

The Plow That Conquered the Prairie Sod

By ELMO SCOTT WATSON

THE pioneering Easterner, recently arrived in the new state of Illinois, looked with glowing eyes out over the broad expanse of open prairie.

"Why!" he exclaimed, "thar ain't no stumps to plow around!"

But he soon learned their absence didn't necessarily mean that his task of tilling this rich virgin soil was an easy one. True, here he wasn't in constant danger of being jerked from his feet and flipped through the air when the point of his plow struck a concealed root, as had happened so often back there while his yoke of plodding oxen wound in and out among the stumps of newly cleared timberland. Nor did he have to worry about a broken plowshare and the delay in his work until he could repair the damage done by that root. But there were plenty of other difficulties.

This sod, tough with the toughness of thousands of interlaced roots of the tall rank-growing grass, was very different from the loose gravelly soil he had known back East. Even when he used one of these great prairie-breaking plows, drawn by three yoke of oxen, its wooden moldboard, plated with iron strips, found this virgin land a hard foe to conquer.

It was rich soil—there was no doubt about that—rich with its decayed vegetation of a thousand years, and a man could raise marvelously abundant crops of wheat and corn on it. But there was no drainage and the heavy loam clung to the iron-shod moldboard where, as one plowing pioneer said, it "stuck like Brother Jonathan's gluepot." So always he had to carry a wooden paddle with him. Then, when his straining oxen couldn't pull forward another step, he'd have to jerk the plow out of the ground and clean it off with his paddle. But it was only a few minutes more until the sticky mud had rolled up on the plowshare like balled snow on a man's boot-heel and the cleaning process would have to be repeated all over again.

Under such conditions it looked as though these prairie lands, rich as they were, could never be farmed satisfactorily. Then, in 1837, just a hundred years ago, a Yankee blacksmith changed all that. He gave them a plow that would "scour" itself. His name was John Deere and he was the "Father of the Steel Plow."

The plow of the Eighteenth century American was a crude affair, differing little from that of his English ancestors. It had a wooden moldboard, usually with plates for turning the furrow. Often there was only a single handle which left one hand of the plowman free to guide his team of horses or to whack his yoke of oxen, but eventually he learned that he could do a better job with a two-handled plow. Even then his implement did little more than scratch the surface of the soil.

The First Iron Plow

In 1797 Charles Newbold of New Jersey completed and patented the first iron plow cast in a single piece but a strange superstition prevented its general acceptance. The farmers of that day believed that a cast-iron plow poisoned the soil so that only weeds would grow in it and Newbold, who had sunk a small fortune in his invention, knew the bitterness of having it rejected by the men whom he had hoped to benefit.

Two years later the versatile Thomas Jefferson, working out his theories by mathematical calculations, published a scientific discussion on the proper shape for a moldboard. One of the many men who carried on a correspondence with the "Sage of Monticello" was Jethro Wood, a Quaker living in New York state. Making use of Jefferson's ideas, Wood patented in 1819 an improved cast-iron plow. Where Newbold's plow had been cast in a single piece, Wood's was so devised that the parts which were subjected to the greatest wear could be replaced when worn out or if one of them was broken.

The Quaker inventor was luckier, too, than the New Jersey man had been in issuing his model at a more favorable time for its acceptance. By the beginning of the Nineteenth century interest in improved farming methods was quickened, stimulated by the founding of agricultural societies. One of them was the Berkshire Agricultural Society in Massachusetts, founded by Elkanah Watson, who would become the "Father of the County Fair." Another was the Agricultural Society of Philadelphia which offered prizes and medals to stimulate agricultural experimentation. On one side of its medals was engraved a plow and



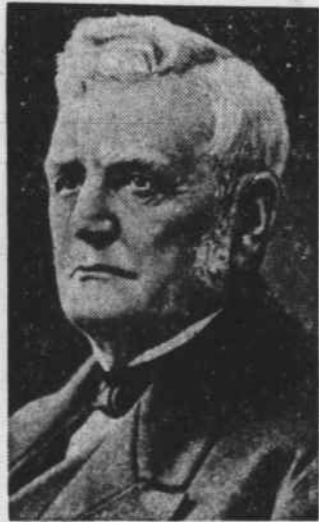
June Ohrstrom examines what has been preserved of one of the first three steel plows made by John Deere in 1837.

oxen at rest with this motto: "Venerate the plough."

Other inventors and manufacturers began to copy Wood's model and he spent so much money defending his rights that he died an impoverished, embittered man. But he had done so much to break down the prejudice against iron plows that by 1825 they were in general use. Plowing matches were held at county and state fairs to determine the best makes, new patents were taken out and new models were hurried on the market.

The Rush to the Middle West

By this time, too, the influx of settlers into the Mississippi Valley was in full swing. The Indian menace had been removed when the Winnebago uprising in 1827 was crushed at its beginning to be followed five years later by Black Hawk's futile effort to stem the tide of white invasion. Thousands of New Englanders and other Easterners packed up their belongings and headed west. From across the Atlantic, from Germany and Ireland and Scandinavia, came thousands



JOHN DEERE
"The Father of the Steel Plow."

more—the vanguard of foreign immigration to the "Promised Land."

Through the Erie canal by canalboat, through the Great Lakes by sailing schooner and down the Ohio by flatboat and barge and river steamboat they swarmed into the Middle West. They came a-horseback or on wheels. They jolted over bumpy frozen roads in stage-coaches or in Conestoga wagons which sank down hub-deep in the mud when the spring thaws came. And tied to the side or the rear of those wagons there were always plows—plows with wooden moldboards or one of those new iron plows made by Jethro Wood or one of his many imitators.

But when they arrived at the end of their journey and set themselves to the task of breaking the prairie sod, they encountered the same difficulties experienced by the Easterner who rejoiced too soon because "thar ain't no stumps to plow around."

So it was for a few years in Prairieland. And then John Deere, the Yankee blacksmith, appeared on the scene.

Deere was born February 7, 1804 in the village of Rutland, Vt., the son of William Ryland Deere, an English merchant tailor, and Sarah Yates Deere, daughter of a British soldier who had fought in the Revolution and then stayed in America to become a citizen of the new republic. Soon after his birth the family moved to Middlebury and in 1812 the elder Deere left his family there and returned to England, for reasons which are unknown. Unknown also is his fate for he never came back. So Sarah Deere continued to operate the shop until she died in 1825.

In the meantime young John Deere had apprenticed himself to Capt. Benjamin Lawrence of Middlebury to learn the blacksmith trade. His apprenticeship ended in 1825 and for the next few years he worked for others or in his own shops in various parts of Vermont. During these years Deere varied his routine of ordinary blacksmithing, such as shoeing horses "all around" for a dollar, by designing and making tools—shovels, hoes and pitchforks. All of them had a ready sale for the Vermont farmers found them well-made and easy to handle. (Later in his life Deere went back to Vermont and was delighted to find some of the tools he had made still in use after nearly 60 years.)

The "Western Fever"

During these years also he had seen many of his friends and neighbors, infected by the "Western fever," pack up their goods and start out to seek their fortunes in the Middle West. But so far that Western bug hadn't bitten him. In 1827 he had married Demarius Lamb, a girl from the town of Granville, and she had presented him with three daughters and a son. The needs of his growing family brought sharply to his attention the necessity for improving his fortunes and the turning point in his career came in 1834.

In that year Maj. Leonard Andrus sold his store in Vermont and went out to Illinois where he settled at a place called Grand Detour on the Rock river. Upon his return to Vermont he told his friends such glowing tales of the possibilities of this new country that many of them were persuaded to accompany him when he went back the following year.

Eventually John Deere also caught the "Western fever" and in 1836 he set out for the Illinois country, leaving Demarius, who was expecting another child, to follow him after she was able to travel. Deere set up a blacksmith shop in the little settlement of Grand Detour and soon had all the work he could handle—shoeing horses and doing repair work of one kind or another. As he listened to his customers talk about their plowing troubles he began thinking more and more about a solution for them. But he wasn't able to figure it out until one day when he visited the sawmill which Leonard Andrus and some others were operating near Grand Detour.

There he noticed a large circular saw of fine Sheffield steel which had been broken and cast aside. As he saw how the sun

shone on the metal, polished by the friction with wood, there flashed in his mind this thought here was the stuff for a plowshare that would scour! So he took the broken saw back to his shop and then—but let John Deere himself tell what happened:

"I cut the teeth off the mill-

saw with a hand-chisel. I cut a pattern out of paper for the moldboard and share. I laid the pattern on the saw and cut around it with a hand chisel, with the help of a striker and a sledge. I then laid the piece on the fire of the forge and heated it, a little at a time, shaping it as best I could with the hand hammer.

"After making the upright standards out of bar iron, I was ready for the wood parts. I went out to the timber, dug up a sapling, and used the crooks of the roots for handles. I shaped the beam out of a stick of timber with an axe and a drawing-knife. In this fashion, I succeeded in constructing a very rough plow."

Success!

Now that his plow was made, the next thing was to see if it would do what he hoped it would. The farmers around Grand Detour had heard about the new model which the blacksmith had fashioned but they were skeptical about its being any better than the plows they had brought from back East. So a large crowd of them were on hand for its first test.

The place selected for the trial was a field, owned by one Lewis Crandall, where, they said, no plow had ever scoured. They helped hitch one of Crandall's horses to the blacksmith's crude plow, Deere took hold of the handles made from sapling roots and Crandall slapped the reins and clucked to his horse to go ahead. The steel point bit into the gummy soil which began to cut and curl from the moldboard in a neat, smooth furrow. After an eighth of a mile they stopped and pulled the plow out of the ground.

"By cracky!" exclaimed one of the spectators who had been following them, "She's clean! No need for a paddle with that plow. She moves right along and polishes herself as she moves!" His enthusiasm was echoed by the others. But it is doubtful if any of them realized fully the importance of the event they had just witnessed—important in the history of American agriculture and in the history of America itself.

In 1838 John Deere, while carrying on his blacksmithing work, made three plows. The next year he made ten and by 1842 he was building two a week to supply the demand for them. In 1843 he and Andrus formed a partnership and built a brick factory to house their growing business. By 1846 they were turning out 1,000 plows a year. The next year the two men dissolved their partnership, Andrus remaining at Grand Detour and Deere moving to Moline, Ill., where he established the business which, by the time of his death in 1886, had become famous all over the world. In the meantime other manufacturers had entered the field to supply land-hungry Americans with the instrument by which the final act in conquering the wilderness was accomplished. But John Deere's fame was secure. In 1837, just a century ago, he won his right to the title which historians have since accorded him—"The Father of the Steel Plow."

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Always Helpful

By G. D. COOKE
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WNU Service.

BOB BRADLEY kicked the front door shut behind him and ran down the long flight of stairs to the drive. He was fuming.

"To heck with her!" he muttered darkly to himself.

He climbed into his coupe and slammed the door, drove out into the street and headed across town toward Joe Benet's soda fountain. Joe was always helpful.

Bob had good reason to be angry. A week before Alene Newton had quietly informed him that hereafter he could fly his kite alone. That had been because he had refused to take her to hear Cab Calloway at the Main Street night seats were two fifty a piece. And she had furthermore informed him that his presence was, to her, about as welcome as leprosy and would he please stay away. He had stayed away for a week, and now that Alene had shown no signs of changing her mind, Bob was taking things into his own hands.

He crossed the inter-city viaduct, then zigzagged across town to Twenty-second street. Bob had a vague idea that Joe could help him out. He parked opposite the "No Parking" sign across the street from Joe's place.

"Gimme a chocolate malted, Joe. Double the cream and put in lots of malt."

"I heard your little romance went flat last week!" Joe said curiously. Bob's eyes narrowed. "Yeah! And who told you that?"

Joe slipped the container under the mixer. "I dunno. A little bird, I guess."

Bob put the coins back in his pocket. "Frog Crawford?"

"Maybe," Joe said vaguely. He stood tapping his foot idly and looking out into the street. There was bad blood between Bob and Frog.

Bob emptied his glass, then he leaned across the bar so the couples in the booths along the wall couldn't hear him. "Listen, Joe," he said "quietly after a quick glance around, "you don't know a swell looking brunette, do you? You know the type I mean, a real bonfire. I want to take her around to some parties and show that blonde Alene that she's not the only potato in the sack."

Joe looked at his customer solemnly. "Wasn't it the week before last that you were in here talking about the little white cottage you were going to have—the one with the roses on the porch?" he chided, ignoring Bob's last question. Then he doubled with laughter.

Bob turned red. As Joe started to turn away he reached out and caught his arm. "How about that brunette, Joe?"

Joe shook his head. "I have enough trouble with you without introducing you to a bonfire like that."

"Aw, now, Joe. I gotta have some help."

"And that's not all," Joe went on. "Some morning you're going to wake up and find that you don't even have Alene."

Bob wrinkled his nose in surprise. "Have her! I ain't got her, have I? And anyway, who'd want her?"

"Frog Crawford."

"Huh!" Bob banged the metal container down on the bar.

"Sure! He was in here tonight after a box of chocolates and he said he'd heard you two had broken up," Joe told Bob's quarter. "He was driving his old man's Packard," he added.

"Say, you don't think he was going to Alene's?"

Joe pulled the lobe of one ear reflectively. "Wouldn't be surprised," he stated.

Bob slid off the stool. "I'll murder that guy!"

Joe reached out and caught his hand. "Hey, wait a minute! What will you do if Frog's not there? You'd better take along a peace offering, hadn't you?" Then: "We have some nice boxes of caramels," he suggested. "Five pounds."

Bob stared at him for a moment; then he grinned. "You old pirate. Well, all right, gimme one." And he was across the street and into his coupe in a jiffy.

Joe watched him go; then he turned to one of his soda dispensers. "Have to make a call, Bill. I'll be back in a minute."

He went into the telephone booth and dialed a number.

"Hello, Alene? . . . This is Joe . . . Yeah, he was here all right . . . No, I didn't tell him you called. I just mentioned Frog Crawford a couple of times and told him what a sap he was to be quarreling with a nice girl like you. He ran right out to his car and started out. Ought to be there any time unless he gets pinched for speeding. . . . What else did I tell him?" Joe laughed heartily.

"Oh, you'd be surprised. . . . Don't mention it. Joe's Place is always at your service. We always aim to please. . . . Okay. . . . Sure, don't mention it. . . . G'by!"

Whale Shark Feeds Like Whale

The whale shark feeds like the whale, by swimming along the surface and scooping up small fish, crabs and jelly-fish in its huge mouth. The creatures are strained from the water by the shark's gills, masticated by its 3,000 file-like teeth, and passed down to the stomach through a gullet about the diameter of a man's fist.

IMPROVED UNIFORM INTERNATIONAL SUNDAY SCHOOL Lesson

By REV. HAROLD L. LUNDQUIST, Dean of the Moody Bible Institute of Chicago, © Western Newspaper Union.

Lesson for February 28

THE NEW COMMANDMENT

LESSON TEXT — John 12: 20-33; 13: 34, 35. GOLDEN TEXT — A new commandment I give unto you, that ye love one another; even as I have loved you, that ye also love one another. John 13: 34. PRIMARY TOPIC — A New Commandment. JUNIOR TOPIC — A Great Man's Way. INTERMEDIATE AND SENIOR TOPIC — What the New Commandment Means. YOUNG PEOPLE AND ADULT TOPIC — The Measure of Christian Love.

In the last week of our Lord's ministry on earth many important events took place, but we pass most of them in our present series of studies. The incident related in our lesson of today is of interest in and of itself, but it is of peculiar significance because it introduces a marvelously instructive discourse of our Lord.

Whatever had prompted their inquiry, we are delighted to note that the Greeks came with an earnest desire to see Jesus.

I. Seeking Jesus (12:20-22). A man has progressed far on the road to blessing when he makes known his desire to see Jesus. Coming to him means coming to the One who has the words of eternal life.

Note that the disciples were wise enough to bring the men to Jesus. The true function of every Christian worker is to bring men to him. On the back of the pulpit in one of America's greatest churches, directly where the preacher can see them as he arises to preach, are the words of our lesson, "Sir, we would see Jesus." Little wonder that a strong and true gospel is preached in that church.

II. Finding the Cross (Lvd. 23-33).

The reply of our Lord to the Greeks and to the disciples who brought them to him, seems a bit singular at first glance. Did he not wish to receive them? They had probably come to see the great religious leader, the King of the Jews—why does he talk about death—why is his soul troubled?

The words of our Lord are clear. Men do not need an example, a leader, a teacher, they need a Saviour. It is as a sacrifice for sin that Christ will draw all men unto himself (v. 32).

We need to relearn that lesson. Leaders of the church are earnestly seeking the explanation of the rapid decline in the influence of the Christian church. It is a good sign that some are beginning to realize that the difficulty is in the realm of the spiritual. The barrenness of so-called modern theology has become apparent to its leaders and they have begun to talk about a "spiritual revival." But unfortunately we soon find that they use the expression to stand for something entirely different from a real scriptural revival. "The voice is Jacob's voice but the hands are the hands of Esau" (Gen. 27:22).

Let us make no mistake about it, a real revival will center in the cross and will manifest itself in denial of self for the glory of God. One cannot forego mention of the fact that the last part of verse 26, "If any man serve me, him will my Father honor," was the motto of the late Dr. James M. Gray, whose life gloriously exemplified the truth of the passage. God is willing and ready to do as much for you and for me.

III. Loving One Another (John 13: 34, 35). When these words were uttered our Lord was two days further in the last week before he was crucified. He was alone with his disciples in the upper room. What message does he have for them in that solemn hour? That they should love one another. That is a message that needs renewed emphasis in our day. The strife which fills the world has almost engulfed the church, and there is bitterness and strife where love should reign.

Let us observe carefully that it is as his disciples that we are able to love one another. There are two erroneous extremes to be avoided. First, we have the out and out conservative, who proclaims his belief in the Bible as God's Word, who is anxious that he be absolutely correct in doctrine, a really saved man, and who then becomes the kind of "fighting" fundamentalist who dimly fails God in the testimony referred to in these verses. On the other hand we have the liberal who has abandoned the scriptural basis of discipleship and who then boasts of his great love for his brethren. Love is no substitute for regeneration, and regeneration is no excuse for lack of love.

Courtesy of the Heart There is a courtesy of the heart, it is allied to love. From it springs the purest courtesy in the outward behavior.—Goethe.

Duty of Gratitude Gratitude is a duty none can be excused from, because it is always at our own disposal.—Charron.

The Fountain Look within—within is the fountain of good; and it will ever bubble up, if thou wilt ever dig.

Ask Me Another

A General Quiz
© Bell Syndicate—WNU Service.

1. Who was Alaric?
2. Members of what race are sometimes called "Huskies"?
3. Which is the larger unit, a brigade or a regiment?
4. Who was father of Queen Anne of England?
5. Who wrote "The Vision of Sir Launfal"?
6. What is the significance of a "hall-mark"?
7. How many "Fates" were there in classical mythology?
8. What is a brogan?
9. Was the lute a stringed instrument?
10. What is a coulomb?
11. What is dross?
12. What English slang word corresponds to the French "Chauvinist"?

- Answers
1. A Visigoth leader who sacked Rome.
 2. Eskimo.
 3. A brigade.
 4. James II.
 5. James Russell Lowell.
 6. It is a mark of genuineness.
 7. Three.
 8. A heavy shoe.
 9. Yes.
 10. An electrical unit (the amount conveyed by one ampere in one second).
 11. Refuse of melted metal.
 12. Jingoist.

Be Sure of Self Do not attempt to do a thing unless you are sure of yourself; but do not relinquish it simply because someone else is not sure of you.—Stewart E. White.

Dr. Pierre's Pleasant Pellets made of May Apple are effective in removing accumulated body waste.—Adv.

Temptation and Curiosity So often Temptation is accompanied by another fellow, arm in arm—Curiosity.

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