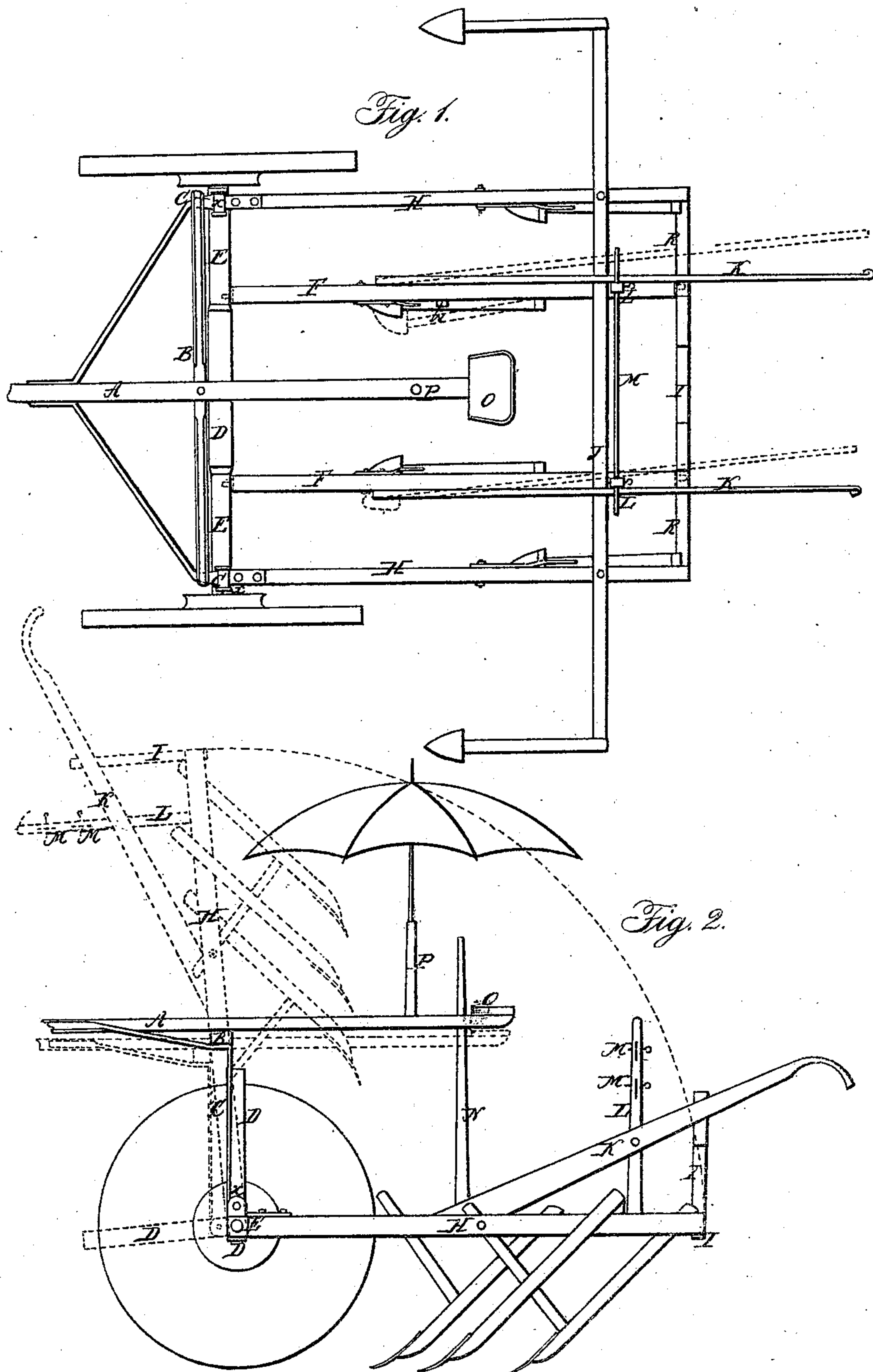


J. CANFIELD.
Wheel-Cultivator.

No. 43,635.

Patented July 26, 1864.



Witnesses:

E. P. Kettner
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by
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UNITED STATES PATENT OFFICE.

JAMES CANFIELD, OF SABULA, IOWA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 43,635, dated July 26, 1864.

To all whom it may concern:

Be it known that I, JAMES CANFIELD, of Sabula, in the county of Jackson and State of Iowa, have invented a new and useful Improvement in Cultivators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a top view of my improved cultivator. Fig. 2 is a side view with one of the wheels removed. The red lines therein represent the cultivator thrown up on the axle for driving to and from the field.

The same letters of reference represent corresponding parts in the different figures.

To enable those skilled in the art to manufacture and use my invention, I will proceed to describe it with particularity.

A is the tongue of my cultivator, and B a cross-piece to which the tongue is fastened. The cross-piece B is supported by two standards, *c c*, the said standards being hinged to the top of the axle at *x*, so as to allow of a free oscillating motion of the tongue up and down.

D is a strip of iron with its ends extending under the wooden axle E E quite to the hub of the wheel, and its center extending up nearly to the tongue A, as shown in the drawings, forming a bow. I is a similar strip of iron, with its ends extending under the cross-pieces R R and its center extending up, as shown in Fig. 2, its corners not coming up square but being curved in, as shown by shaded lines *y y*, so as not to interfere with the handles K K. E E are made of wood and extend through the hubs of the wheels, forming the axle.

H H are side beams of the cultivator, and are mortised firmly into the end pieces, E E and R R.

F F are two central beams, supported upon the end pieces, E E and R R, by pivot joints, so that they can be turned laterally.

J is a long cross-beam, fastened by screws to the beams H H and having attached to each end of it a standard for a cultivator-plow.

K K are handles for guiding the machine when the operator chooses to walk.

L L are standards firmly attached to the beams F F, and are connected at the top by means of the thin strips M M. Said strips pass loosely through slots in the standards,

being fastened at each end by pins. This arrangement prevents the plow-beams F F from revolving laterally too far, and also causes them to revolve together. The tongue A extends back over the center of the cultivator and has fastened to it the seat O for the driver, and there is also attached to the tongue at a suitable distance in front of the driver an umbrella-holder, P.

N is a lever fastened at one end to the beam F and extending up near the seat O, so as to enable the operator sitting on the said seat to turn the beams F F laterally and thereby avoid damaging the corn. The weight of the driver on the seat O balances the pressure on the horses' necks caused by the draft of the machine.

The umbrella-holder enables the operator to do his work in a hot summer's day sitting coolly in the shade with no fears of a sun-stroke.

When cultivating the corn the first time, or when the corn is small, the long cross beam J is attached to the cultivator, as described, and the plows on the end of it extending over between the adjacent rows on each side of the cultivator enable the operator to accomplish one-third more work than he could without the cross-beam; but when the corn is high and there is more danger of breaking it down the beam J is removed.

The wooden pieces E extend through the hubs of the wheels, it being cheaper than to extend the iron D and causing the wheels to revolve on it.

The cultivator is thrown up on the axle, as shown by the red lines in Fig. 2, to drive to and from the field.

Having thus fully described the construction and operation of my improved cultivator, what I claim as my invention, and desire to secure by Letters Patent, is—

The combination and arrangement of the axle E E, the bow D, plow-beams H F, cross-pieces R, and bow I, the removable bar J, draft-pole A, bar B, standards C, pivot *x*, and seat O, all constructed, arranged, and operating substantially as and for the purposes specified.

JAMES CANFIELD.

Witnesses:

W. H. ELDREDGE,
W. E. MARRS.