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## **Manitowoc County - a leader in the manufacture of farm machinery. Monograph 8 1969**

Ehlert, Edward

Manitowoc, Wisconsin: Manitowoc County Historical Society, 1969

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MANITOWOC COUNTY-A LEADER  
IN THE MANUFACTURE OF  
FARM MACHINERY

PUBLIC LIBRARY  
MANITOWOC, WIS.

by EDWARD EHLERT

It was in 1848 that immigrants from the northern European countries began arriving in Manitowoc county in large numbers. The white population of the county in 1847 numbered 629. In 1850 it had become 3,702, and by 1860 the population of the county had increased to about 23,000. Most of these immigrants settled on the farms of the county. The population of Manitowoc in 1860 was 3,065, and Two Rivers had 1,340 people.

Most of the immigrants who arrived in the county during these years brought only their personal belongings with them; whatever tools and farm equipment that was needed to convert the forest into crop land was either made in the farm workshop or was acquired from a blacksmith in the vicinity.

These settlers were a hard working lot. They were thrifty and very ingenious. Although they were not above using their own physical labor where and when it was needed, they always looked for ways of doing things more quickly, better, and with less effort on their part. While many of the tools that were made were of European design, there were adaptations of these tools to American use. Changes in design and structure were made to suit the peculiar circumstances that prevailed here.

All of the settlers had need of a plow to turn over the soil that once had been forest. Many had brought with them seeds which they hoped to use as they planted their first crops. They were not sure whether climatic conditions would be enough like that of their European homeland. However, it seemed that success might crown their effort if they would try to duplicate those crops that could be successfully raised in about the same latitude abroad. One of the earliest blacksmiths in the county was E. J. Smalley. He set up his shop in Manitowoc with the avowed purpose of providing the settlers with those tools and equipment of which they had need. He began to make plows, and found that he

had a ready market for this piece of equipment. To make plows he needed to have as an adjunct to his shop a small foundry in which the mold board, the land side, and the plow point was made. The beam of the plow was made of wood, as were also the handles. This was no problem, for the county had a plentiful supply of oak and ash. In the early days a coulter was not used; however, with the tough soil conditions that sometimes prevailed, a knife or a disc was placed ahead of the plow point. Neither was there a wheel to aid in establishing the depth of the furrow. The farmer adjusted the depth of the furrow by application of pressure on the plow handles.

From the manufacture of plows Mr. Smalley went into the business of making equipment which would make forage more palatable to cows and horses. There were hand tools with which mangels, turnips, beets, etc. could be cut up. Feed cutters were built to cut up the hay and corn. At first the feed cutter (or hexel machine) consisted only of a table on which the forage was placed, and a "mouth" into which it was forced. A piece of steel was

placed at the bottom edge of this opening. Then a knife which resembled a sickle was provided, which was hand operated. There was an adjustment so that the forage could be cut in pieces that ranged from one quarter inch to about two inches. The length of the cut was regulated by a gauge plate. This was a line of equipment which was made through the next forty years or so. It was succeeded by what is known today as a silo filler. After a short time the knives were put on a cylinder, with two, three, or four knives doing the cutting.

In the early years of the county, farmers specialized in the production of grain such as oats, barley and wheat. These were soil depleting crops and in time crop yields began to diminish. When an invasion of cinch bugs ruined an entire crop of wheat in the early 1880's, farmers began to realize that diversification was needed. It was then that the dairy industry slowly began to grow in importance. And as dairying increased, there was a change in the farm machinery industry, too.

It was Cyrus H. McCormick who is generally credited with being the inventor

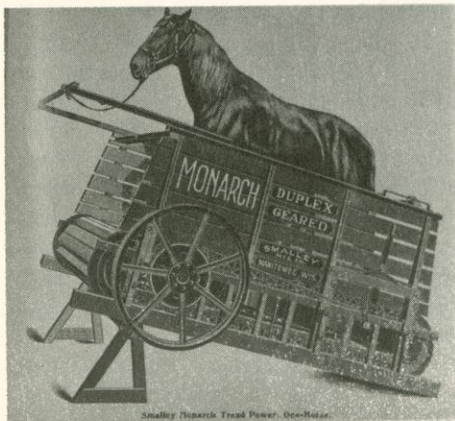




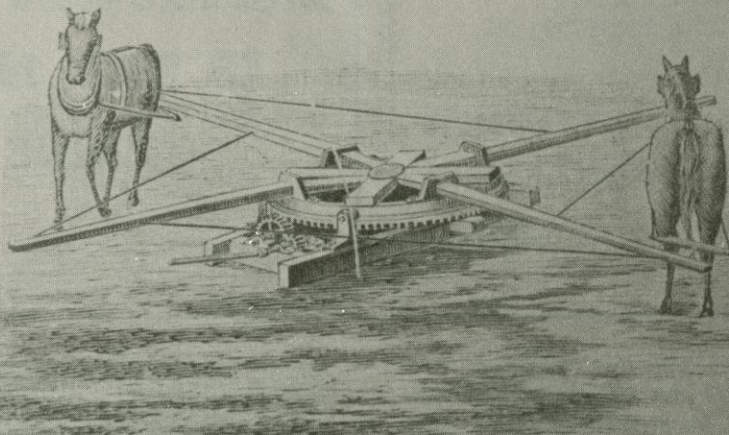
of the first reaper. His invention was patented in 1831. Several others had made reapers before McCormick, however. A man named Ogle-Brown made such a machine in 1820 and a Mr. Hussey also invented a reaper some time between 1820 and 1830. Lincoln and Stanton, in a lawsuit brought by these inventors contested McCormick's patent. They lost the case though, and thus McCormick began to manufacture farm machinery on a large scale, especially machines having to do with the harvesting of grain. Deering soon entered the harvesting machinery field, and these two companies were bitter rivals for many years. There were also many smaller companies, such as the Milwaukee Company, the Champion, the Plano, et al. which specialized in the same kind of equipment.

These grain harvesting machinery companies had aggressive sales organizations, and they did much to encourage farmers to expand on their operations. Their salesmen sometimes resorted to unscrupulous tactics, such as putting the machine of a competitor out of order so that it would not work properly. Farmers in those days generally were not experienced in the repair of farm machinery, so when a machine did not perform well, they could easily be convinced that the competitor's machine was the better one. And so a trade was made with the advantage going to the salesman, of course.

The efforts of the large farm machinery manufacturing companies to mechanize the farm operation helped the smaller companies such as the Smalley Manufacturing Company at Manitowoc and the Kaltenbrun's at St. Nazianz. These companies were careful to avoid direct competition with the larger companies, specializing in lines of machinery into which McCormick and Deering had not entered on a major scale. In this way they were able to survive the keen competition of these giants in the industry.



## Smalley Sweep Powers, Nos. 2 1/2, 3 and 4.



SMALLEY SWEEP POWER FOR TWO HORSES, NO. 2 1/2.

Weight, 760 lbs. Price, \$35.00.

### Edmund J. Smalley

Edmund J. Smalley was born in Riga, New York, on July 6, 1817. He moved to Sheboygan in 1848 and in 1857 moved to Manitowoc where he founded the Smalley Company. The company was originally known as the Smalley-Fricke Company. His wife's maiden name was Fricke. He had been married while he still lived in New York state. The Smalley's had five sons.

When Mr. Smalley came to Manitowoc he was a school teacher. During his first term he taught the school at Four Corners. He also did blacksmithing as a side line, and was a dealer in farm implements and tools.

After a year or so of teaching, the side line became his entire means of earning a livelihood. It was on June 30, 1881, that the company was incorporated, having capital stock of \$50,000. Two sons, namely Clarence and Charles, joined the father in this venture.

The motive power used in the plant had an interesting evolution. At first the only source of power was a wind mill. This operated the bellows in the blacksmith shop, and also the grindstones and emery wheels. Early in the history of the company there was a fire which destroyed the plant. When it was rebuilt, a surer source of power was sought, and at that time a tread mill was installed with a horse or an ox supplying the power. In due time a horse power was invented, and this then supplied the power with which the plant was operated. These machines became popular sources of power to operate the cutting and grinding machines used on the farms. Wood saws

were also powered by horse power. Then came the steam engine, and when this kind of power was available it was used in the Smalley Company. It was succeeded by electrical power.

From the 1880's on, the Smalley Company specialized in the manufacture of feed cutters, burr mills, corn shellers, root and vegetable cutters, circular saw rigs, drag saws, and plows.

The founder of the company, Mr. E.J. Smalley, died on August 21, 1898. His sons carried on the business after his death.

### The Smalley Line in 1902

From the beginning, the Smalley's published a catalog which described the line of farm machinery which they were producing. It was in 1902 that they issued their 45th annual catalog. It called attention to the special patents that the company held, namely the safety fly-wheel and pulley, a stop lever, an oscillating feeding device on all feed cutters, an automatic brake or speed regulator on tread powers, a silo carrier, and a saw guide on drag saw machines.

On one of the first pages of the catalog a fodder cutting machine is described which operated with a lever cutter. It is described as "a reliable machine for any man keeping one or two horses or cows." It had an eleven inch steel knife strongly bolted to the lever. By means of an adjustable gauge, the length of the cut was regulated from a length of one quarter inch to two inches. It had a five inches by nine inches throat with a shield covering it. There was a table on which the fodder to be cut was placed. The machine weighed fifty pounds. Its cost, \$7.00.



Another cutter was a "fly wheel type." This machine had one knife placed on a cylinder, which made three revolutions with each turn of the crank. It had two feed rollers. The machine was hand operated, but it could also be operated with horse power. This machine cost \$18.00.

The catalog describes an "Ensilage and fodder cutting machine." This was also operated by horse power. Sprocket wheels and link chains were used to drive the machine. The speed of the machine was from 450 to 650 revolutions per minute. Capacity was from one to two tons of green fodder per hour and it cost \$50.00.

There were some silos making their appearance on the farms. There needed to be some means to carry the cut corn to the top of the silo. A carrier was devised which was attached to the bottom of the feed cutter. It was driven by link chains. The cost of a carrier was \$50.00. A blower is also described in the catalog. It seems that it might have been a mere sheet metal box with blower pipes attached. A fan in the blower supplied the power that forced the cut fodder into the silo. Altogether there were forty one pages of the catalog which were used to describe the complete line of feed and ensilage cutters.

Several kinds of corn shellers and feed grinders are described in detail. Corn shellers, of course, were hand operated. The feed grinders were driven by horse power.

A large part of the catalog is devoted to the Smalley line of wood saws. These consist of circular or cut-off saws, drag saws, and bolting and slat saws. These machines must have been of excellent quality, for a testimonial letter, written by the F. Eggers Veneer Seating Company of Two Rivers, stated, "We are still using the No. 5 Drag saw purchased from you twelve years ago, and it has always given very satisfactory service. We do not contemplate making any change as we feel we could get no better service from a new outfit than the old saw is giving us."

An interesting machine called a wood splitting machine is pictured. This was hand operated and was designed for splitting pulp wood, kindling and fire wood. Cost of the machine was from \$190 to \$375.

The catalog described the various kinds of motive power that could be supplied to farmers. These consisted of horse power, tread power, and a steam engine. The steam engine was of either four or six horse power. Cost of the horse

powers ranged from \$45 to \$90, which included the tumbling rods, couplings, and jacks. Tread mills sold for \$120 to \$210. The steam engines sold from \$275 to \$425.

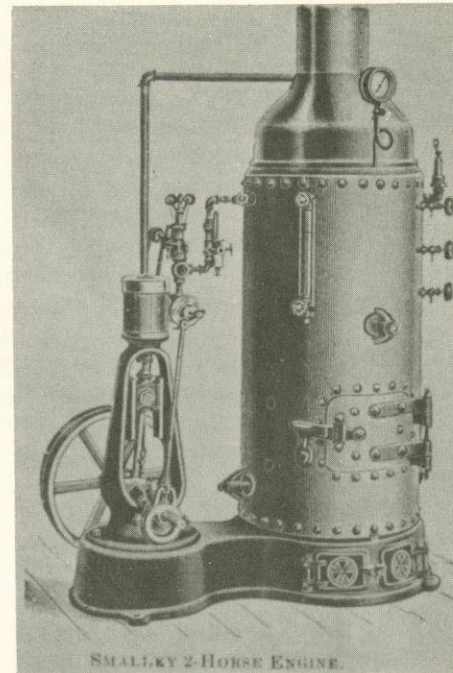
The company's line of walking plows are shown in the concluding section of the catalog. In 1902 the beam was made of steel. Various kinds of attachments could be purchased, which consisted chiefly of coulter and wheels to help in adjusting the depth of the furrow. Price of the plows ranged from \$12 to \$15. 'Tis said that in those days a person could begin farming if he had a team of horses and a plow. Obviously, the capital investment limited only a few from entering the business of farming.

Falge's History of Manitowoc County (Vol. 2) remarks as follows concerning the Smalley Manufacturing Company. "No better equipped factory of its kind can be found in the country anywhere. Today (in 1914) a hundred working men are employed throughout the year, and the Smalley Manufacturing Company has made the name of Manitowoc known from one end of the country to the other. Its present officers are Mrs. C.F. Smalley, president; John L. Smalley, vice-president; (also the designer of the machinery and in charge of construction); Chester F. Smalley, secretary-treasurer. John and Chester represented the third generation connected with the business. The value of this enterprise cannot be overestimated. Its success has been an element in public prosperity, furnishing employment to a large force of workmen and keeping in circulation a large amount of money. At its head have ever been men of marked enterprise and capability."

#### The Smalley Company Since 1928

The Smalley Manufacturing Company was reorganized in 1928. The present management of the company consists of President and Treasurer, Quirin C. Delsman; Vice-president, Mrs. Quirin C. Delsman; Secretaries, William L. Meany and James J. LaFond.

In view of the fact that the larger farm machinery manufacturing companies tended to absorb the smaller companies, it is remarkable that this locally owned and operated company should have remained in existence through 112 years. The fact that they have always produced a high quality product has given them a reputation that has served them well, and has enabled them to meet any competition that the industry has afforded. Furthermore, the company has always been alert to new trends and development



SMALLEY 2-HORSE ENGINE.

in agriculture. As they have sensed the need for change, they have changed machine designs and have added new lines of machinery. Their Ram disc is the world's first hydraulic controlled wheel type tractor weight disc. This is a machine which has a width ranging from about nine feet to eighteen feet. It is a combination disc and harrow.

The company has specialized in auger blowers for forage and grain, as well as for wagon unloaders. Their hammer mill is a machine in which livestock feed rations are ground in one operation. This machine permits a farmer to convert home-grown crops into high grade feed. A bale elevator is another of the late items in the farm machinery line. The latest to be added is their "Mix-master" which grinds livestock feed and mixes it with concentrates in one operation and discharges the mixed ration into feed bins or feed wagons.

#### Export Business

The Smalley Manufacturing Company does a considerable export business. Some years ago a shipment of one hundred hammer mills was sent to Tunis, Tunisia, in northern Africa. This livestock feed making machine was selected from a number of competitive makes because of its high performance and quality. The company exports much machinery to Canada and Latin American countries also.

#### Awards

In the Columbia Exposition held in St. Louis in 1893 the Smalley Manufacturing Company received an award "for the general excellence of its line of farm



machinery."

Another award was received from the Panama International Exposition held in San Francisco in 1915. A blue ribbon was received there "for excellence of its line of agricultural machinery."

The Brand Names Foundation on April 14, 1948 "in recognition of its continuous service to the American people since 1857," presented to the Smalley Manufacturing Company, its Diamond Anniversary Certificate of Public Service. In order to receive this recognition, the company had to submit its products for testing. Only companies having fifty or more years of successful operation were eligible to receive the award. The company, in order to attain eligibility, had to be one that had won and held public confidence through unfailing integrity, reliable quality and fair pricing. This was a very distinctive kind of award, which a few ever attain, and the Manitowoc community can feel proud that a company of such high reputation has been a part of its industrial complex through 112 years.

## THE KALTENBRUN COMPANY

St. Nazianz

The farm machine which was the specialty of the Kaltenbrun's was the feed cutter. As was stated earlier, the first of these machines had only a table on which the forage was placed, and a cutting knife toward which the forage was forced. A set of rollers had been placed before the knife, and occasionally the operator's hand came in contact with these knives, which resulted in the loss of fingers and even hands.

It was in 1896 that Mr. Anton Kaltenbrun, along with his brother, Ambrose, invented a safety feed cutter. This consisted of an automatic feed apron which carried the forage forward until a set of four rollers received it and carried it into the cutting area. Tension on the rollers was supplied by springs which were set on the top roller. Kaltenbrun received a patent on this device.

At first the Kaltenbruns specialized in the rebuilding of old feed cutters that did not have the automatic feeding equipment. However, they soon went into production of the entire feed cutter. The first machine that was made in the factory at St. Nazianz was bought by a man named Franz Schad. The Kaltenbrun plant turned out about ninety feed cutters a year, and it was such a popular machine that the supply was never able to meet the demand.

The plant was located on the north limits of the village of St. Nazianz. The complex of buildings contained a foundry where the numerous castings for the feed cutter were made, an assembly room where the feed cutter was assembled, and a sheet metal shop.

Silos were just beginning to appear on farms. At first carriers attached to the feed cutter carried the cut forage into the silo. The Kaltenbruns got the idea of conveying the silage up into the silo by means of a blower. Men named Diedrich and Holzer were prominent in this phase of the operation.

The success of the automatic feed apron was short-lived, however. A competitor received a patent for a similar type of machine with the only difference being that on his machine the tension was applied to the bottom roller rather than to the one on top. When this patent was granted, it brought on a period of illness to Mr. Kaltenbrun. During this time the company did little work on its own feed cutter. However, it remained in operation with Mrs. Kaltenbrun being in charge of business affairs. She had in her employ several loyal and dedicated workmen who redesigned the feed cutter. Among these workmen was Ambrose Kaltenbrun, the brother of the owner. In addition to several changes in design in the feed cutter itself, the men came up with a new design for a blower. This blower had two fans. One threw the cut forage upwards, and the other supplied the wind pressure to convey the materials to the top of the silo. This feature was one that could be attached to any feed cutter. The Kaltenbruns made a great number of these blowers. In 1916 Mr. Kaltenbrun obtained a patent on the New Idea Blower. It was the first blower in which a pipe nine inches in diameter was used.

Ambrose Kaltenbrun, the son of the original owner, succeeded his father in the operation of the plant. It seems that the feed cutters were of such excellent quality that farmers actually fought to get them. The Kaltenbrun shop is still in operation. In 1946 a new type air-force grain blower was designed and added to the line of farm machinery in which the company specialized.

Today the company specializes in the repair of silo fillers, and in blowers for these machines. They also manufacture chains for spreaders.

## THE MILLER FARM IMPLEMENT COMPANY

Farmers in Manitowoc County recognize "Miller of St. Nazianz" as one of the long time dealers in farm machinery in this area. This company was formed in 1901 by John Miller, Sr., and his son John Miller, Jr., and Peter Miller. An old public school became the first building in which the company did business. The school was bought for \$500 and the company invested about the same amount of money in stock with which to begin the business. Previous to beginning this business venture, Peter Miller had been employed as a tinsmith at the Kerscher Company at Manitowoc. In the early years of the business, gasoline engines were a popular item. Hand pumps were installed. Large milk cans were another popular item.

In these years St. Nazianz had three dealers in farm machinery. These were Mr. Backhaus, Mr. Luloff and Mr. Miller. Each had the franchise to sell the machinery of a different company.



First Kaltenbrun Factory



The farm machinery "war" ended when the Morgan Company of New York (investment financiers) supplied the money to form the International Harvester Company. McCormick and Deering were the major companies in this transaction. However, a number of smaller companies either were purchased by "International" or were absorbed by the company. Since the three dealers in St. Nazianz sold machinery that was made by the same company, only one of the firms could have the franchise for the area. It was therefore necessary that two of these dealers move. Mr. Christel, who had succeeded Mr. Lulloff moved to Valders, where he has been ever since. Mr. Lulloff moved to Kiel.

Three generations of the Miller's have been in the farm machinery business since 1901. The design of the International grain binder remained unchanged from 1923 through 1936, and the price was also unchanged in this period. However, since that date there have been regular changes in both design and price. The Miller's pioneered in many corn equipment innovations. They sold the first power take off machinery, three wheeled tractors, rubber farm tractor tires, and self-propelled combines.

### Summary

There have been great changes in farming methods in the last one hundred years. From the period when most of the operations were done with only a few crude tools, the time has come when

farms have become highly mechanized.

The changes that have come about in farming methods during the last century are reflected in statistics such as the time needed to produce a ton of timothy hay. In 1860 it took thirty five hours to mow, rake, load on wagons, and store in mows a ton of timothy hay. In 1946 it took 2.8 hours. The improvement is further reflected in these additional statistics:

	HAY		Yield in Tons
	Man	Hours per Acre	
1910 .....		11.9	1.15
1925 .....		12.0	1.22
1935 .....		11.3	1.24
1945 .....		8.4	1.35
1955 .....		6.0	1.61
1967 .....		5.5	1.84

In 1870 there were 6.5 million people who worked on farms, in 1945 there were 8,200,000 workers, and 1967 there were 4,903,000 workers on farms. Today there are 3,157,854 farms in America. Crop yields have increased to a point where fewer acres are needed to produce the food which America needs.

Statistics further show that fewer people are producing more and more food; in fact, production has reached the point where there are surpluses in many areas. This has resulted because of the use of better seed, better tillage practices, soil that is more aerable and fertile, better harvesting methods, and better control over insects and plant diseases.

Farm machinery improvements have had a great part in increasing the produc-

tion of our farms. A writer in National Geographic magazine made this observation, "If the wheat crop harvested in the United States with equipment and methods of 1850, the services of every able-bodied person in the United States would be required to produce this crop, and there would be a need to import many more persons in addition to these." This indicates how greatly we are indebted to the manufacturers of farm machinery. Theirs is a contribution toward better living which so very often we are inclined to forget.

Because of the contributions made by manufacturers of farm machinery, farmers have been able to earn more with less labor. And the consumers of the products of America's farms are able to have a diet which makes them the best fed people in the entire history of the human race. Grocery stores carried some 867 items in 1928, compared with 7,350 in 1967 and a predicted 10,000 by 1970. While the cost of living is constantly going up, food prices still are low enough so that even the poorest among our people are able to enjoy a healthy diet.

The farm machinery companies of Manitowoc may be small in the total production of farm machinery. However, each one of them has made a significant contribution, and it behooves us to hold in remembrance what they have contributed. We have every reason to be proud of the fact that in our county there have been some who have contributed mightily toward the better life that is enjoyed on the farms. As our farmers have pros-

State of Wisconsin,  
County of Manitowoc.

### VILLAGE MARSHAL'S OFFICE.

Manitowoc, Sept. 15<sup>th</sup> 1859.

Received of *E. J. Smalley* *17*  
for all General, Highway and ~~Washington Square~~ Tax levied by the Village authorities of Manitowoc Village in the year 1859, and also for all delinquent Bridge and Street Tax, on the following property, to wit:

Description and Number of Lots.	Blocks.	T A X.		Remarks.
		Dollars.	Cents.	
<i>Personal Tax</i>		<i>8</i>	<i>5</i>	<i>17</i>

*Mrs. Bigel*  
Village Marshal.



pered, so also have those who live in our cities. The contributions of the Kaltenbruns and the Smalley's justify recogni-

tion and remembrance.

"It is not known where he that invented the plow was born, nor where he

died; yet he has effected more for the happiness of the world than the whole race of heroes and conquerors."

-An anonymous quote.

STATE OF WISCONSIN, }  
MANITOWOC COUNTY.

Town of Manitowoc Rapids, Jan 20 1897

\$ 13 67/100  
Thirteen 67/100

Received of E. J. Smalley

Dollars, in full payment of all taxes charged on the

following described property, on the Tax Roll of the above named Town, for the year 1896.

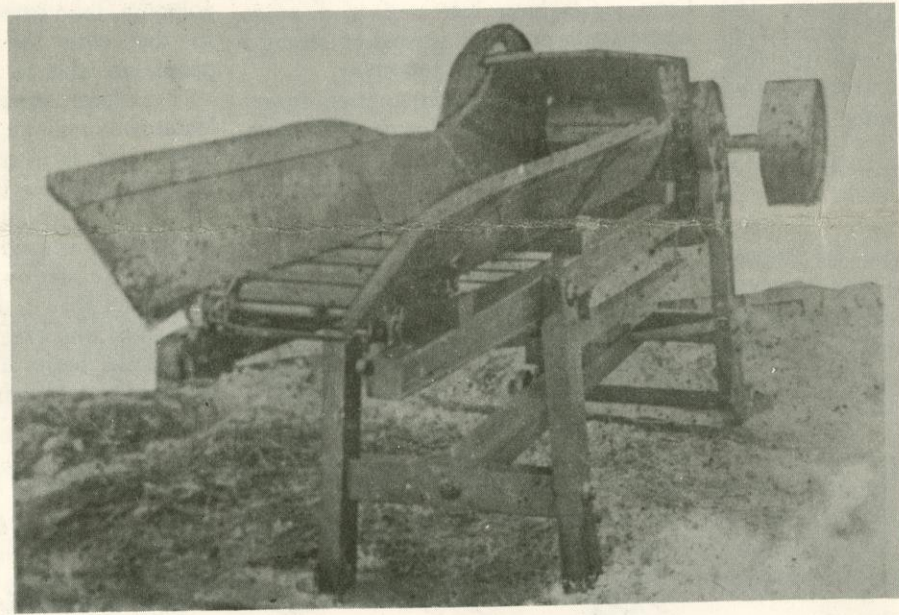
BRANDY PRINTING & BINDING CO. Taxes unpaid previous years.

All of S 24 1/4 S 24 1/4 being S of N 24 1/4 RR and 23/100 W N 24 1/4 S 24 1/4 E of N 24 1/4 RR.  
Gov lot no 5 Sub of 8 1/2 N 24 1/4 Personal Property, \$  
As Dir Page 277 Vol 48 Seeds

DESCRIPTION.	Sec.	T.	R.	Acres.	Lot.	Block.	Valuation	State, County School and Town Taxes.	School District Tax.	Road District Tax.	Fees.	Total Taxes	Taxes unpaid previous years.
	12	19	23	21	7/100		420	445	92		26	563	
	13	"	"	16	73/100		500	530	109		31	670	
	"	"	"	5	4/100		150	106	22		6	134	
												13.67	

John Blum

Town Treasures.



Kaltenbrun's feed cutter with first automatic feed apron.

MANITOWOC COUNTY  
HISTORICAL SOCIETY

Address all Communications to:

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1115 North 18th Street  
Manitowoc, Wisconsin 54220



Send To:

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Manitowoc, Wisconsin

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