. I recall as a young man on the farm an encounter with a family of skunks. On another occasion a swarm of hornets made things very uncomfortable for a few moments. A friend recalls an occasion when a rather fat fellow, atop a wagonload of hay 10 or 12 feet above the ground, had to make a jump to safety when a loader sent up a hive of bumble bees who promptly began stinging the recipient of the load!

The cutting of hay was usually done in the morning. Hauling of hay was done during that part of the day when the hay was dry, usually in late morning or the afternoon. When the dew of the evening appeared it would end the work of hauling hay. Of course, cutting hay could be done at any time of day; however, the different jobs associated with hay making usually were influenced by the time of day. If there was a large family of boys, and the farmer had four or more horses, perhaps he might proceed at cutting at a more rapid rate. Otherwise he would cut only about as much as could be hauled in an afternoon.

Hay placed in storage in a barn must be completely dry. If a high amount of moisture remains in the stems and leaves there is a possibility of spontaneous combustion to set fire to the hay and the barn. Hay that is moist can also cause molding in the loft.

When the hay was sufficiently dry so that it would cure properly, it was gathered up into "wind rows." An implement known as a dump rake was used for this purpose. This was a horse drawn machine with either one or two horses used to operate it. The dump rake was a two-wheeled implement which had about 28 curved steel "rakes" which were set about four or five inches apart. It was wide enough to rake two swaths of hay each time around the field.



Sherman Mueller on load, William A. Mueller pitching hay up on wagon – in early '30's.

The rake was foot operated. The operator sat on a seat which was between the two wheels. When the rake was set down on the ground, the implement moved forward until hay had accumulated in it to the point where no more could be gathered. Then the operator tripped a lever with his foot, which caused a cam in each wheel to engage in a ratchet, and thus bring up the rake teeth. As the rake teeth were in an upright position the machine moved forward and left a "wind row" of hay. Each time around the field he tried to trip the rake in the same spot.

When the raking was completed, a decision needed to be made concerning the next operation. If the hay was dry enough to be hauled to the barn, this could be done without need of another operation. However, if there was more hay than could be hauled in an afternoon, or if the hay was not sufficiently dry to be hauled to the barn, the hay was usually put in "cocks" to cure. The farmer in those days did not have the benefit of weather reporting service, he had to make a judgment as to the probability of dry weather to continue. There would not be as much damage from rain if the hay was in cocks, so that often became a next step.

To make a hay cock a pitch fork was a necessity. This was a three-tined tool in which the fork was attached to a wood handle. The handle was round, turned smooth, and then coated with shellac and varnish for comfortable handling. The handle was usually made of hickory or ash. Several fork-fulls of hay were placed on top of each other, and rounded so that it would shed water in case of rain. Should there be a heavy rain while the hay was in the cocks, it might be necessary to tear them apart again, and scatter the hay on the ground for better drying. Then a hand rake or fork might be used to gather it together again for loading.

When the time for loading the wagon came, the farmer placed a hay rack on the farm wagon. The hay rack consisted of two 2 x 10" planks set against the bolster on the wagon. Two by fours (or 2x6's) were placed at intervals to keep these planks upright and rigid. Over these were placed other 2x4's set at right angles to the planks, over the wheels of the wagon. The hay rack was as wide as the farmer wished the load of hay to become. Many of them were about ten feet wide. One by six inch boards were

placed over the 2 x 4's, usually placed about three to four inches apart. Hay wagons were drawn by two horses.

Many a farm lad got one of life's big thrills when he was allowed to handle these horses, often the family's finest, for the first time so that Father could stand on the wagon to load the hay properly.

In the early days the loading of hay was done with long handled pitch forks. The farmer lifted the hay in cocks onto the wagon. Usually there was a person on the wagon who did the loading. A farmer was able to haul from about 1600 pounds to a ton of hay on a load. To get a load home without tipping required real skill, especially since the straight bolsters and rigid wheels of the wagon provided no "give."

The hay was then taken to the barn for storage. Earlier we described a hand operation of unloading hay. This perhaps was the process of unloading when only a few tons of hay were put into the barn. With dairying on the increase, and larger herds of cattle to be fed, a way was sought to alleviate the drudgery associated with unloading hay. A track was installed just below the ridge of the barn roof. On this track a hay carrier was placed, and to this was attached a series of pulleys and ropes. A "hay fork" was used to do the work of unloading, with the horses furnishing the power needed to lift the hay into the barn loft.

The picture shows two types of hay forks. The one on the left shows a single "fork." This is inserted in the load of hay. A prong protrudes at the bottom from either side of the fork, and this provides the means by which the hay can be lifted from the wagon to the barn loft. The fork on the right has two steel tines. Each of them has a protruding prong which slip into the hay and make possible the lifting of the hay from the wagon. A third device that was used for lifting hay into the barn was a "sling." The sling was placed at the bottom of the hay rack. Hay was piled on top of it. There were at least two or three of these. These slings were attached to the hay carrier in the barn loft, and these then lifted the hay from the wagon to the barn loft. Slings were perhaps a more sure way of lifting a quantity of hay than was the fork. Loose or short hay was especially difficult to unload with a hay fork. When the hay reached that part of the mow where the farmer wished to store it, he pulled a trip rope to release the hay from the fork or sling.

Hay lofts were all the way from 30 to 40 feet wide. The hay was usually dropped immediately below the ridge of the roof. This meant that unless the hay was moved, there would be little storage at the outside edges. Thus, the farmer had to put a man in the hay mow to scatter the hay about so that it was all over the mow. This was hard work, expecially if the hay was long or heavy. A mow in an ordinary sized barn would hold about 20 to 30 tons of hay. There usually was a hay mow on either side of a driveway.

In due time other hay making implements made their appearance. One of these was the hay tedder. This was a machine that was used to loosen the hay in the swath so that better drying would take place. It was used most often if the swaths had been rained on or if the crop was unusually heavy. While this machine did take some of the drudgery out of hay making, it was not a popular machine. Kicking the hay around as this machine did caused many of the leaves to drop off the stem. The food nutrients present in abundance in the leaves were therefore lost. Following the hay tedder, the side delivery rake made its appearance. This took the place of both the dump rake and the tedder.

Hayforks (for unloading hay from wagon) Klafanda's Farm Museum, Chilton, Wis.

Another hayfork (for unloading hay) Klofanda's Farm Museum, Chilton

To further aid the farmer with hay making, a hay loader was manufactured. This was nothing more than a machine that was fastened to the rear of the wagon, and which followed the wind rows at right angles. The hay loader did the lifting of the hay from the ground to the wagon.

Hay making as it has been described in this monograph represented a development over a period of perhaps three quarters of a century. Having influence on all of this was the mechanization of other phases of the dairying process. At one time both butter and cheese were made on the farm. It was about the 1880's that the first

cheese factories made their appearance. Soon after, the cream separator made its appearance. Farmers recognized that the manufacture of cheese and butter represented the way of getting cash for their products which they had long sought. Thus they were encouraged to raise more cows, and this required more and more food. Silos became a part of the farm building complex, and larger barns became a necessity. Agricultural research indicated that for dairy cattle to produce well, a good ration was needed. In addition to roughages consisting of hay and corn, grain and dairy feed were needed. There were other developments, too, which required change in the methods of operation of the dairy farmer.

Thus, the methods of hay making described here soon became obsolete. A further mechanization of the process was needed, and it was not long before the tools we described were completely out of date. Tractors took the place of horses making possible larger machines which had the advantage of hastening the various operations. Mowers had longer sickle bars. Machines came into being that were an aid to the hay drying process, and instead of hay loaders, hay balers became common. Or hay choppers were used with storage of the forage in silos. Each year we read of new developments in the making and storage of hay, and it is clear that even now the ultimate in these things has not been reached.

Hayloader – in the early 1920's

It should not be forgotten that along with the advance of farm mechanization, the entire way of farm life was changed. During the era represented in this monograph, there was a community excitement generated during hay making time. In most cases, neighbors worked together, combining their teams and tools as well as their physical energies. Children felt an increased sense of sociability and usefulness as they were sent to the fields about nine o'clock in the morning, and again about three in the afternoon, bringing needed refreshments to the men. These usually consisted of hot-from-the-oven butter or lemon cookies, hand-churned buttermilk, strong, hot coffee with thick cream and jars of ice-cold well water. An old German custom was to add a handful of raw oatmeal to the water, with the idea that this had certain thirst-quenching properties. Horses, too, got a few minutes at the feed-bag at this time.

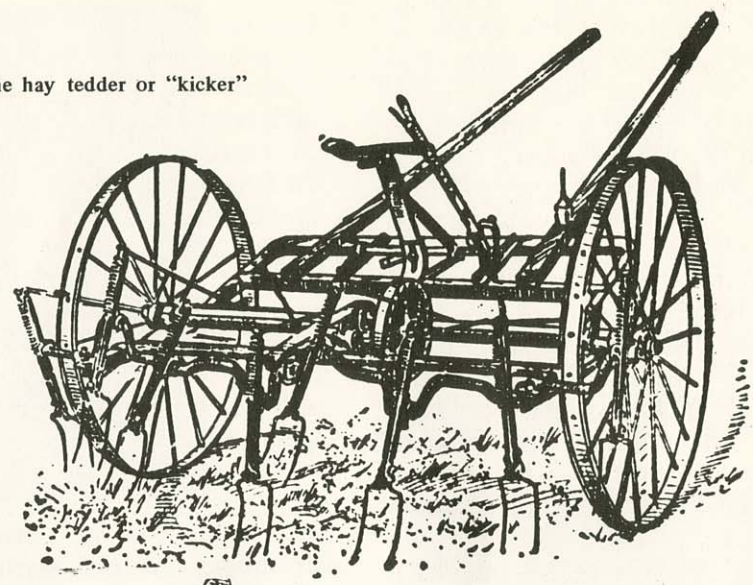
At noon, bowls and basins of water were set up on benches out of doors and towels hung from tree branches so that the working crews could clean up for dinner. And what dinners! The wives, working together, set the table with meats, potatoes, fresh garden vegetables, home-made relishes, jams and jellies. Breads, rolls, cakes, pies also were all made by the ladies, who vied with one another on their culinary skills. Usually, the family whose crop was being harvested treated the workers to some cold, brown beer. So, although the work loads became lighter with improved machinery, a certain sense of neighborliness and convivial concern also faded out.

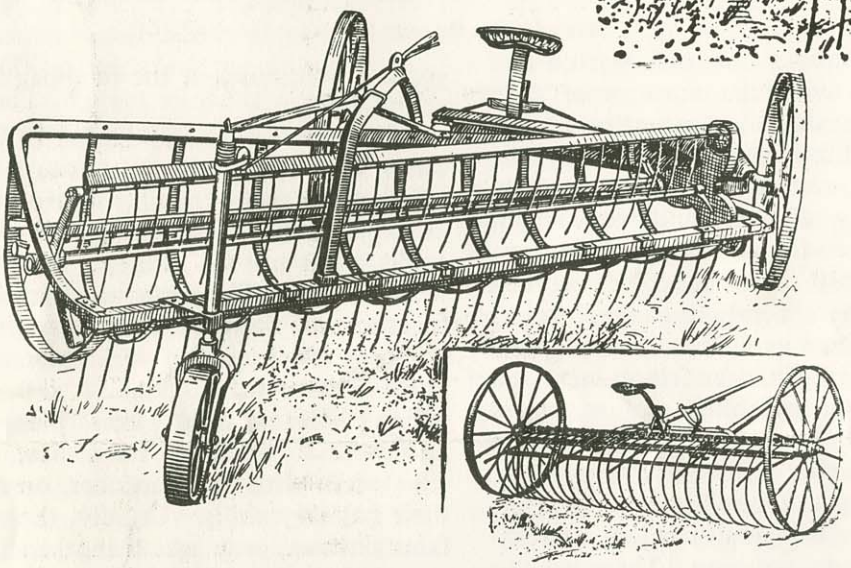
The result of all this has been that Wisconsin has become a leading dairy state in the U.S.A. Its climate and its soil has ever been such that hay, corn and grain grew well here. Yields in these products increased and with increase in production came larger profits from dairying. The farm machinery industry helped in the elimination of the hard physical labor associated with farming. And with all this came the production of ever more crops and dairy products at less cost. The prosperity of farmers has helped much to make of Wisconsin a fine state in which to work and live. As farmers were prospering, people in

Loading the hay wagon by hand

the cities were becoming prosperous, too, and together, both the rural and urban segments of the economy of Wisconsin have thrived to the point where both can say with great sincerity "we like it here."

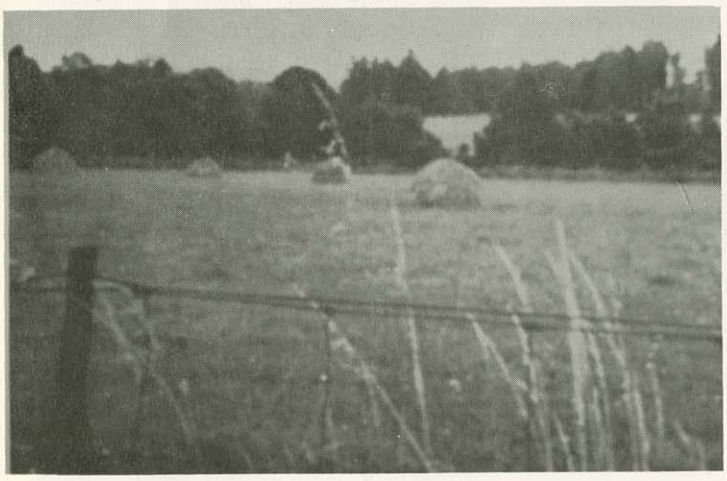
The hay tedder or "kicker"





Side delivery rake of the cylinder type, and (inset) the common dump rake which can compete with it only on small farms and in rolling country.

These monographs are sent to public and parochial schools in Manitowoc County and to all who are members of the Society. Persons may become members upon payment of $2.00 annual dues. Dues should be sent to Mr. Edward Ehlert, Treasurer, 1115 North 18th Street, Manitowoc, Wis. 54220.



A field of hay cocks

Some wooden hay forks.
Klofanda's Farm Museum, Chilton