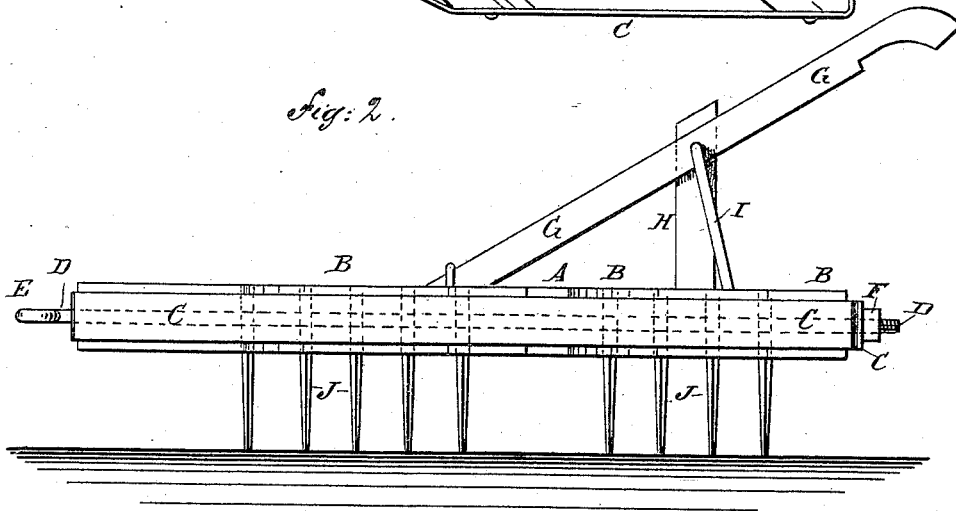
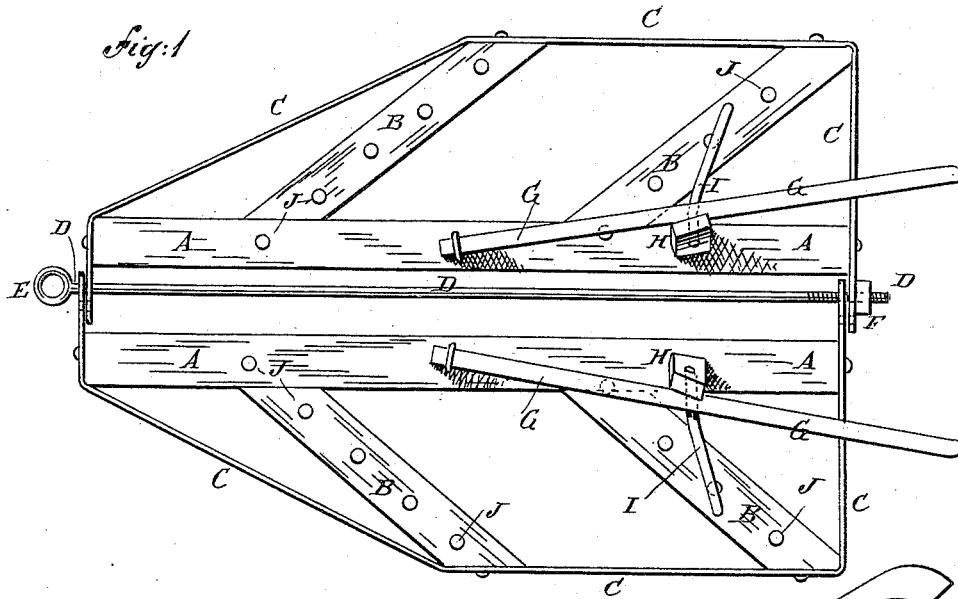


(No Model.)

J. COLLINS.  
CULTIVATING HARROW.

No. 301,214.

Patented July 1, 1884.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOYEUX COLLINS, OF TYRO, ARKANSAS.

## CULTIVATING-HARROW.

SPECIFICATION forming part of Letters Patent No. 301,214, dated July 1, 1884.

Application filed February 5, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOYEUX COLLINS, of Tyro, in the county of Lincoln and State of Arkansas, have invented certain new and useful Improvements in Cultivating Harrows, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a plan view of my improvement. Fig. 2 is a side elevation of the same.

My invention relates to improvements in harrows; and it consists in the peculiar construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

A are two parallel beams, to the forward and rear parts of the outer sides of each of which are attached the forward ends of two beams, B. The side beams, B, incline outward and rearward, have their outer ends beveled parallel with the beams A, and are strengthened in position by iron bars C, attached to their outer ends. The rear parts of the bars C are bent inward at right angles, and are attached to the rear ends of the longitudinal beams A. The forward parts of the bars C incline inward to the forward ends of the beams A, where they are bent inward across and are secured to the said ends. The ends of the bars C project at the inner sides of the beams A, overlap each other, and are perforated to receive the rod D. Several holes are formed in the ends of the bars C to receive the rod D, so that the said beams A can be adjusted at any desired distance apart.

Upon the forward end of the rod D is formed an eye, E, for convenience in attaching the draft, and upon the rear end of the said rod is cut a screw-thread to receive the nut F, to fasten the said rod D in place and hold it against the draft-strain.

To the middle parts of the upper sides of the beams A are attached the forward ends of the handles G, which incline upward and outward, and the middle parts of which are at-

tached to the outer sides of the upper ends of the standards H. The standards H are attached to the beams A, at a little distance from their rear ends, and incline outward slightly, to bring their upper ends into proper position to receive and support the said handles G. The handles G and standards H are strengthened in position by the brace-rods I, the upper ends of which are attached to the said handles and standards at their points of contact, and their lower ends are attached to the rear inclined beams.

With this construction, in using the harrow it can be drawn along a row of plants, so as to cultivate both sides of the row at the same time; or the harrow can be drawn along the space between two rows, so as to cultivate the adjacent sides of two rows at the same time, the side parts of the harrow, in either case, adjusting themselves to the inclination of the sides of the ridges.

The harrow-teeth J are attached to the inclined beams B, and to the main beams A, near the ends of the said side beams, as indicated in Figs. 1 and 2.

I am aware that a V-shaped harrow-frame has been lined on the outside and inside with sheet-iron strips, and I am also aware that a harrow provided with curved sections hinged thereto by straps facing said sections is old, and therefore I do not claim such inventions.

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

1. In a harrow, the combination, with the parallel beams A and the rearwardly-inclined beams B, of the binding-straps C, secured to the outer ends of the rearwardly-inclined beams and to the forward and rear ends of the parallel beams, and having their ends projecting inwardly beyond the ends of the parallel beams, and perforated, and the draw-rod D passed through the perforations of the binding-bars, substantially as herein shown and described, whereby the binding-bars serve the double purpose of braces and means for hinging the sections to the draw-bar, as set forth.

2. In a harrow, the combination, with the

parallel beams A, the rearwardly-inclined beams B, the binding-bars C, secured to the outer ends of the inclined beams and to the forward and rear ends of the parallel beams, 5 and having their inwardly-projecting ends perforated, and the draw-bar D, of the standards H, handles G, and the braces I, secured

to the rear inclined beams, and passing through the standards and handles, substantially as herein shown and described.

JOYEUX COLLINS.

Witnesses:

M. J. MEAD,

S. L. FRENCH.