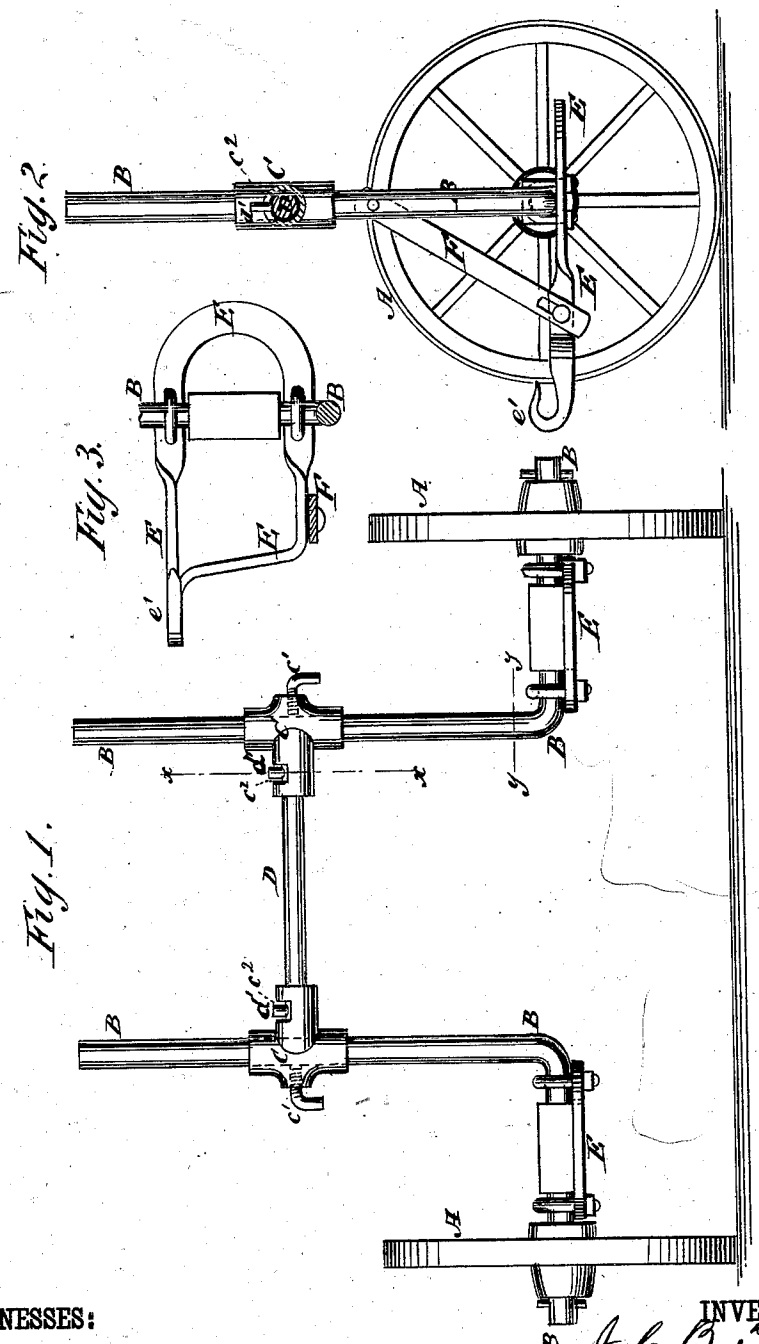
J. C. B. THOMAS.

CULTIVATORS.

No. 194,190. Patented Aug. 14, 1877.



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UNITED STATES PATENT OFFICE.

JOHN C. B. THOMAS, OF PALMYRA, MISSOURI.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **194,190**, dated August 14, 1877; application filed June 18, 1877.

To all whom it may concern:

Be it known that I, JOHN C. B. THOMAS, of Palmyra, in the county of Marion and State of Missouri, have invented a new and useful Improvement in Cultivators, of which the following is a specification:

Figure 1 is a rear view of my improved cultivator, the plow-beams and their attachments being removed. Fig. 2 is a vertical section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a horizontal section of the same, taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved cultivator which shall be so constructed that it may be readily adjusted to cultivate tall plants without injuring them, which will allow one horse to advance a little before the other without turning the plows out of line, and will enable the cultivator to work to the end of a row and close to a fence.

The invention consists in the adjustable frame-work formed by the combination of the axles, bent upward at right angles, the three-armed couplings, the cross-rod, and the set-screw, with each other, and in the cross-slots formed in the inner arms of the three-armed couplings, to receive the set-screws that secure the ends of the cross-bar in said arms, to give a play to the frame.

A A are the wheels, which revolve upon the journals of the axles B. The axles B, at a little distance from the wheels A, are bent upward at right angles, and upon their upright parts are placed the three-armed couplings C, which are secured to them adjustably by set-screws c^1, so that they can be readily raised when cultivating tall plants, and lowered to make the cultivator firmer and stronger when cultivating low plants, plowing in grain, &c.

In the inner arms of the three-armed couplings C are inserted the ends of the cross-rod D, which are secured in place by the screws d', which pass through short transverse slots c^2 in the inner arms of the couplings C, and screw into the said cross-rod D, or by a bolt running through the said inner arms of the coupling and the cross-rod. This construction gives the frame-work the necessary play to allow one horse to advance a little in front of the other without drawing the machine out of line. To the horizontal parts of the axles B, at the inner side of the wheels A, are secured the draw-frames E by U-bolts or other convenient couplings. The rear parts of the draw-frames E are made in U shape to give the plow-beams the necessary lateral play. At a little distance in front of the axle B the inner arm of the frame E is bent outward and welded to the outer arm of said frame. Upon the forward end of the outer arm of the frame E is formed a hook, e', to receive the whiffletree.

F F are braces, the upper ends of which are bolted to the upright parts of the axles B, and their lower ends are bolted to the forward part of the inner arm of the frames E, a slot being formed in the said braces to give the frame-work the necessary play to accommodate the different changes in the line of draft.

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

1. The three-armed coupling C, the horizontal arm provided with a transverse slot to receive a stud upon the cross-bar D, and allow the latter a partial rotation, and the vertical portion, having a tube and set-screw to permit its adjustment at different heights upon the vertical part of axle, as shown and described.

2. The combination of the three-armed coupling C, axles B, cross-bar D, and set-screws c^1 d', as and for the purpose specified.

JOHN C. B. THOMAS.

Witnesses:

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