Background Notes on the Bourne Lister Cultivator

PATRICIA M. BourNE and A. BOWE R SAGESER

IN the drier regions west of the Missouri river, corn was frequently planted by the lister planter. The lister planter, in reality a double-moldboard plow with a drilling device for the seed, was used extensively in the lighter soil areas of Kansas. It presented the advantages of increased yield, resistance to drought and wind erosion, and reduced operating costs. It was adopted by many farmers before a tool suitable for cultivating the ridges and furrows had been developed. The farmer depended on the existing tools which were inadequate. Consequently, there was a real need for a new lister cultivator. Midwestern farmers experimented with adaptations for the existing corn-cultivator and eventually invented several new machines more adaptable to this particular type of cultivation. Interest in the development of a lister cultivator ran high during the period 1883-1900.

The history of the lister planter and the general evolution of the lister cultivator has been described thoroughly by James C. Malin in his study, Winter Wheat in the Golden Belt of Kansas. The purpose of this brief report is to relate the personal factors and the motivating influences around one particular invention by Daniel M. Bourne of Cool, Kan.

Among the early settlers who made their homes in and near the Solomon valley were Mr. and Mrs. Daniel M. Bourne, who came to Kansas in 1876. The story of this family is typical of many frontier families. Daniel Montague Bourne was born near New Bedford, Mass., December 27, 1848. When he was four years old, he moved with his parents, the Franklin Bournes, to Oshkosh, Wis. He was married to Amelia Jane Spencer of Stockbridge, Wis., on September 26, 1875. According to Amelia Bourne:

There was a lot of advertising being done and it sounded like the Solomon Valley flowed with milk and honey. So Daddy decided he would come out and see for himself, and he was so taken with the country that he bought the farm which we still own.

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2. Children born to this family were: Lena, 1876; Harry, 1877; Bessie, 1879; Richard, 1881; Gordon, 1883; Bert, 1892; Essie, 1898.—From family records.

In late September, 1876, Mr. and Mrs. Bourne and their baby daughter arrived by train in Solomon. Their new homestead was 40 miles northwest of Solomon. Bourne had purchased in the spring of that year the rights of an original homesteader for the sum of $600, having paid $100 down with the balance due the first of October. This quarter section was located three miles east and three miles north of Delphos, in south-central Cloud county. Family records show that the Bournes experienced the usual problems typical of such a frontier community. In time, Bourne enlarged the farm holdings.

However, Bourne did not limit himself entirely to farm work. He became interested in a general store and post office in the Cool community. Near the store was a stone house and a blacksmith shop. This small village was located eight miles north of Delphos and four miles east and two miles north of Glasco. In the fall of 1883, Bourne mortgaged his farm for $1,500 to buy the business at the country store, and the family moved to the new community. The local press frequently spoke of Bourne as “the Cool merchant.”

Bourne found that he enjoyed the work of a blacksmith. He began his blacksmithing career at a time when there was a great deal of demand for a lister cultivator. From his own experience and from that of his farmer neighbors, he knew that no implements, up to this time, would adequately control the weeds in the rows and the ridges. He set himself to the task of making a shovel that could be attached to the shank of a regular cultivator. He soon named this shovel Bourne’s Wing Bull Tongue for cultivating listed corn.

After making several sets of shovels for the local farmers, Bourne decided to patent his invention. He secured the services of Munn & Company of New York, publishers of the Scientific American. The patent was issued December 14, 1886. Two weeks later the Scientific American published a lengthy description of the new invention. At the time, patent attorneys advertised extensively in the local newspapers, and the following week, the description was reprinted in the Glasco Sun.

According to the Scientific American, the chief objects of the invention were “to provide a shovel that will cultivate the bottom of

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4. From an interview with Mrs. L. H. Cool. The buildings were owned by Frank Wilson of the Cool community. Mrs. Cool’s maiden name was Bessie Bourne—See Footnote 2. She married L. H. Cool of that community and lived near the site of the Cool store and post office.
5. Glasco Sun, January 1, 1887.
6. Ibid., May 28, 1887.
7. The patent is now in the possession of Bert A. Bourne, Delphos, Kan.
9. Glasco Sun, January 8, 1887.
D. M. BOURNE.
CULTIVATOR.
No. 354,381.
Patented Dec. 14, 1886.

Fig. 1.

Fig. 2.

Fig. 3.

WITNESSES:

INVENTOR:

BY

ATTORNEYS.
the furrow, and at the same time trim the edges.” 10 The description likewise stressed that the shovel could be used on the riding or walking cultivator. The accompanying diagram of the Bourne model shows the chief problems of design. Figure 1 shows how the shovels would operate in the lister row.11 Figures 2 and 3 show how the shovel was curved and pointed to work more effectively in the row and on the sides of the ridges.

After securing the patent, Bourne advertised the invention in the local press. Usually a modified drawing of Figure 1 was used by the printer. The shovels sold for three dollars per pair. The advertisements, like many others, carried indorsements by local users of the new shovel.12

The Wing Bull Tongue had to compete with several other lister cultivators. The Clyde Carriage Company sold the Kirlin listed corn cultivator and many farmers endorsed the success of this machine.13 The rate of invention was high. The January 27, 1887, issue of The Republican-Empire, Concordia, published a list of Kansas inventors. On this list were a cultivator, a planter and a harrow patented by F. M. Douglas of Seneca, and a garden cultivator and a seed drill patented by C. C. Hunter of Concordia.

Family records offer no evidence as to the number of shovels made by Bourne, but there was sufficient blacksmithing business to enable him to hire a clerk to help run the store. Bourne did not find a manufacturer to produce his machine. Soon his invention was replaced by a better one. In fact, most of the inventions were replaced by the disc sled-type cultivator.

The years following the Bournes’ entrance into the store and blacksmithing business were years of general hard times. Few people could pay their bills, and Bourne carried too many accounts on his books. He eventually closed the store and the family returned to the farm. They were not free from debt until 1898.14

While Bourne’s invention was not a great success, his experience brings out more clearly the role of the local farmer in the inventive process. Then, as now, many of the machine problems were solved on the scene. Daniel M. Bourne was one of many who tried to meet the need for more adaptable farming machinery in a pioneer country.

10. Scientific American, loc. cit.
11. Photograph of the original patent.
12. Glasco Sun, May 25, 1887. This particular advertisement carried an endorsement by Frank Wilson of the Cool community.
13. Clyde Herald, April 20, 1887. This machine had been in use for three years.