

Transcribed Excerpts from "The Farm and Garden," Newspaper Article, February 12, 1872

The Farm and Garden

Plows and Plowing - - A Revolving Plow-Fender.

The Use of Cast Steel in Place of Iron - - Sward-Plowing.

Sulky Gang Plow and Riding Cultivators --- The Chemistry of Farming.

From Our Agricultural Correspondent.

CHAMPAIGN, Ill., Feb. 10.

There is much inquiry in regard to

PLOWS AND PLOWING.

Many of those have had replies by mail, but of late they have become too numerous to admit of this, and we will take up the subject from the present stand-point. This is done the more willingly on account of the thousands of new readers of THE TRIBUNE who have not been posted on this subject, and yet I must confess that there are some new things that I desire to take into consideration.

... Why not use all cast steel in the construction of our plows? Cast steel is a great deal stronger and stiffer than iron, and could be used of much less size for the same purpose. The large bolts that pass through the beam weaken it in a ratio corresponding to their size; hence, the smaller the bolts, the smaller may be the beam. If you can reduce the bolt one-fourth of an inch, you may reduce the thickness of the wood that amount. If cast steel costs more per pound than iron, it will require less pounds for the same work, and then the cost of the wood is also reduced. Cast steel is not being used for harrow-teeth, as it is found that the size of the harrow-teeth may be much less, and the harrow may have a wider spread without adding to the weight, and is thus enhanced in its capacity for work. Our plows are all too heavy; but, with the use of iron, it has been found difficult to make them lighter and yet have them capable of all the resistance that they meet in striking sunken boulders and roots. The use of cast steel would make a most decided change, and more especially when we are enabled to lower the beam from four to ten inches. — a point of no small consideration ...

The fact is, the new processes for the cheapening of steel are gradually drawing us on to the use of steel in place of iron, and we will soon enter the age of steel, and substitute it in all cases for wrought iron. While these remarks apply to the common old land and sward plows, yet they have a double force in the sulky or gang plow ...

The double Michigan plow went out of use on account of the power required to draw it; but it did the work in the best manner, and to it we are indebted for the idea of trench-plowing. I have no doubt that a modification of that plow, combined with such a sulky plow as that of Skinner's, would be found

useful for this purpose. We may look for improvements in this new style of plow, in order to better fit them for sward-plowing, for which they are especially adapted. So soon as they come into more general use, the price will be materially lessened. A boy of a dozen years can drive a good sulky plow all day, and do as much work as a man with a common walking plow; while, with the walking plow, he could neither do good work nor a day's work. One of my neighbors has used one of these sulky plows four years, in all kinds of work, and would not think of doing without it. The wheels of this plow are too small, and the whole is unnecessarily heavy; yet he contends that the draught is little, if any, greater than with a common plow. With first-class timber and cast steel, these plows may be made so light and so cheap that they will come into general use.

For the past two years the demand has been for walking cultivators, mainly from the fact that sulky cultivators cost too much, and I predicted that, so soon as this objection was removed, they would again come into general use. I have letters from several manufacturers, who say they have accomplished this desired result, and that riding cultivators will be put on the market at an advance of from \$5 to \$10 over the walking cultivators, and that the demand from dealers is larger than usual. So much for a reasonably cheap article. The fact is, with corn at the present rates, farmers cannot afford to pay \$60 or \$65 for a sulky cultivator, when \$30 or \$35 will buy a walking one, and the same holds good, to some extent, with the sulky plows. A good single sulky plow, with rolling cutter, costs \$65, while a first-class walking plow, with rolling cutter, costs about \$28 ...

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