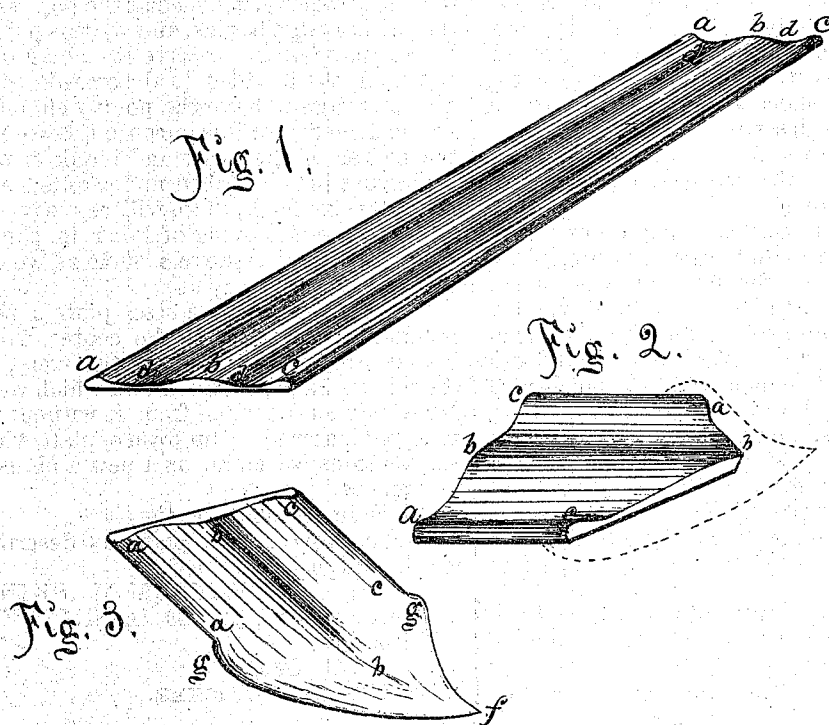


No. 119,419.

Patented Sep. 26, 1871.

SKINNER BROTHERS'

Improved Plate for Cultivator Shovels.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM W. SKINNER AND DAVID D. SKINNER, OF DES MOINES, IOWA.

IMPROVEMENT IN ROLLED STEEL PLATES FOR MAKING CULTIVATOR-TEETH.

Specification forming part of Letters Patent No. 119,419, dated September 26, 1871.

To all whom it may concern:

Be it known that we, WILLIAM W. SKINNER and DAVID D. SKINNER, of Des Moines, in the county of Polk and State of Iowa, have invented an Improved Steel Plate for Making Cultivator-Shovels, of which the following is a specification:

Our invention is a new form of steel plate or bar from which to cut blanks for cultivator-shovels; it consists in forming the plates or bars, under dies or rollers, with a wide swell on the top and center and a short swell on each edge or side, as hereinafter described.

Our drawing shows in perspective a plate or bar, a blank for a cultivator-shovel, and a finished cultivator-shovel.

Figure 1 is the plate or bar. *a a* represent the short swell on the top and edge of the left side; *c c*, the short swell on the top and edge of the right side; and *b b*, the wide swell on the top and center. The thinnest part of the plate is at the points marked *d d*. We usually make our plate or bar about five inches wide and one-third of an inch thick at the swells and one-fifth of an inch at the thinnest points; but the width and thickness and length may be varied as desired.

Fig. 2 is a blank for a cultivator-shovel cut from the end of our plate. The corners are cut away at the lower end or point. The dotted lines indicate how it may be drawn out into a perfect shovel.

Fig. 3 is a finished cultivator-shovel. *f* represents the point drawn or forged from the wide center swell *b b*. *g g* represent curved points or enlargements at the sides. These are drawn or

forged from the short swells on the sides. The points *f* and *g g* are worn most in the use of a cultivator-shovel.

The advantage of having blanks with swells and more metal to supply the wear and waste at these points is obvious. It is also an advantage to have the shovel widened at the points *g g* where the cutting-edge begins, and for this purpose it is a great advantage to have the plate and blank enlarged at the sides, as described. It is also an advantage to have the point *f* elongated and strengthened; for this purpose the wide swell in the center of the plate and blank is provided. By having plates formed under rollers or dies, in the shape set forth, there will be a saving of material and great saving of labor in the production of cultivator-shovels such as we have described and generally use.

We are aware that a steel plate is made and patented with a swell in the center, from which blanks are cut for cultivator-shovels; but the shovels we have described and which we use and prefer cannot be made from it without waste of time and material. Our form of plate with swells on the sides we claim as a new and useful improvement.

We claim as our invention—

The improved steel plate, as described, and for the purposes specified.

WILLIAM W. SKINNER.
DAVID D. SKINNER.

Witnesses:

W. H. LEAS,
GEO. A. McVICKER.