

H. C. BRIGGS.  
CULTIVATOR.

No. 182,347.

Patented Sept. 19, 1876.

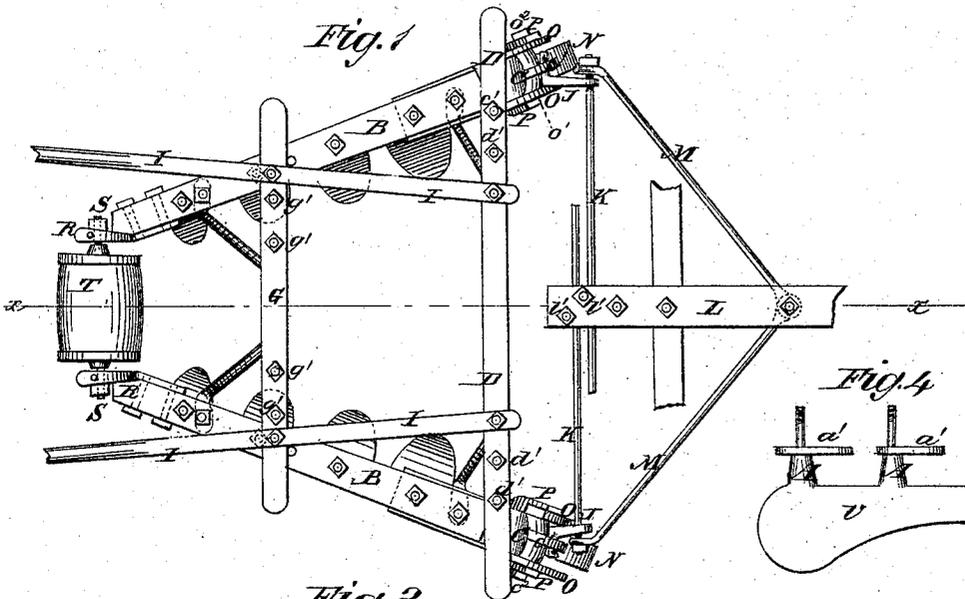


Fig. 2.

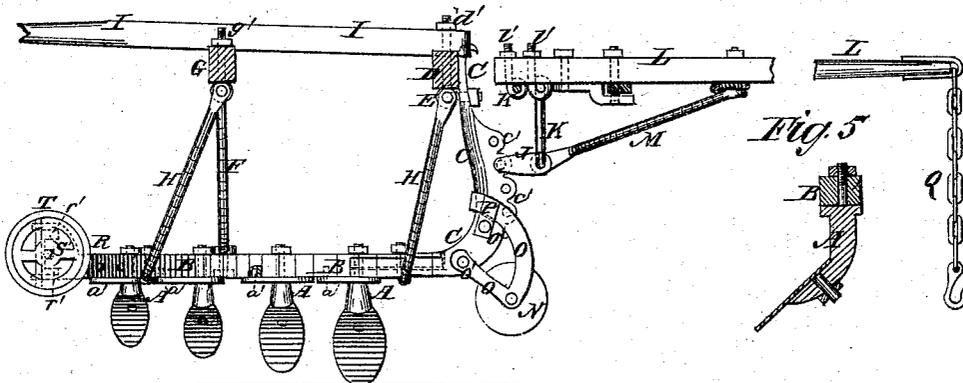


Fig. 3.

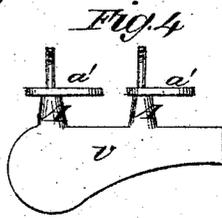
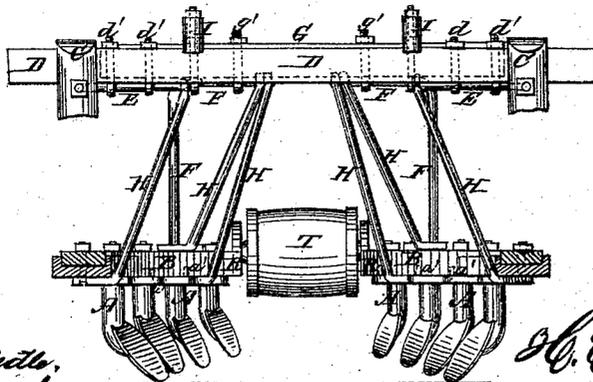
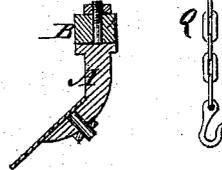


Fig. 5.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

HORACE C. BRIGGS, OF WEST AUBURN, MAINE.

## IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 182,347, dated September 19, 1876; application filed June 26, 1876.

*To all whom it may concern:*

Be it known that I, HORACE C. BRIGGS, of West Auburn, in the county of Androscoggin and State of Maine, have invented a new and useful Improvement in Cultivator, of which the following is a specification:

Figure 1 is a top view of my improved cultivator. Fig. 2 is a vertical longitudinal section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a front view of the same, part being broken away to show the construction. Fig. 4 is a detail face view of one of the covering-plows. Fig. 5 is a detail longitudinal section of one of the plows.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with drawing, and then pointed out in the claims.

The invention consists in the plow-standards provided with the cross-heads, the beams, the uprights provided with perforated flanges, the bent rods, the cross-bars, and the braces, in combination with each other; in the combination of the hooks and the adjustable rods with the perforated flanges of the uprights, and with the tongue and its braces; in the combination of the wheels, the adjustable brackets, and the clamping-blocks with the uprights of the frame; in the combination of the brackets and the roller with the rear ends of the beams; and in the plows made with one end wide and rounded off, the other end narrow and straight, and with the lower edge concaved from the wider to the narrower end, as hereinafter fully described.

A are the plow-standards, to the lower ends or feet of which the plow-plates are securely bolted. The upper ends of the standards A pass through holes in the beams B, and are secured in place by nuts screwed upon their said upper ends. Upon the standard A are formed cross-heads *a'*, which rest against the under sides of the beams B, and have dowel-pins attached to or formed upon them, which enter holes in said beams, and thus prevent the plows from turning. The forward ends of the beams B are bolted to the lower ends of the uprights C, which are curved forward and upward, and their upper ends rest against the end parts of the forward side of the cross-bar

D. To the upper parts of the uprights C, at the lower side of the cross-bar D, are attached the ends of the rods E, which are bent at such an angle as to pass along the under side of the said bar D, and are secured to it by eyebolts *d'*, so that by loosening the nuts of the said eyebolts *d'* the forward ends of the beams B may be moved wider apart or closer together, as may be desired. To the beams B, a little in the rear of their centers, are attached the lower ends of the rods F, the upper parts of which are bent inward, extend along the under side of the cross-bar G, and are secured to said cross-bar by eyebolts *g'*, so that by loosening the nuts of the said eyebolts the rear ends of the beams B may be moved wider apart or closer together, as may be required. The bent rods E-F are strengthened by braces H, the upper ends of which are secured to the inner ends of the said rods E F, and their lower ends are secured to the beams B. To the cross-bars D G are bolted the forward parts of the handles I, the rear ends of which project into such a position that they can be conveniently reached and operated by the plowman in guiding the cultivator. Upon the forward side of the uprights C are formed flanges *c'*, in which are formed holes to receive the draft-hooks J, so that the points of draft attachment may be raised and lowered as circumstances may require. The shanks of the hooks J have eyes formed in them to receive the rods K, the inner parts of which cross the lower side of the rear end of the tongue L, and are secured to said tongue L by eyebolts *l*, so that by adjusting the nuts of the said bolts the hooks J may be adjusted wider apart or closer together to correspond with the adjustment of the forward ends of the beams B. The rods K are strengthened against the draft-strain by the braces M, the rear ends of which are connected with the outer ends of the said rods K, and their inner ends are bolted to the tongue L. The depth to which the plows enter the ground is regulated by the gage-wheels N, which are pivoted to and between the angles of the two-armed brackets O. The ends of the lower arms of the brackets O are pivoted to the lower parts of the uprights C by a bolt, *o'*. The upper arms of the brackets O are curved

upon the arcs of circles having their centers in the axis of the bolts  $o^1$ , and are clamped against the side edges of the said uprights by blocks P, which are drawn against said arms by the bolts  $o^2$  passing through the said uprights and the said blocks, so that by loosening the bolts  $o^2$  the wheels N may be adjusted higher or lower, as may be desired. To the forward end of the tongue L is attached a short chain, Q, provided with a hook at its outer end to be hooked into the neck-yoke ring, and which should be a little slack, so that the machine may be more easily guided around short turns in crooked rows. To the rear ends of the beams B are attached brackets R, in the rear sides of which are formed notches to receive the ends of the shaft S, upon which the roller T revolves, and which are kept in said notches  $r'$  by pins passed through the said brackets in front of the said notches.

The roller T is not used when cultivating rows of plants. Each beam B is represented as having four plows attached to it; but the two middle plows may be detached, and replaced by a single plow. This arrangement is preferable when plowing stony ground. For covering seed the plows are detached and replaced by the wide plows U, provided with two standards, as shown in Fig. 4.

In this case the roller T is used. The machine may be used for furrowing by detaching the plows A and the roller T, and attaching to the beams B the wide plows U, or others of the same form, but larger. The plows U are made wide at one end and narrow at the other, with the wide end rounded off, and with the narrow end straight, and with the lower edge concaved from the wide end to the narrow end, as shown in Fig. 4.

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

1. The combination of curved uprights C, having perforated flanges  $c'$ , the bent posts F, braces H, cross-bars D G, and plow-beams B, provided with notched brackets R, substantially as herein shown and described.

2. The curved uprights C, with perforated flanges  $c'$  rigidly secured to the front ends of plow-beams B, and adjustably secured to cross-bar D, in combination with the hooks J and tongue L, as and for the purpose specified.

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Witnesses:

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