

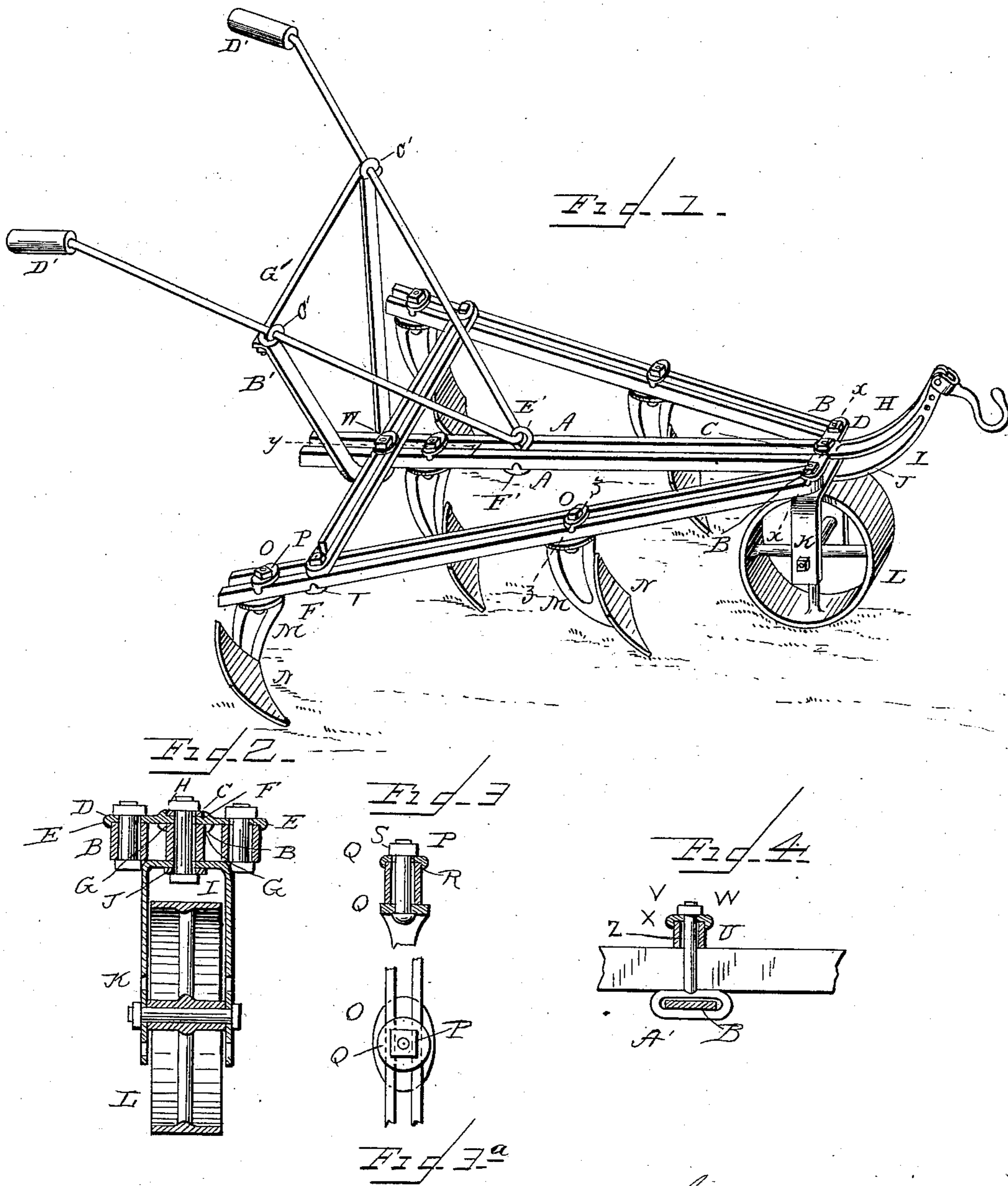
(No Model.)

J. A. JOHNSON.

CULTIVATOR.

No. 347,273.

Patented Aug. 10, 1886.



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UNITED STATES PATENT OFFICE.

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CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 347,273, dated August 10, 1886.

Application filed May 24, 1886. Serial No. 203,061. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. JOHNSON, a citizen of the United States, and a resident of Madison, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Cultivators; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved cultivator. Fig. 2 is a vertical transverse sectional view on line *xx*, Fig. 1. Fig. 3 is a similar view on line *zz*, Fig. 1. Fig. 3^a is a top view of the same; and Fig. 4 is a longitudinal vertical detail view on line *yy*, Fig. 1.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to that class of cultivators in which the beams are composed of parallel bars, between which the upper ends of the shovel-standards may project, having means for securing them; and it consists in the improved construction and combination of parts of such a cultivator, in which the bars are held clamped by flanged washers upon the upper ends of the bolts securing the several standards, as hereinafter more fully described and claimed.

In the accompanying drawings, the letters A indicate the parallel doubled bars forming the beams, and the forward doubled ends of these bars are secured upon bolts B B and C, passing, respectively, through perforations at the ends and at the middle of a transverse bar, D. The ends of this bar have downwardly-bent lips or flanges E E, which bear against the outer sides of the doubled ends of the bars forming the side beams, the heads of the bolts bearing against the lower edges of the bars, and the nuts upon the bolts bearing against the upper side of the transverse bar, and the middle of this bar is provided with two lips, F F, projecting upward, and with two downwardly-projecting lips, G G, the lips upon the under side of the bar bearing against the outer sides of the doubled end of the bar forming

the central beam, while the upper arm, H, of the clevis-frame I rests between the lips upon the upper side, having the nut upon the central bolt bearing against its upper side. The headed end of the central bolt bears against the under side of the lower arm, J, of the clevis-frame, and this arm bears again against the under side of the upper end of a bail or bifurcated frame, K, between the lower ends of which the supporting-wheel L is journaled, the upper end of this frame thus bearing against the lower edges of the doubled end of the bar forming the central beam. The standards M for the shovels N are provided with plates O at their upper ends, through which plates bolts P project, and these bolts are inserted between the bars forming the cultivator-beams, having washers Q upon their upper ends, formed with downwardly-projecting lips R, which bear against the outer sides of the bars, the washers being retained upon the bolts and forced down by nuts S upon the bolts. Bolts T T are provided with T-heads upon their lower ends, having upwardly-bent ends, which clasp the lower edges of the rear portions of the side beams of the cultivator, and the eyed ends of two adjusting-bars, U U, are secured upon the upper ends of the bolts, being held upon the bolts by the nuts V, and the adjusting-bars, which project inward and run parallel to each other, are clamped by a washer, W, having downwardly-bent lips X X, and secured by means of a nut, Y, upon the upper end of a bolt, Z, projecting up between the rear ends of the bars forming the central beam. The lower end of this bolt is formed into a flat eye, A', bearing against the lower edges of the bars forming the central beam, and the lower end of a V-shaped flat brace-bar, B', passes through the said eye. The upper ends of this V-shaped brace-bar are provided with eyed bolts C', passing through them, and having nuts upon their lower ends, and the handles D' D' pass through the eyes, being formed by a V-shaped rod, having its bent portion passing through an eye at the upper end of a bolt, E', having a washer, F', upon its lower end, clamped against the lower edges of the bars of the central beam by means of a nut. The handles are held together and prevented from spreading too far by means of

a rod, G', having its eyed ends fitting upon the shanks of the eyed bolts holding the handles. It will be seen that the doubled ends of the beams may turn upon the bolts in the forward cross-bar, and the adjusting-bars may be so adjusted by the nut and lipped washer upon the bolt in the rear end of the central beam that the side beams may be adjusted to stand in any position desired, bringing the shovels to follow a wider or narrower path, according to the width of the space between the rows of plants to be cultivated; and it will also be seen that the standards of the shovels may be adjusted to bring the shovels to stand at any desired angle to the line of draft by loosening the nuts upon the bolts securing the shovels, and turning the standards and plates upon the bolts into their desired positions and again tightening the nuts.

All the parts of the cultivator which are exposed to the greatest strain may be made of wrought metal, and will consequently be very strong, and the entire construction is simple, the frame being strong and light at the same time.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a cultivator, the combination of a central beam and two side beams composed of bars doubled at their forward ends, a transverse bar having downwardly-projecting lips at its ends, and having upwardly-projecting lips upon the middle of the upper side and a pair of downwardly-projecting lips upon its under side, a bail-shaped frame having a wheel journaled between its ends and having a perforation in its upper end, a clevis-frame having a perforated upper arm resting between

the pair of lips upon the upper side of the transverse bar, and having a perforated lower arm bearing against the under side of the upper end of the wheel-frame, and nutted bolts having their heads bearing, respectively, against the lower edges of the side beams and against the lower perforated arm of the clevis-frame, and having their nuts bearing, respectively, against the upper side of the transverse bar and against the upper perforated arm of the clevis-frame, as and for the purpose shown and set forth.

2. In a cultivator, the combination of a central beam consisting of parallel bars, a bolt having an eye at its upper end and having its lower end projecting between the bars, and provided with a lipped washer bearing against the lower edges of the bars, and having a nut for drawing the said bolt, a V-shaped rod forming handles at its ends and inserted through the said eyed bolt with its bend, a nutted bolt projecting between the rear ends of the bars forming the central beam, and having a flat eye bearing against the lower edges of the bars, a flat bar bent to a V shape and passed through the said eye, eyed bolts fitting upon the handles and passing with their nutted ends through the ends of the brace-bar, and a rod having its eyed ends fitting upon the shanks of the eyebolts, as and for the purpose shown and set forth.

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

JOHN A. JOHNSON.

Witnesses:

A. E. PROUDFIT,
J. H. NICHOLS.