

By MARKHAM W. HISLOP

## FARM TECH AND TIMES

# No profit from agricultural inventions

**"P**eople who are inventive are often lazy," said Tobias Nelson Bjorndahl, a Watrous farmer, businessman and inventor. His inventions ranged from a grain saving attachment for early combines to a sprinkler for curling ice. Some of Bjorndahl's innovations were patented, but none were ever manufactured in large quantities or made a profit for their creator. However it never stopped Tobias Bjorndahl from tinkering and improving.

Bjorndahl was born in 1875 in Norway. He immigrated with his family to North Dakota in 1882. The original family name was Nels, but American immigration officials added the suffix "son" for the four boys. A different official decided that Nelson was too common and forced Tobias' father to choose yet another surname. He decided upon Bjorndahl, which is Norwegian for Bear Valley, their home in Norway. All of the family was given the same middle name and surname.

In 1903 Tobias Bjorndahl and several young Norwegian immigrants journeyed to Canada looking for a homestead. They found good land near Manitou Lake. The area was not yet open for filing so they returned to North Dakota. The next summer they returned to claim a quarter section, build sod shacks and moved their families in the fall (Bjorndahl had married Julia Johnson in 1899).

Since Davidson was the nearest town, 51 miles southeast, the enterprising young man decided to found one. He applied for a post office with the name Mandal and became the new village's first postmaster.

Bjorndahl also opened a general store and blacksmith shop. The store's initial inventory consisted of \$50 of notions Julia had purchased in Winnipeg on their

way to the homestead. A school board was elected and one of the three trustees was Bjorndahl.

A few years later the Grand Trunk Pacific surveyed the area for its new line and decided on a site one mile northwest of Mandal. A location near a railway stop was greatly to be desired: since the GTP would not come to Mandal, the village came to the railway. All buildings, including the Bjorndahl store, were moved to the new site, named Watrous after one of the GTP directors.

Around 1910 Bjorndahl sold the farm and the store and set up a machine shop. Machinery had always been his first love and now he had time to pursue inventing. His first patent was awarded in 1913 for a dump rack. Most farmers obtaining a patent employed lawyers in Winnipeg because of the complicated procedures, but to save money Bjorndahl made all the patent applications himself.

The success of the patent application encouraged him to form a company name, TNB Manufacturing, to produce the dump racks. There were only two other shareholders: Donald McDonald, a storekeeper and good friend of Bjorndahl's, and J. A. Speers, a furniture store owner and also

a director in the infamous Farmers' Machine Company, which at that time was being accused of swindling farmers in a stock scam. The company started with very little capital and the factory was Bjorndahl's machine shop. Only about 20 dump racks were ever sold, one apparently as far away as Kindersley.

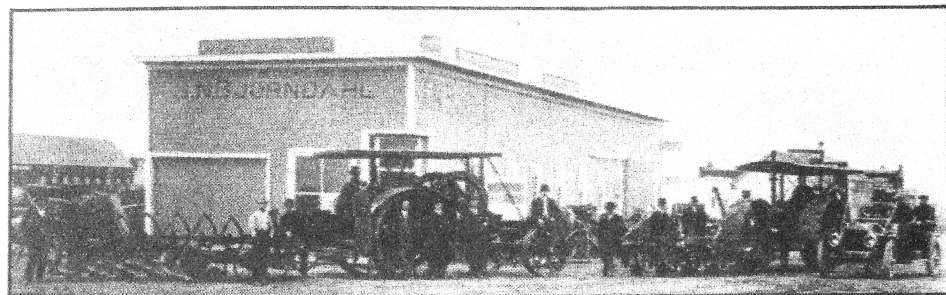
TNB Manufacturing struggled along until about 1920, when Bjorndahl turned his attention full time to his machine shop. He operated a number of dealerships from the one shop: Rumely and Minneapolis-Moline Farm equipment and Dodge Brothers automobiles.

He was passionate about curling. Bjorndahl is credited with devising a sprinkler for applying pebbling and a ice scraper and sheepskin for cleaning curling ice. The latter was supposedly widely used until the mid-1970s, though Bjorndahl received neither credit or profit from his invention.

In the 1940s the Watrous inventor contrived his most popular device — a grain saver for combines. The grain saver was a screen or sieve that attached to the tailing chaffer. It enabled farmers to increase the wind on the blower without a consequent loss over the back, as was usually the case. As one farmer boasted in a published testimonial, "This extra application of wind definitely makes for more and cleaner grain in the hopper and I highly recommend said device to any grain farmer." Farmers estimated they save as much as two bushels or 20 pounds per acre, which at even \$1 a bushel wheat was a very good return on the \$25 investment.

Agricultural engineering professor Evan Hardy of the University of Saskatchewan helped Bjorndahl with the design. Hardy was sent a model of the grain saver in 1941 and made some suggestions which were later adopted.

TNB Machine Shop began manufacturing the grain saver in 1947 and it appears to have been popular with area farmers until the early 1950s. An unfortunate accident ended Bjorndahl's career as an inventor and manufacturer. He was walking home at dusk and fell into a deep hole in the path, bumping his head and suffering a concussion. He was more than 70 years old and never fully regained his faculties. ■



T. N. Bjorndahl's machine shop in 1910.