

# WATERLOO BOY

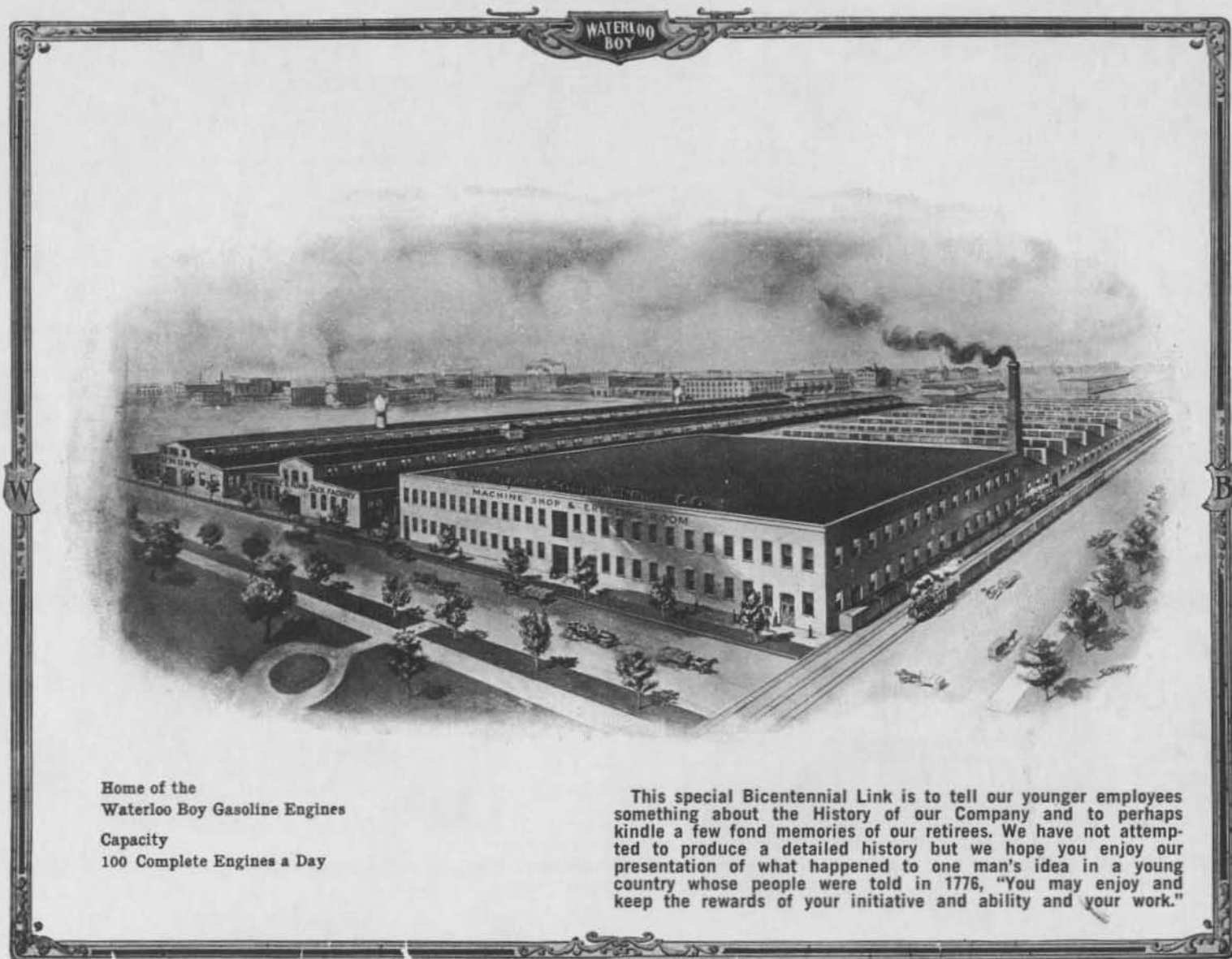


GASOLINE  
ENGINES



MANUFACTURED BY  
WATERLOO GASOLINE ENGINE COMPANY  
WATERLOO, IOWA.





Home of the  
Waterloo Boy Gasoline Engines

Capacity  
100 Complete Engines a Day

This special Bicentennial Link is to tell our younger employees something about the History of our Company and to perhaps kindle a few fond memories of our retirees. We have not attempted to produce a detailed history but we hope you enjoy our presentation of what happened to one man's idea in a young country whose people were told in 1776, "You may enjoy and keep the rewards of your initiative and ability and your work."

The history and progress of Waterloo is inextricably woven with the history of the farm tractors and manufacturing. The impact of the agricultural tractor in Waterloo began with John Froelich, a man with a revolutionary idea and John Deere, the man that gave to the world the steel plow.

Let's start out with a quick backward glance at the chronological history of Waterloo.

July 18, 1845

The first "Prairie Rapids Crossing" settlers arrived. The party was composed of George Washington Hanna, his wife, Mary; their sons John Quincy and James Monroe and Mrs. Hanna's brother, John Melrose. They had carried all their possessions from White County, Illinois in one wagon pulled by a single yoke of oxen.

1846 It was the eve of the Mexican War. James Polk was President and Iowa became a state.

1851 A post office was established. "Prairie Rapids Crossing" received its new name—"Waterloo."

1854 The plat of Waterloo was filed. Its boundaries enclosed an area of less than 3 square miles and it had a population of 200.

1855 Waterloo was chosen site of county seat.

1856 Some river commerce commenced between Cedar Rapids and Waterloo as the paddle wheel steamer, **Blackhawk** plied the waters of the Cedar.

1861 Dubuque and Pacific Railroad reached Waterloo—followed later by its division office and shops.

1891 E. F. Rath and John Rath built the Rath Packing Co. on the banks of the Cedar River.

Then, in 1892 we meet John Froelich. Around 75 to 80 miles northeast of Waterloo at Froelich, Iowa, the grain elevator man—John Froelich was picking up extra income with a well digging outfit and by taking "runs" in Iowa and South Dakota during the harvest season with his strawburning, hissing, panting, whistling steam traction engine and threshing rig. Well, John had an idea . . . he wanted to invent a small traction engine that would run on gasoline and do the work of horses! It is said that townspeople had an idea too. They thought old John had too much sun.

But John did not have a touch of the sun . . . he knew about steam engines from experience. They were heavy and bulky, hard to maneuver. They were always threatening to set fire to the grain and stubble in which they worked—and on flat prairie, with a wind blowing, that was no joke. Froelich believed that he could build a gasoline traction engine—or tractor—that would remove all these drawbacks to mechanical power.

The two halves (gasoline engine and traction device) didn't fit together too well. In fact, in most respects, they didn't fit at all, and Froelich and his helper, William Mann, had to design many new parts. It took time to figure out everything. But the day came when the hybrid was assembled and ready for trial.

Froelich tugged at the massive fly-wheel. The machine wouldn't start. No matter how hard Froelich and Mann yanked on that fly-wheel, the machine simply wouldn't start . . . and somewhere among the spectators, there was a snickered "I told you so!"

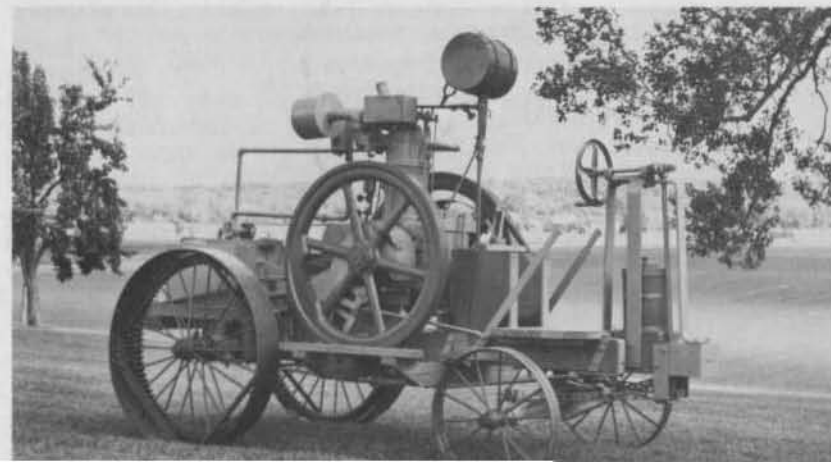
Then Mann had an idea.

He twisted the bullet from a rifle cartridge, wedged the cartridge in the priming cup, hit it with a hammer.

With a cough and a roar, the one lungner came to life. The flywheel began to spin . . . horses reared and tried to pull loose from a nearby hitching rail . . . "I knew old John'd do it!" shouted the onlooker, who a moment before, had started to scoff.

Froelich, on the driving platform, gingerly eased his invention into gear. It lurched forward. He tried reverse. The machine clanked backward.

**THE FROELICH — built by the Waterloo Traction Engine Company.**





Out on the road he went, and to a farm where a neighbor was threshing grain. The hybrid was substituted for the steam engine. It did the job.

A few weeks later, Froelich and his crew started for the broad fields of South Dakota with the gasoline tractor and a new threshing machine.

That fall they threshed 72,000 bushels of small grain.

Success seemed assured.

Froelich went to work to organize a company to manufacture gasoline tractors. Since Waterloo offered good rail service and some manpower, the little company decided to locate its factory here. A wood frame building was erected.

The company was named the Waterloo Gasoline Traction Engine Company.

But efforts to build a practical tractor failed. Two were sold but they were returned.

The company decided to manufacture stationary gasoline engines in order to have some income while tractor experiments continued.

In 1895 the Waterloo Gasoline Engine Company was reorganized by John W. Miller but John Froelich whose interest was in tractors, not stationary engines, withdrew.

The new company began in a very small way occupying the small two-story building 50 feet wide by 100 feet long. The building was located at Third and Cedar Streets and housed a scant 20 employees.

In the early days of Waterloo, the present site of the down town plant was a duck pond! A portion of the ground was used for several years as a league baseball park. There was also a horse and buggy bridge over the Black Hawk on

Avalon Avenue, a favorite route for young gentlemen to take their young ladies on Sunday afternoon drives.

The Waterloo Gasoline Engine Company continued the building of stationary engines of varying horsepower (1½ to 12) with increasing success. The engines were used in elevators, pumps, etc. In 1896 the company offered an improved tractor. It was a good job for those days. But the world wasn't quite ready for gasoline tractors. Only one was sold.

In 1897, another tractor was designed. Again only one was sold. Demand for stationary engines, however, had become so good that a new factory and foundry were built.

The Waterloo Gasoline Engine Company also began manufacturing two cylinder automobiles. Space limits and the mounting demand for stationary engines made it necessary to discontinue that project after only six automobiles had been sold.

But tractor experiments continued. None was successful until in 1913, the company offered the Model "LA", a two-cylinder opposed engine on a four-wheeled chassis. **Twenty tractors were sold ! !**

Early the next year (1914) the company brought out the Model "R" single speed tractor (the first Waterloo Boy Tractor). Farmers liked it. Within a year sales reached 118.

Design was modified, largely on basis of users' suggestions and by the end of 1918, the company had sold 8,076 Model "R" Waterloo Boys.

Meanwhile Deere and Company, of Moline, Illinois had been watching the progress of the Waterloo



**A consistent winner in early field demonstrations, the Waterloo Boy rated high with farmers eager to mechanize their farm operations.**

Engine Company and the mounting quality of its product with interest. There was much competition and rivalry in early days of Tractor manufacturing. Demonstrations were conducted throughout the country in all kinds of weather conditions and in all sorts of soil. A section of land was used in these demonstrations. Machines would be lined up and a furrow would be plowed the full length of the section. The starter would fire a pistol and the winner would be the tractor that plowed its area the quickest.

John Deere had a representative at all of those demonstrations and found that the Waterloo Boy had the best record. Farmers were really in the market for tractors—and Deere was anxious to add a quality farm tractor to its line. The purchase of the Waterloo Engine Company with its many years of experience, was the logical step. This took place on **March 14, 1918 to the tune of \$2,100,000.** The purchase brought the plant facilities and employees of the Waterloo Engine Company into the John Deere organization.

(It is interesting to note that the first cooperative Tractor catalog included reference to tractors produced by 62 manufacturers. By 1917, 85 new manufacturers started manufacturing tractors. From 1921-1929, the number of manufacturers fell from 186 to 47.)

The new Deere family member had a factory capacity of a hundred stationary engines and 20 tractors per day. It had 1,000 employees and the annual estimated payroll in 1919 was \$1,090,000. The plant had a one-story main building about 1,000 feet long which housed the machine house, a forge shop, heat treat building and foundry. All in all, the physical plant comprised about 50 acres.

Now what about this John Deere Farm Equipment Manufacturing Company that had purchased the Engine Company?

Deere & Company was founded in 1837 by a young Vermont Blacksmith who had journeyed West as far as Grand Detour, Illinois to find work and fortune. He did both—the latter by perfecting a desperately needed self-polishing steel plow. The plow was in instant demand by prairie farmers and Deere was forced to enlarge his shop. By 1845, he was producing 1,000 plows a year. (Remember this was one year before Iowa had become a state and ten years before Waterloo became the county seat).

Realizing the restrictions to manufacturing in Grand Detour, John Deere selected Moline, Illinois for his new location for the growing industry. This was in 1846. Each succeeding year saw a need for expansion and in 1868 John Deere reorganized and incorporated his plow company under the name



**Waterloo Gasoline Engine Company purchased in 1918 by Deere and Company. This facility was located at 3rd and Cedar Streets.**

of Deere & Company and future plans were made to carry a full line of farm equipment.

John Deere, the man, passed away in 1886, (six years before John Froelich built his first tractor) but the company continued to grow and in 1910, six farm equipment firms were purchased by the company. Each manufacturing company added to the house of Deere had been first in the field with an implement—the perfection of which had brought it preeminence. The purchase of the Waterloo Gasoline Engine Company in 1918 continued that practice.

Following the purchase of the Waterloo Company, the tractors continued to be known by the name of "Waterloo Boy". But with the end of World War I and the nation shifting from a wartime economy to a peace time economy, a depres-

sion followed and the company saw some pretty lean years. Then in 1923, the first of famous two-cylinder John Deere tractors—the Model "D" was introduced. Among other accomplishments, it would pull a 4-bottom plow, cover 15 acres a day with disc tiller, 100 acres with a single disc and operate a 28" thresher. Few, (if any) tractors of whatever make or model have been so popular.

The general purpose tractor was introduced in 1928 and the capacity of the plant increased 150%. In 1932, the heart of the depression, John Deere added the Model "A" tractor. The years from 1940-1946 found Deere's a major producer of War Materials. Here in Waterloo, transmissions and final drive assemblies for tanks and parts for Grumman Airplane Plants were manufactured. Our people

## THE FAMOUS JOHN DEERE MODEL "D"

SUCCESSFUL

EFFICIENT

SAFE



**THE TWO CYLINDER MODEL "D".** Its simplicity of design and rugged construction assured long life and dependability for thousands of farmers throughout America and abroad for three generations.

on the Home Front received several production awards for meritorious service from the Army and Navy.

The years 1946-1955 were transition years with the company busy producing badly needed farm tractors.

In 1956, Deere and Company opened the 850 acre Product Engineering Facility in Cedar Falls, just a few miles from Waterloo where new products are designed and tested. The growth of this facility in itself is of much importance to Waterloo and Cedar Falls. We have about 900 employees in this facility with perhaps 200 graduate engineers.

The year 1960 saw a giant step by the Tractor Works when it moved from the familiar Putt-Putt sound of the two-cylinder to the four- and six-cylinder big hp tractors that have become known as the New Generation of Power. These tractors were born in the JDWTW Product Engineering Department.

The "downtown" manufacturing facility occupies about 320 acres of land—including the area across from the Electric Park where our multi-million dollar electric foundries "8001" and "8002" are located. The newest installation, 8002 provides 580,000 additional square feet. Both Foundry 8001, in operation for about three years and Foundry "8002" (when completed) contain the most modern equipment known in the foundry industry.

In addition to the John Deere Waterloo Tractor Works facilities, the John Deere Engine Works located on a 189 acre parcel of ground near De Witt and Ridgeway

roads began manufacturing operations in 1975 in a huge ultra-modern 924,000 sq. foot facility.

The latest (December 1975) addition to Deere and Co. Waterloo is about 1300 acres, located in N. E. section of Waterloo—bounded by Donald Street on the North; Elk Run Road on the East; Newell Street on the South and the former Waterloo City limits on the West.

The first development on the site probably will be a warehouse. Eventually, 10,000 persons or more may be employed by the new facility.

**These statistics offer some idea of the economic impact of the growth of John Deere in the Waterloo area.**

### Employment:

1895	20 employed
1919	About 1000 employed
	\$ 1,090,000 payroll
1950	About 6500 employed
	\$ 19,492,000 payroll
1970	About 8000 employed
	\$ 73,941,000 payroll
1975	About 11700 employed
	\$185,840,000 payroll

### Property Taxes Paid:

1930	\$ 47,400
1960	\$ 881,400
1970	\$2,042,290

John Deere Waterloo is part of a dynamic challenging organization. It has been successful, but past success does not insure success in the future.

It's greatest asset over the years has been its employees. The best type of employees are those who care—those who when they see a problem contribute to the solution. John Deere has had those kind of employees.





**THE 1930's.** Notice the parking lot, located where office Building now is and take particular note of the saw tooth buildings on Miles (Westfield Ave.) Street. Fishing the back waters was always good. But the problem was keeping the fish from lunch time to check out time.



**WW II DAYS.** Sign above clockhouse reads "You're in the war too!" 'Member Nanke's Smoke Shop—the House Cafe—Arends Lunch—the Myrsiades Brothers, the Diamond Cafe, Model A's . . . and parking? Some things never change.



Today — grandsons of employees that helped manufacture the Waterloo Boy and Model "D" are building giants of the industry like this Four Wheeled Drive 8630.

