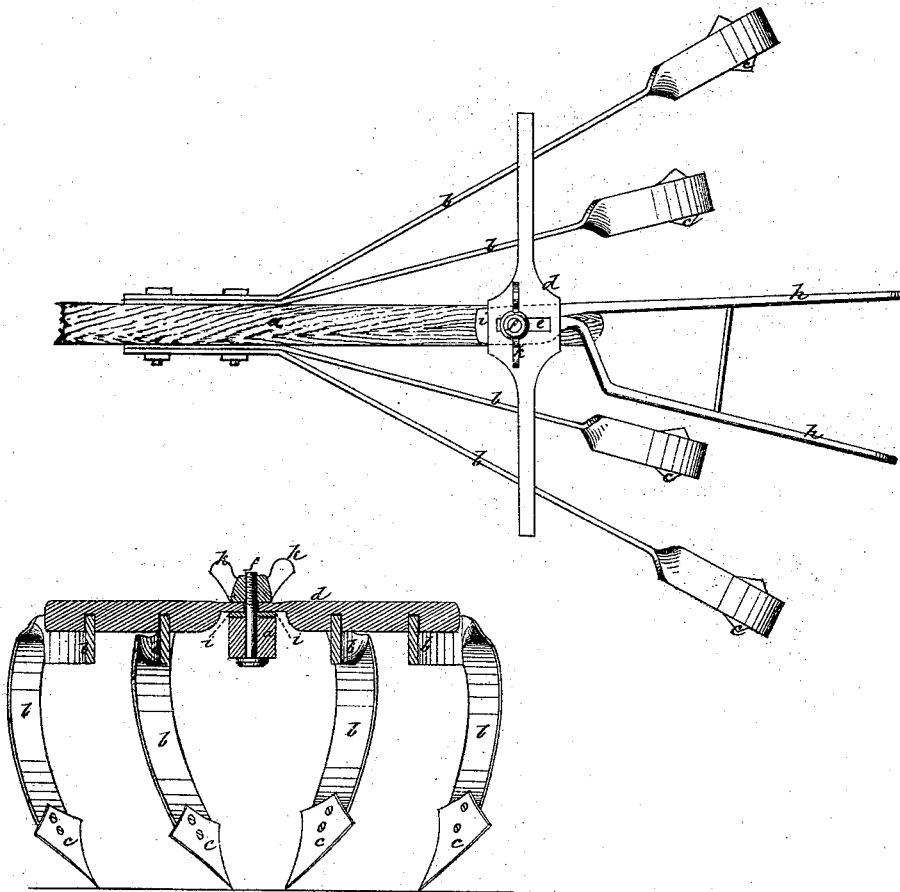


J. S. Thomas,

Cultivator.

No. 113,223.

Patented Mar. 28. 1871.



Witnesses:

J. J. Smith
C. W. Smith

Inventor:

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PER

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UNITED STATES PATENT OFFICE.

JACOB S. THOMAS, OF MIFFLINTOWN, PENNSYLVANIA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **113,223**, dated March 28, 1871.

To all whom it may concern:

Be it known that I, JACOB S. THOMAS, of Mifflintown, in the county of Juniata and State of Pennsylvania, have invented a new and Improved Cultivator; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view, and Fig. 2 is a transverse vertical section.

This invention has for its object improvement in the class of cultivators which have a series of shovels made laterally adjustable by means of a cross-bar.

The invention consists in the combination, with a set of shanks having shovels attached, of a notched cross-bar, which is provided with a slot to allow of its adjustment on the plow-beam by means of a clamp-bolt, said shanks being formed of plates of metal which are bolted at their forward ends to the beam, and hence form springs of greater or lesser elasticity, all as hereinafter described.

Referring to the drawings, *a* is the beam; *b*, the shanks, the same being in this instance secured at their forward extremities to the beam *a*, two at each side of the latter, and extending beyond the rear end of the beam as far as necessary.

c are the shovels, attached in any suitable manner to the lower rear ends of the curved shanks.

d is the bar that sits across the shanks and beam, said bar having a groove in its under side for each shank, which grooves are occupied by the latter, as shown in Fig. 2, the front

part of the shanks *b* being turned up edgewise, so as to be attached to the beam *a* and to enter the grooves in the bar *d*, and their rear parts being turned up sidewise, so as to be in the proper position for the attachment of the shovels. The bar *d* has a central transverse slot, *e*, through which a bolt, *f*, passes into the beam *a*, on which bolt is a set-screw, *k*. By means of this slot and set-screw the bar *d* may be moved backward or forward along the beam *a*, and by these movements draw the shanks *b* more closely together or place them farther apart.

The handles *h* are united in one plate, *i*, at their lower end, which plate is between the beam *a* and bar *d*, and this plate is pivoted upon the bolt *f*, so that when the set-screw *k* is loosened the handles may be set to the right hand of the beam *a* or to its left hand, at the pleasure of the plowman, and again fastened in that position.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The cross-bar *d*, provided with a series of grooves or notches to receive the spring-shanks *b* of the shovels *c*, and with the transverse slot *e* for the clamp-bolt *f* *k*, all arranged, as shown and described, in connection with the beam *a*, whereby the shanks and shovels may be laterally adjusted by moving the cross-bar lengthwise of the beam, as set forth.

JACOB S. THOMAS.

Witnesses:

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