C. BELDEN.

Cultivator.

No. 52,515. Patented Feb. 13, 1866.

Fig. 1.

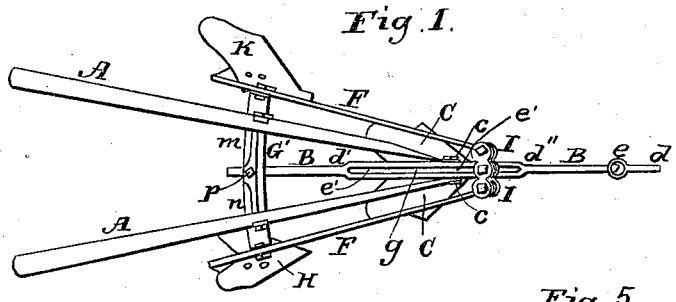


Fig. 5

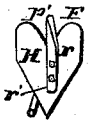


Fig. 4.

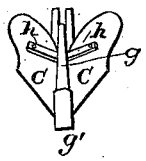


Fig. 3.

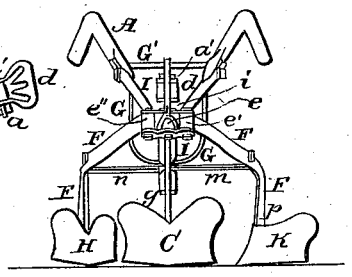
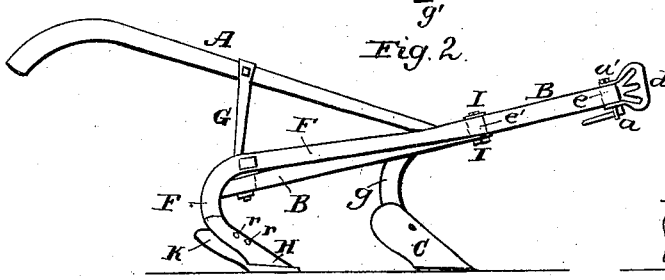


Fig. 2.



Witnesses.

W. H. Burridge

H. Milhaus

Inventor:

Charles Belden

UNITED STATES PATENT OFFICE.

CHARLES BELDEN, OF MIDDLEBURY, OHIO.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **52,515**, dated February 13, 1866.

To all whom it may concern:

Be it known that I, C. BELDEN, of Middlebury, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Cultivators; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan view of the cultivator. Fig. 2 is a side view. Fig. 3 is a front view. Figs 4 and 5 will be referred to in the description.

Like letters of reference refer to like parts in the views.

My improvement relates to cultivators, as hereinafter described.

A A are the handles of the cultivator, the lower ends of which are bolted at *c* to the sides of the beam B. This beam is made of a bar of iron doubled and bent round at the front end, as at *e*, through which a bolt, *a'*, passes for attaching the clevis *d* to the end of the beam. The bar is turned at the front end and doubled closely together, excepting from *d'* to *d''*, where it is bent outward and extends along so as to form a slotted opening, *e'*. (Seen in Fig. 1.) In this opening is fitted and secured a curved standard, *g*, being secured by the bolt *c*, that connects the handles to the beam. This standard curves down on the inside of the double plow C in front, as shown in Fig. 4, which is a view of the under side of the plow, and the end is inserted and secured between the point *g'* and plate of the plow, the point extending up on the inside, leaving a space for this purpose. The point *g'* is made of such metal as hardened steel, so as to be self-sharpening, and the sides of the plow extend up and curve out, forming a double mold-board, as represented. From each side of the standard extend out arms *h*, that are bolted to the sides of the plow.

F F are drag-bars, jointed in front to the beam B by means of plates I above and below the beam, that are secured in place by a bolt, *i*, being put through the plates and slot *e'*. Between the ends of the plates on each side of the beam are placed the ends of the drag-bars, which are curved around, as seen at *e''* in Fig. 3, so that a bolt passes through them and the plates, connecting them to the beam.

At the rear end of the beam and drag-bars are slotted braces *m n*, bolted to the drag-bars, and the inner slotted ends of which are placed one upon the other, as shown in Fig. 3, and through the slots a bolt, *p*, passes, connecting them to the end of the beam.

Above the slotted arms is a curved brace, G, attached to the beam by the bolt *p*, that extends through the slotted arms and beam. The brace G is connected to the handles by a brace, G', extending between and through the handles and ends of the brace G.

The rear ends of the drag-bars are curved down and twisted or turned at *p'*, so that the flat side comes under the blades H K and fits up close onto the under side, where they are secured by bolts and nuts *r*, as represented in Fig. 5. On account of the front ends of the drag-bars being jointed to the beam, as described, and by means of the slotted arms *m n*, the rear ends of the drag-bars can be adjusted nearer or farther from each other, according to the distance between the rows to be cultivated, and are secured in any position by the bolt *p*.

The double plow C, in front, double and single blades H K, are all detachable, and can be removed or adjusted in any way that may be desired.

In going between the rows the first time it is desirable to cut down the weeds, which is done by having the double blade, represented at H, attached to the drag-bars. This blade has an arrow-shaped point in front from which it inclines upward, being divided at the top into two lobes, curving outward, as represented, and is of such a shape as to be well adapted for cutting down the weeds.

In going through the rows the second time the single blades K are attached to the drag-bars. These blades have self-sharpening steel-points, like *g'*, and curve up on the side, each forming a single mold-board, whereby the ground as it is plowed is cast or thrown up onto the rows in the desired manner.

I claim—

1. The frame B F, in combination with the changeable and reversible blades H K, when constructed and arranged as and for the purpose set forth.

2. The herein-described cultivator, with changeable blades H K, when constructed and arranged as and for the purposes set forth.

CHARLES BELDEN.

Witnesses:

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H. NEWBERRY.