

Thomas & Mast,

Chain Drill.

No. 97,729.

Patented Dec. 7, 1869.

Fig. 1

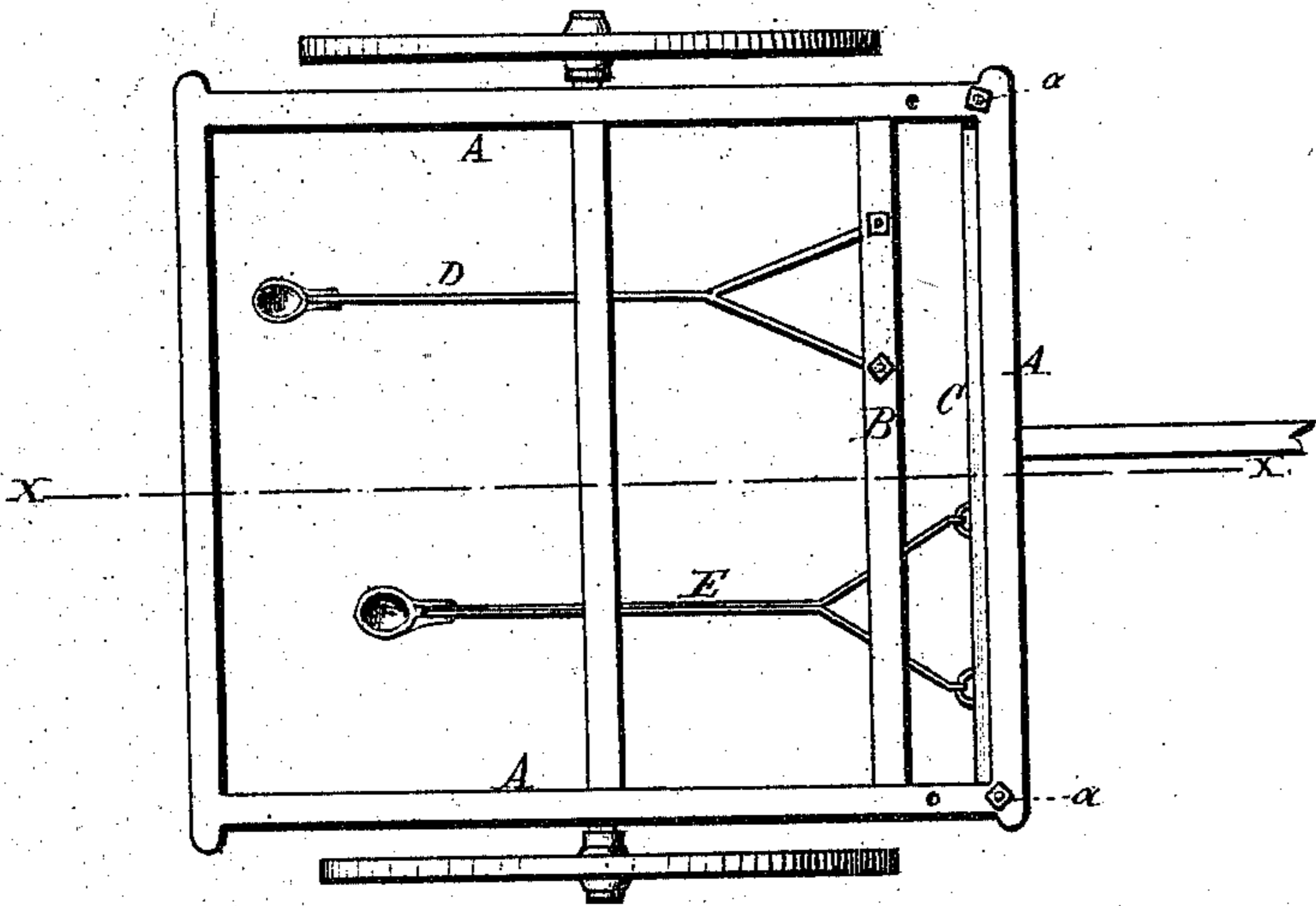


Fig. 2.

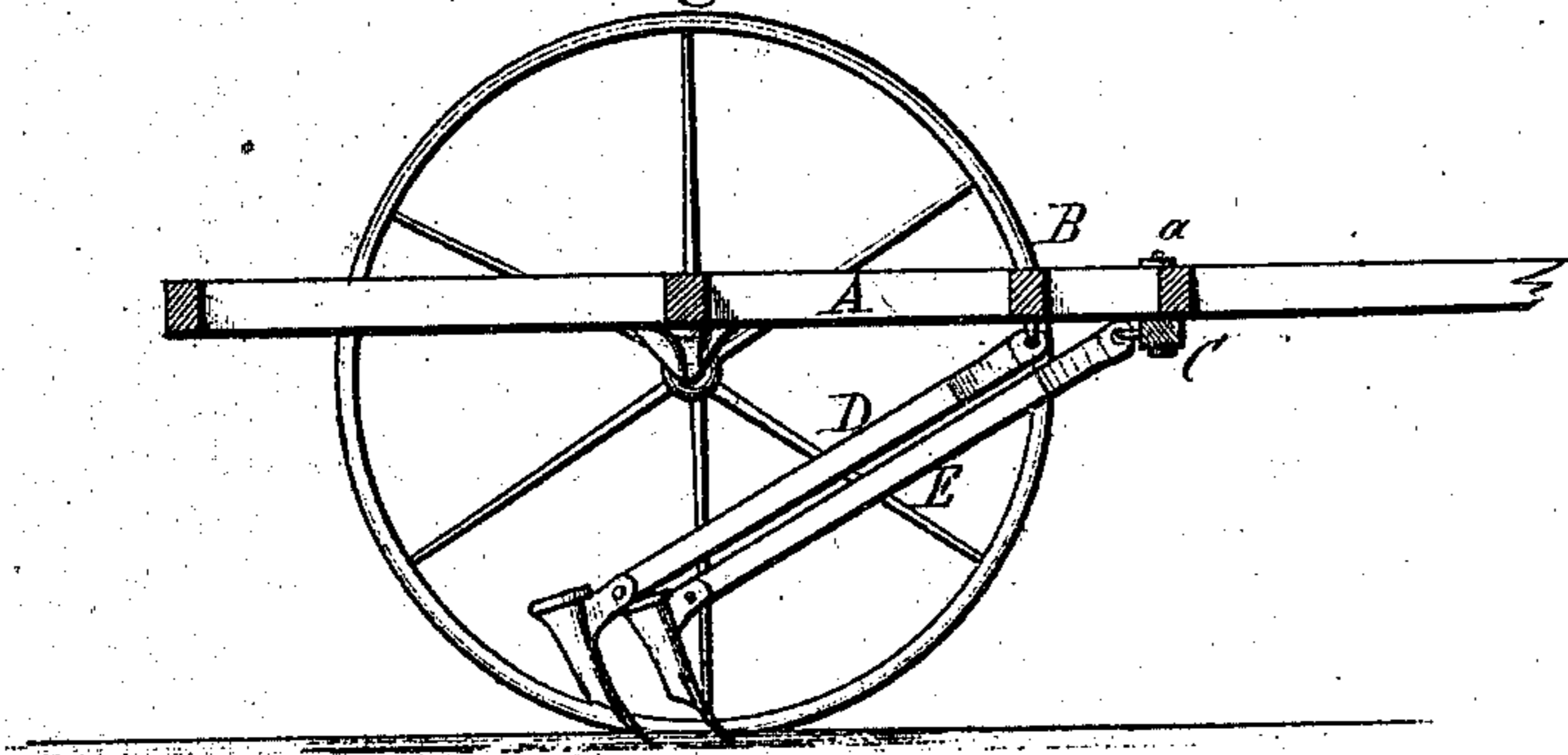
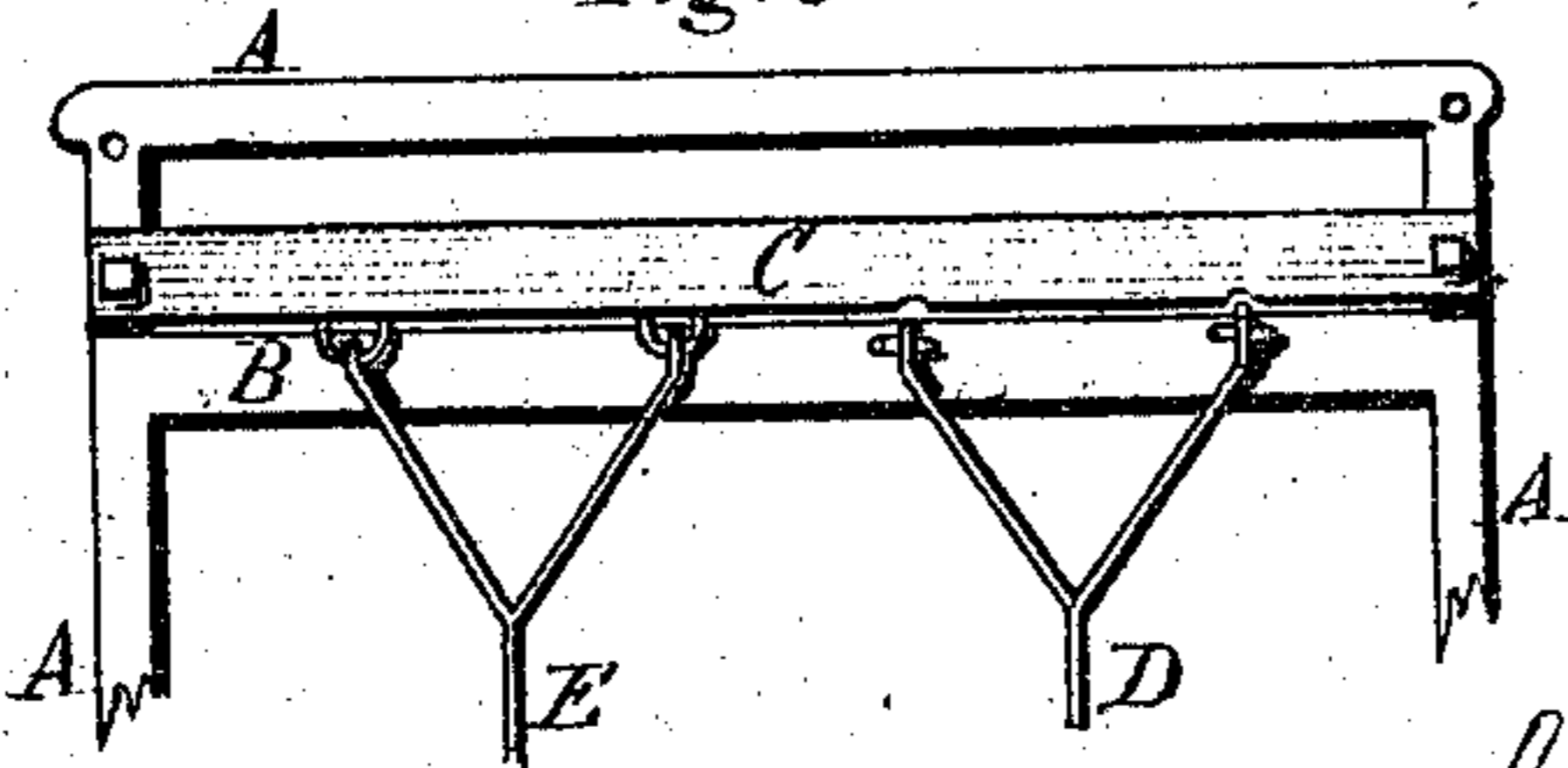


Fig: 3



Witnesses:

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United States Patent Office.

JOHN HENRY THOMAS AND PHINEAS P. MAST, OF SPRINGFIELD, OHIO.

Letters Patent No. 97,729, dated December 7, 1869.

IMPROVEMENT IN GRAIN-DRILLS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, JOHN HENRY THOMAS and PHINEAS P. MAST, of Springfield, in the county of Clark, and State of Ohio, have invented certain new and useful Improvements in Grain-Drills; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use our invention, we will proceed to describe it.

Our invention relates to grain-drills; and

It consists in a novel manner of constructing and arranging the parts to which the drag-bars are attached, so that the drill-teeth may be made to form two series, one in front of the other, or be all arranged in one series, in line, in the manner hereinafter described.

Figure 1 is a top plan view of the frame, with the hopper and seeding-devices removed;

Figure 2 is a longitudinal vertical section of the same, on the line $x x$ of fig. 1; and

Figure 3 is a bottom plan view of the front portion.

Our present invention may be considered as an improvement on the patent granted to us in connection with C. O. Gardner, August 3, 1869.

In that, the drag-bars were attached to two cross-bars, one of which was stationary, and the other movable, as in this; but in that case, the movable bar was in rear of the stationary one; and when it was desired to arrange the drill-tubes in a single line, the rear bar was moved forward in line with the stationary one.

In practice, we find that plan objectionable, for the reason that all the drag-bars being moved to the extreme front end of the frame, tend to make the front end of the tongue bear down upon the necks of the team, thus increasing the labor of operating the drill.

Our present invention is intended to overcome this difficulty, and to cause the machine to be more evenly balanced.

We make the frame A in the usual manner, as represented in fig. 1, and secure a stationary cross-bar, B, a short distance from the front, as shown in figs.

1, 2, and 3. To this stationary bar B we attach one set of the drag-bars, as represented by D in the drawings.

We then provide a movable cross-bar, C, which is secured under the frame, at its extreme front end, by a bolt, a , at each end; and to this movable bar we attach the other half of the drag-bars E, as represented in figs. 1 and 2.

When it is desired to bring all the drill-tubes into a single line, the bolts a are taken out, and the bar C is moved back, and refastened by the bolts, directly under the stationary bar B, as represented in fig. 3.

It will be observed that the bars D are secured to the under face of the cross-bar B, near its front, while the drag-bars E are secured to the rear edge of the cross-bar C, and that the latter has notches e cut in its rear edge, at the points opposite the ends of the drag-bars D, so that when the bar C is moved back, the drag-bars D and E may all be brought directly in line, as represented in fig. 3.

By this method of constructing and arranging the parts, we accomplish the desired change in a very simple and expeditious manner, and produce a machine that is more perfectly balanced, and therefore operates better, besides being extremely cheap and simple in its construction.

Having thus described our invention,

What we claim, is—

1. A grain-drill, having two sets of drag-bars, one set being hinged to a stationary bar, B, and the other set being hinged to a movable bar, C, the latter being arranged to be secured at the front, or moved back so as to bring the points of hinging of the two sets in line, substantially as described.

2. Attaching the drag-bars D to the underside of the cross-bar B, and the drag-bars E to the rear edge of the movable bar C, so as to bring the drill-tubes all in line, when the bar C is moved back, substantially as described.

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Witnesses:

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