J. W. CHASE.

CULTIVATOR.

No. 171,503. Patented Dec. 28, 1875.

Fig. 1.

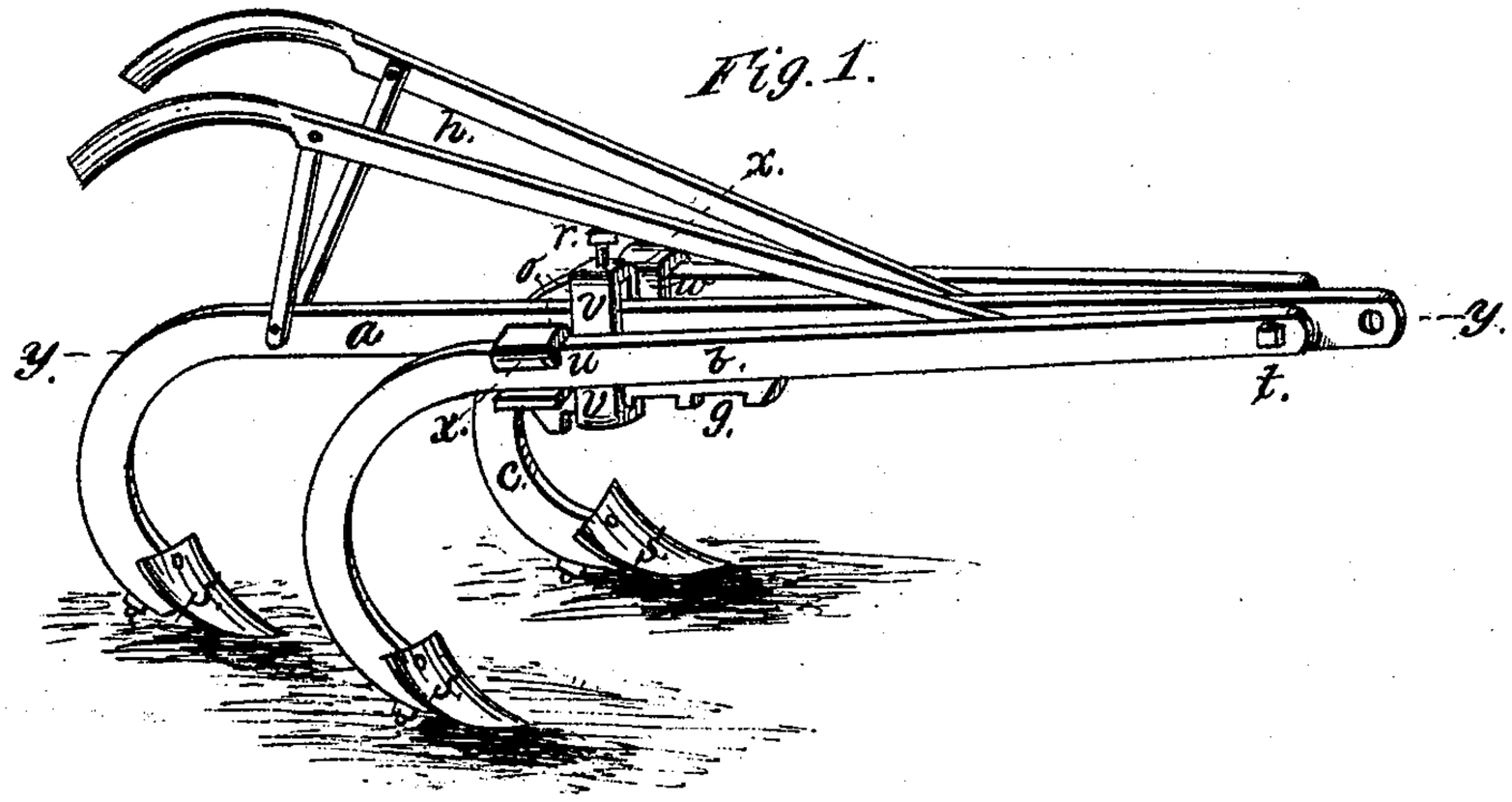


Fig. 2.

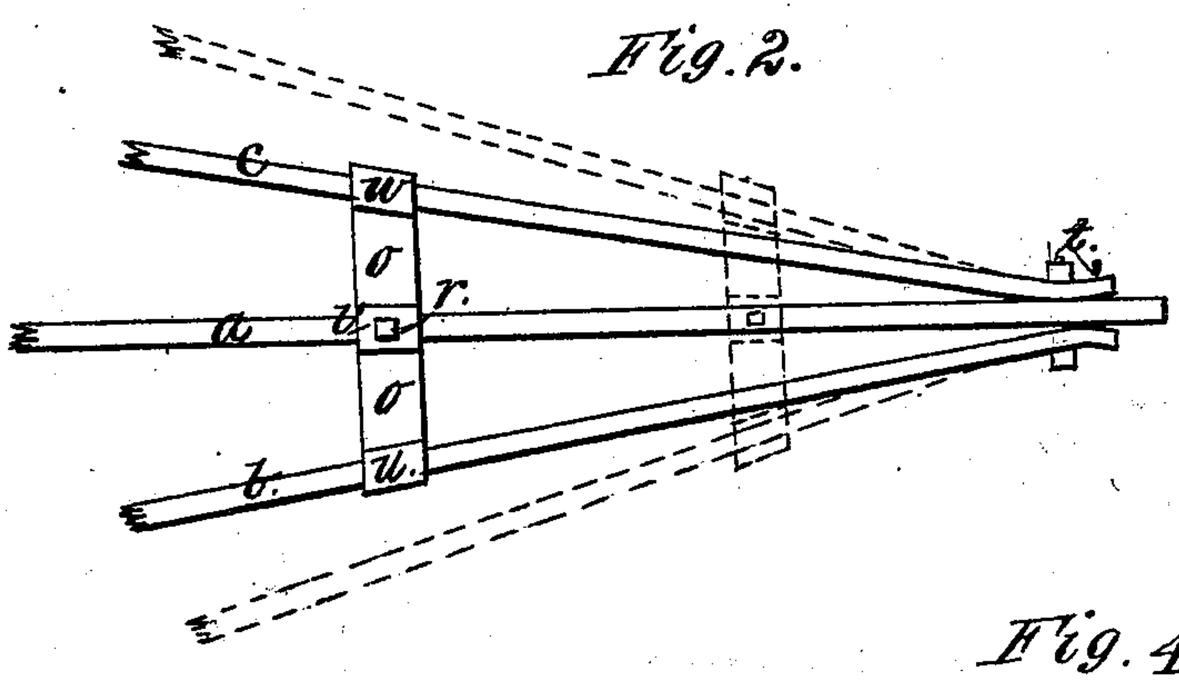


Fig. 3.

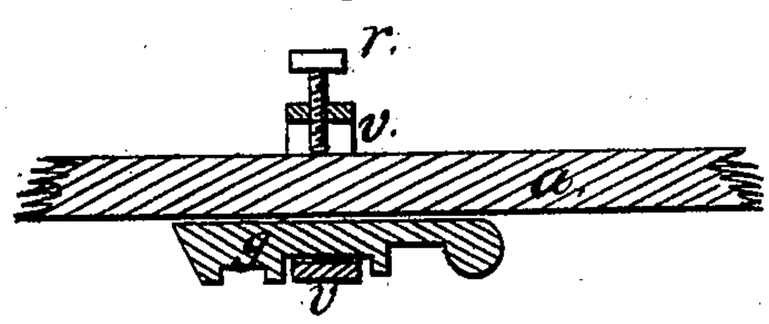
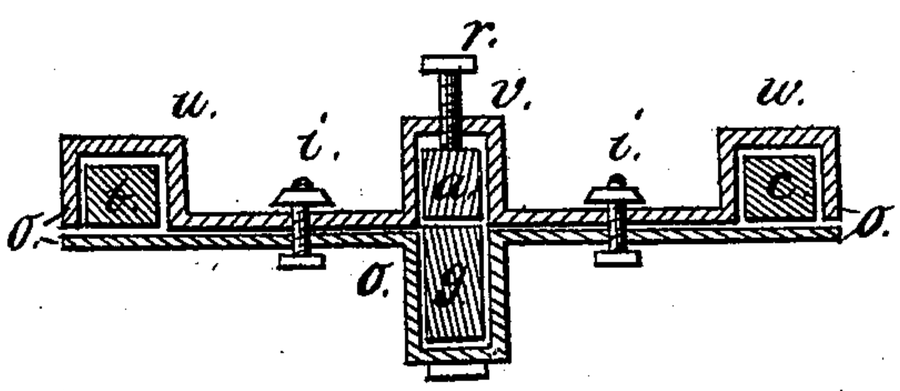


Fig. 4.



Witnesses:

William Harlow Jones.
Neal M. Holt.

Inventor:

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Atty.

UNITED STATES PATENT OFFICE.

JOSEPH WARREN CHASE, OF MIDDLEPORT, OHIO.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **171,503**, dated December 28, 1875; application filed June 25, 1875.

To all whom it may concern:

Be it known that I, JOSEPH WARREN CHASE, of Middleport, in the county of Meigs and State of Ohio, have invented certain new and useful Improvements in Cultivators; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in cultivators; and consists in the device by which the beams are rendered adjustable laterally and vertically, so as to increase or diminish the spaces between the furrows, or to vary the direction of the draft with regard to the plane of the blades, all of which will be described more fully hereafter.

The accompanying drawing represents my invention.

Figure 1 is a perspective view of my improved cultivator. Fig. 2 is a plan view of the front or straight parts of the beams of my improved cultivator, and of the device by which the beams are made adjustable laterally. Fig. 3 is a vertical longitudinal section of a portion of my improved cultivator, taken through the line *y y*, Fig. 1, showing the device by which the direction of the draft is varied, as aforesaid. Fig. 4 is a vertical cross-section of my improved cultivator, through the line *x x*, Fig. 1, with scale enlarged to show more plainly the devices by which the beams are made adjustable.

Similar letters of reference represent corresponding parts.

a b c are three beams, of which *a* is the central and longest one, the after ends of which are curved downward, terminating in the blades *s*. The extreme front ends of the two side beams *b c* are slightly curved outward, as more plainly represented in Fig. 2, and, through these curves, are attached to the sides of the central beam *a*, near its front end, by a bolt, *t*, which passes through the beam *a*, and loosely through the beams *b* and *c*, so as to form a hinge-joint that will permit the after ends of the beams *b c* to be elevated or depressed, while the slight curves in the beams *b c* at their points of attachment permits, also, a lateral motion. The beams *b c* diverge from the central one backward from the bolt *t*, and are braced across, and held in position, by a sliding clamp, *o*, which consists of two parts, held together by bolts *i i*, the parts being so constructed that when brought together lugs *u v w* are formed equidistant apart, and having mortises to receive the beams *a b c*, which slide loosely through them, the middle lug and mortise being longer vertically than the other two in order to receive both the beam *a* and the key or gib *g*, which latter will be hereafter more fully described. The middle lug *v* is furnished at top with a set-screw, *r*, which bears upon the upper surface of the beam *a*, pressing the latter down upon and against the gib *g*, the effect of which is to hold the clamp *o* firmly in position at any point desired along the beams *a b c*, causing a greater or less divergency of the beams *b c* from the beam *a*, as exhibited by the dotted lines in Fig. 2, the design being to enable the operator to increase or diminish at will the distances between the after ends of the beams, and, hence, to increase or diminish the spaces between the furrows. The key or gib *g*, more plainly shown in Fig. 3, is furnished with several notches or steps of different elevations, to receive the lower rim of the mortise through the lug *v*, the design of which is to allow the clamp *o* to be elevated or depressed, according to the notch used, with regard to the beam *a*, thus elevating or depressing the after ends of the beams *b c*, with regard to the beam *a*, so as to change the direction of the draft with regard to the plane of the blades *s*.

The handles *h* of my improved cultivator are of the usual form, and are attached to, and supported by, the beam *a*. The front end of the latter, also, is perforated by a ring-hole to receive the clevis.

If desired, the clamp *o* may be made in one piece or solid, dispensing with the bolts *i i*.

In using my improved cultivator the operator may, first, change the width of the spaces between the furrows by simply moving the clamp *o* forward or aft; second, he may change the direction of the draft to the plane of the blades by means of the set-screw *r* and gib *g*; third, he may readily change the cultivator

into a double-shovel plow by loosening the bolt *t*, and removing one of the beams *b c;* or, fourth, he may convert the cultivator into a single-shovel plow by removing both the beams *b c*, and, also, if desired, the clamp *o*.

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

The clamp *o*, composed of the upper plate *o*, having the mortised lugs *u v w*, and the lower plate *o'*, having the central mortised lug *x*, in combination with the gib *g*, the set-screw *v*, and the plow-beams, as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOSEPH WARREN CHASE.

Witnesses:
WILLIAM HARLOW JONES,
NIAL N. HOLT.