

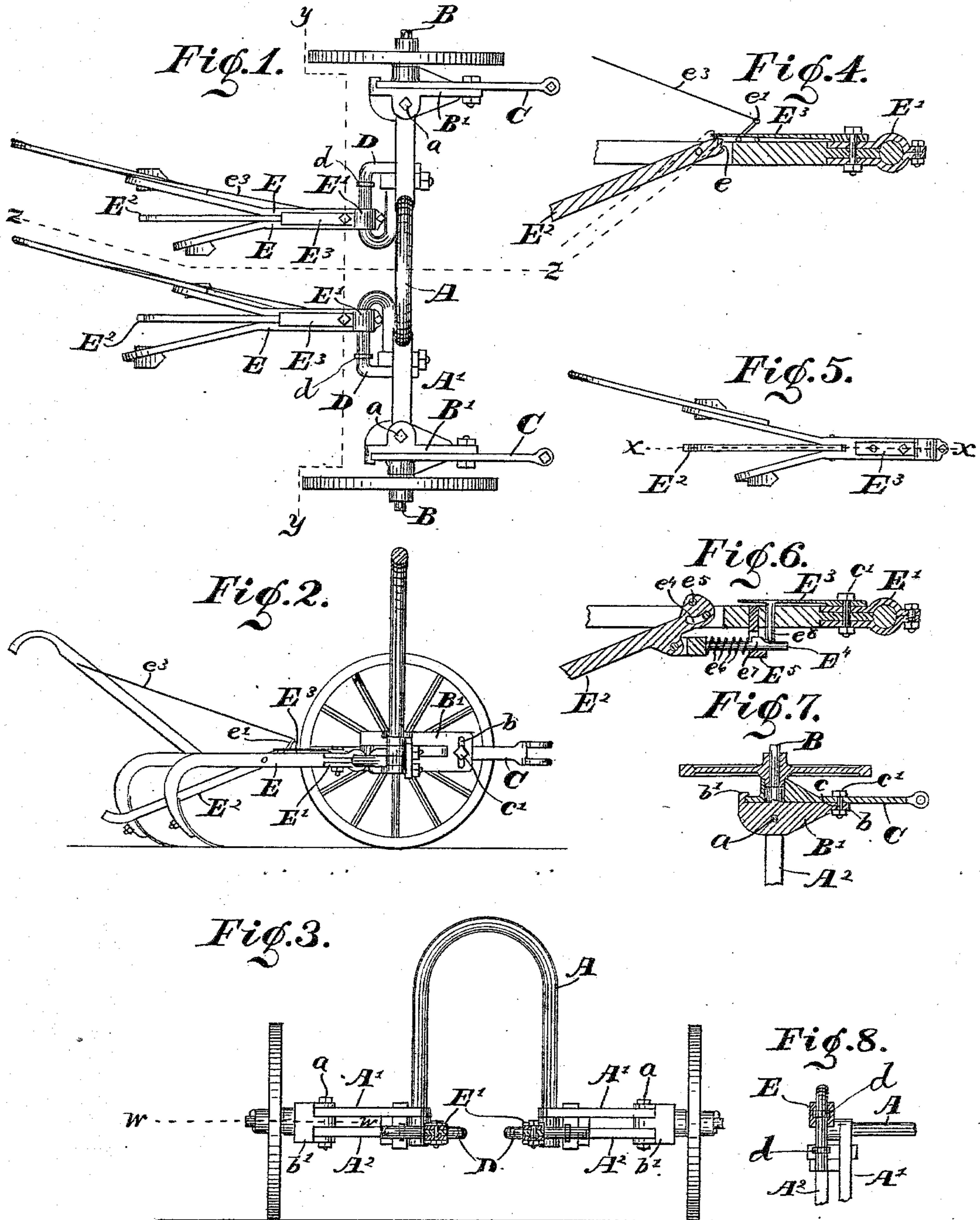
(No Model.)

M. W. McCANN.

CULTIVATOR.

No. 296,860.

Patented Apr. 15, 1884.



WITNESSES.

Chas. A. Leonard,
Chas. L. Thurber.

INVENTOR.

Marion W. McCann,
PER
C. Bradford,
ATTORNEY.

UNITED STATES PATENT OFFICE.

MARION W. McCANN, OF POSEY, FAYETTE COUNTY, INDIANA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 296,860, dated April 15, 1884.

Application filed November 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, MARION W. McCANN, of Posey, county of Fayette, and State of Indiana, have invented certain new and useful Improvements in Cultivators, of which the following is a specification.

My said invention consists in several improvements in the construction of various parts of wheel-cultivators, whereby they are adapted to be readily adjusted and easily manipulated, as will be hereinafter more fully described.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a top or plan view of a cultivator embodying my improvements; Fig. 2, a central section of the same on the dotted line *z z*; Fig. 3, a section looking to the right from the dotted line *y y*, showing all the rear parts of the machine in elevation, except the plows; Fig. 4, a detail section of a portion of the plow-beam and my device for supporting the plows from the ground when desired; Fig. 5, a top or plan view of one gang of plows, showing an alternate construction of this device; Fig. 6, a central section of the same on the dotted line *x x*; Fig. 7, a detail section of the wheel-spindle and the immediately adjacent parts, looking upwardly from the dotted line *w w*; and Fig. 8, a detail section looking to the right from the dotted line *v v*.

In said drawings, the portions marked A represent the axle; B, the wheel-spindles; C, the draft-rods, to which the double-trees are attached; D, link-shaped extension-pieces mounted on the axle, and E the plow-beams.

The axle A is an arched axle, with its horizontal portions formed in two parts, A' and A², thus affording an easy means for hinging the spindle thereto, and also affording a means for regulating the depth at which the plows operate, as will be presently more particularly described. On the outer ends of these horizontal parts are hinged the wheel-spindles B by means of pivot-bolts *a*, as shown.

The wheel-spindle B has a bracket, B', formed on the end, which is hinged to the axle by said pivot-bolt *a*, which extends in both directions from the spindle, affording a support

for the draft-rods, as will be presently described. In its front end is a slot, *b*, formed transversely thereof, (see Fig. 2,) through which the bolt *c* passes, which secures the draft-rod to said bracket. On its rear end is formed a lip, *b'*, which is adapted to overlap the rear end of the draft-rod and hold it firmly in position. On the side next the spindle the face of this bracket is made smooth, with said spindle projecting out at right angles therewith at the proper point. On its opposite face are provided suitable means for hinging to the end of the axle.

The draft-rods C are of suitable length and dimension to properly perform their functions. They are provided near their rear end with a journal-bearing, and are journaled on an enlarged portion of the wheel-spindles next the bracket B', (see Fig. 7,) their faces being contiguous to the bracket B'. Their rear ends project back far enough to extend under the lips *b'* on the bracket B', and in their front ends are provided with holes *c* directly opposite the slots *b* in the bracket B', through which the bolts *c'* pass. They are first slid onto the spindle in a position nearly at right angles with the bracket B', and then are turned down until the holes *c* come opposite the slots *b*, when the bolts *c'* are inserted and the nuts screwed on, thus securing the draft-rods in position, the rear end having turned under the lip *b'* during the operation. When it is desired to change the line of draft, the nut upon the bolt *c'* is loosened, when the draft-rod is permitted to be raised or lowered by means of the slot *b* until it is in the proper position, when the nut is again tightened and the rod secured in place.

The link-shaped extension-pieces D are mounted on the horizontal parts of the axle, and have the plows attached to them. The side to which said plows are attached has two raised rings, *d*—one at each end—and the insides of the clevises which secure the plows to said piece are formed with a corresponding groove, (see Fig. 8,) which fits over said raised ring, and thus said clevises are secured in position on the end desired. They are shown as mounted on the lower part, A²; but when it is desired to raise the plow-beam for the purpose of regu-

lating the depth to which the plows operate, it can be readily detached from this piece and changed to the top piece, A'.

The plow-beams E of each gang are secured together near their ends, and form practically one beam. They are coupled to the piece D by means of the clevis-like devices E'. Attached to each gang, and preferably pivoted between the beams of the separate plows, as shown, is a runner, E², which extends down between the plows, and is adapted to support them free from the ground when it is desired to do so, as will be presently described. A spring, E³, is secured to the top of the plow-beam, and extends back over the end of the runner E², thus holding this end down and the other end up free from the ground when it is not in use. A notch, e, is formed in the end of the runner E², (see Fig. 4,) in which the end of the spring E³ engages when said runner is pressed down in position to support the plows, and thus holds it in this position until the spring is raised up out of the notch, when said runner may again be lifted up until its end is under the end of the spring, which operates to hold said end down, as before described. I have shown a lever, e', as a means for raising the spring E³ out of the notch; but any other desired means may be employed when preferred. It is pivoted to the plow-beam, and provided with an arm, which extends under the spring. A cord or wire, e³, extends back to the plow-handle from the top of this lever, by means of which the operator can more readily operate the spring.

By the use of this device the work of the operator is much lessened, as, when turning around the ends of the field or driving in other places where it is not desired to drag the plows, he can simply drop these runners E² until the end of the spring engages in the notch e, when they will be below the level with the points of the plows, and thus support them free from the ground without any manual labor.

In Figs. 5 and 6 an alternate construction of this supporting device is shown, which may be used instead of the one just described when desired. The runner E² is provided with a slot, e⁴, in its upper end, through which the pivot-bolt passes. In the opposite corner is inserted a pin, e⁵, which extends out on either side, so that its ends rest on the tops of the plow-beams. A sliding rod, E⁴, is pivoted to this runner underneath the beam, and extends forward through a guide, E⁵. Between this guide and a shoulder formed near the end, where it is pivoted, it is provided with a spring, e⁶, which operates to throw the runner up from the ground. Said rod is also provided near its outer end with a notch, e⁷, with which a downwardly-projecting catch, e⁸, on the spring engages.

The device is operated as follows: Its parts being in the position shown, and it being desired to raise the plows, the runners are pressed down, which pushes forward the rod E⁴ until the notch e⁷ passes under the catch e⁸, when it engages therewith and holds the runner in the desired position. When it is desired to again let the plows down, the spring E³ is raised, which disengages the catch and allows the spring e⁶ to throw back the rod E⁴ and raise the runner E², and permits the plows to fall. In some cases this construction may be desired; but for general use I regard the one before described as preferable on account of its cheapness and simplicity.

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

1. In a wheel-cultivator, the combination, with the wheel-spindle having a bracket, B', at its inner end pivoted on the axle, of a draft-rod journaled on said spindle and secured to said bracket, substantially as described, and for the purposes specified.

2. In a wheel-cultivator, the combination, with the wheel-spindle B, provided with a bracket, B', and adapted to be hinged to the end of the axle, of the draft-rod C, journaled on said spindle and adjustably secured to said bracket, whereby the draft-rod may have vertical adjustment on said spindle and bracket, substantially as set forth.

3. The combination of the bracket B', having in its front end the slot b and on its rear end the lip b', the wheel-spindle B, the draft-rod C, adjustable on said spindle and bracket, and the hinged axle A, substantially as shown and described.

4. The combination, in a wheel-cultivator, of the axle A, the horizontal portions of which are in two parts, the link-shaped extension-pieces D, adapted to be adjustably secured to either of said parts, the wheel-spindle B, hinged thereto, and the draft-rod C, adjustably mounted on said spindle, substantially as described, and for the purposes specified.

5. In a wheel-cultivator, the combination, with the plow-beam E, of the runner E², pivoted thereto at its front end, and provided with a notch, e, and the spring E³, secured to said plow-beam and running back over the end of said runner when it is in a raised position, and engaging with the notch e when it is in a lowered position, substantially as described, and for the purposes specified.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 29th day of October, A. D. 1883.

MARION W. McCANN. [L. S.]

In presence of—

E. W. BRADFORD,
CHAS. L. THURBER.