

(Model.)

2 Sheets—Sheet 1.

N. DULANEY.
Sulky Cultivator.

No. 241,319.

Patented May 10, 1881.

Fig: 1.

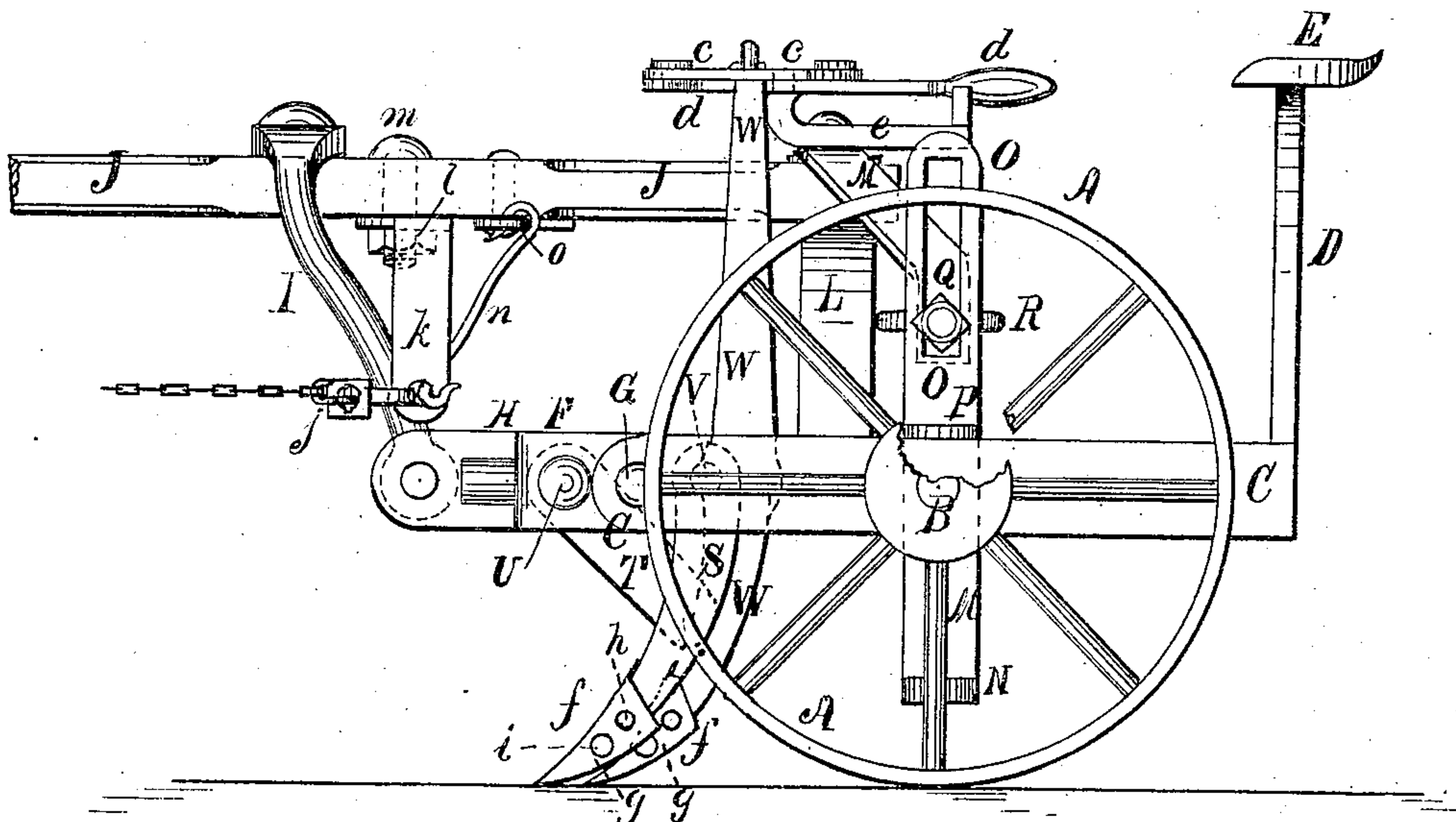
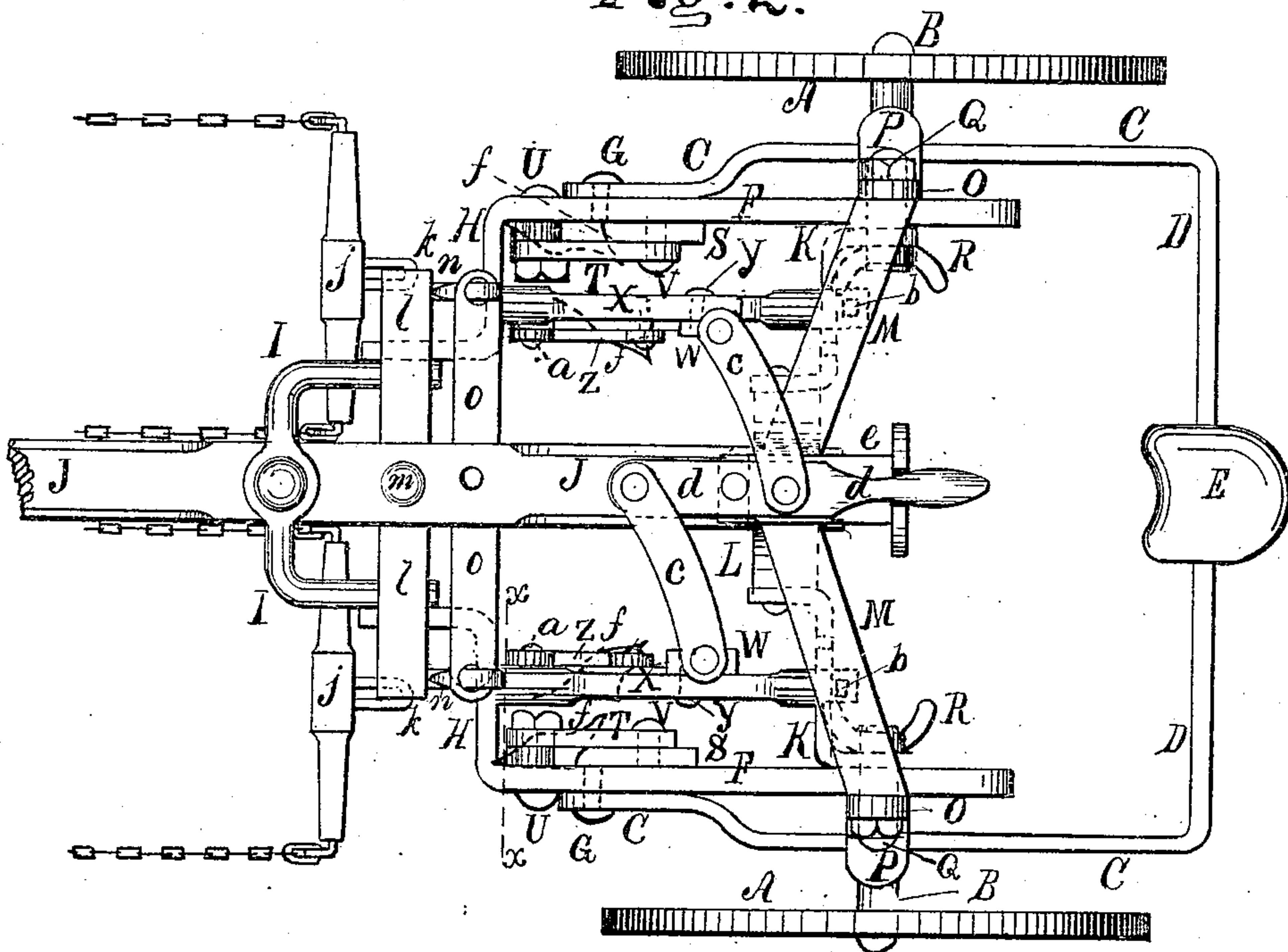


Fig: 2.



WITNESSES:

W. E. Whitney,
C. Sedgwick

INVENTOR:

N. Dulaney
BY *Mum & Co*
ATTORNEYS.

(Model.)

2 Sheets—Sheet 2.

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Fig: 3.

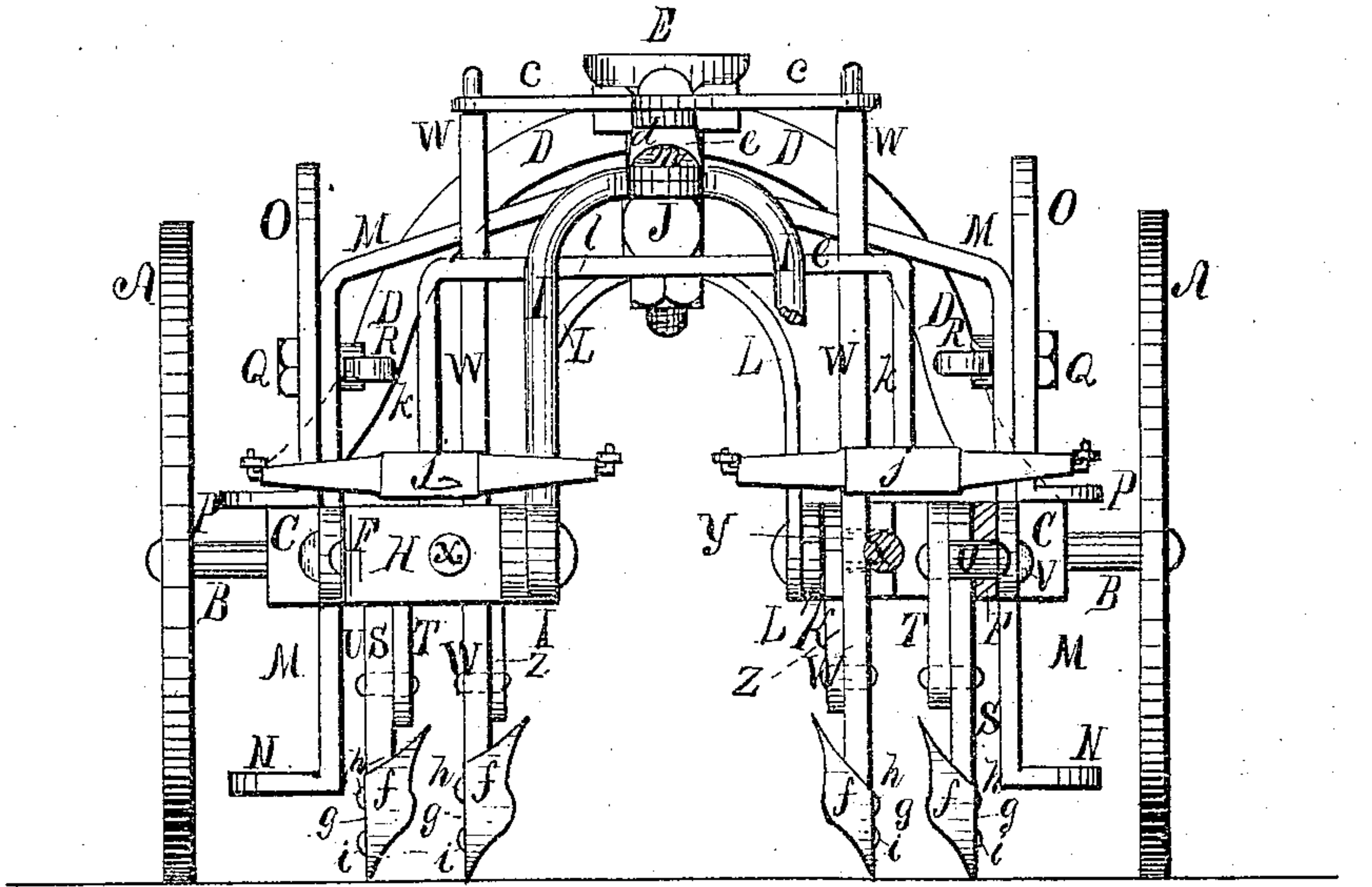
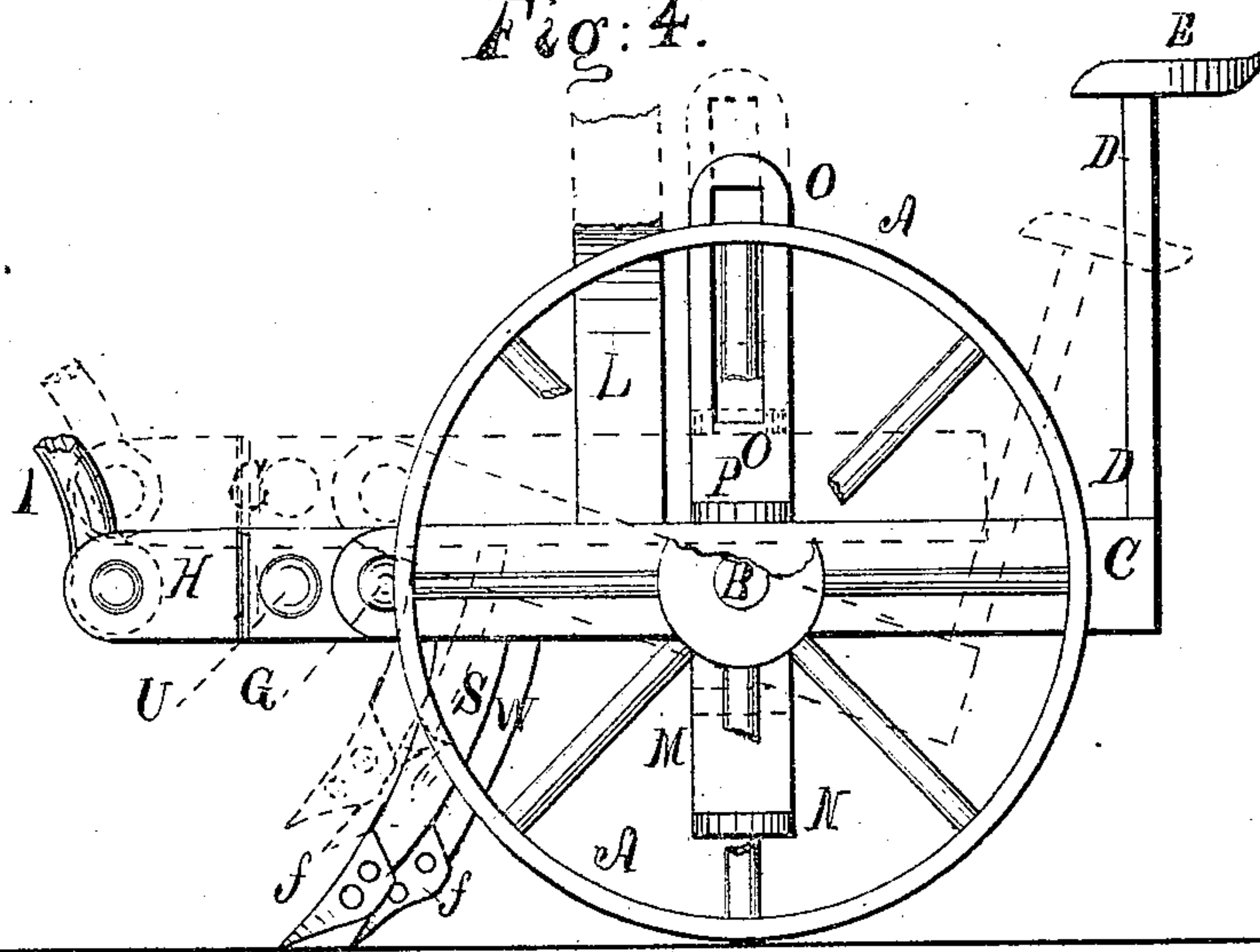


Fig: 4.



WITNESSES:

W. E. Whitney,
C. Sedgwick

INVENTOR:

N. Dulaney
BY *Mum Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

NELSON DULANEY, OF LYNNVILLE, ILLINOIS.

SULKY-CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 241,319, dated May 10, 1881.

Application filed January 5, 1881. (Model.)

To all whom it may concern:

Be it known that I, NELSON DULANEY, of Lynnville, in the county of Morgan and State of Illinois, have invented a new and useful Improvement in Sulky-Cultivators, of which the following is a specification.

Figure 1, Sheet 1, is a side elevation of the improvement. Fig. 2, Sheet 1, is a plan view. Fig. 3, Sheet 2, is a front elevation, partly in section, through the line *xx*, Fig. 2. Fig. 4, Sheet 2, is a side elevation, showing in dotted lines the position of the frame when raised.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish sulky-cultivators so constructed that the plows can be readily adjusted to throw the soil toward or from the plants, that the inner plows can be guided along crooked rows or to avoid irregular hills, and that the draft will be taken off the horses' necks.

A are the wheels, which revolve upon short axles B, attached to the bars C, the rear ends of which are rigidly connected by an arched bar, D. The bars or frame C D can be made in one piece, if desired, and to the center of the arched bar D is attached the driver's seat E. The bars C project in front of the axles B, and their forward ends are pivoted to the longitudinal bars F by bolts G, so that the bars F and their attachments can be raised by the driver's weight resting upon the seat E, the bars C D serving as a lever and the axles B as fulcrums. Upon the forward ends of the bars F are formed, or to them are rigidly attached, inwardly-projecting arms H, the inner ends of which are bent forward and are attached to the ends of an arched bar, I. The arched bar I passes over the tongue J, and is bolted at its center to the said tongue.

To the bars F, at a little distance from their rear ends, are rigidly secured, or upon them are formed, inwardly-projecting arms K, the inner ends of which are bent forward and are bolted to the ends of the arched bar L. The arched bar L passes beneath the tongue J, and is bolted to the said tongue J. With this construction the frames H F K are rigidly connected with the tongue J.

To the rear parts of the longitudinal bars F are secured by bolts or rivets the upright

bars M, which project below the said bars F, and have their lower ends bent outward to form stops or gages N, to strike against the bars C and limit the upward movement of the bars F and their attachments. The bars M, at a little distance above the bars F, are bent inward, and their upper ends are secured to the rear end of the tongue J.

O are bars placed against the outer sides of the upper parts of the bars M, and having their lower ends bent outward at right angles to form stops or gages P, to strike against the bars C and limit the downward movement of the bars F and their attachments. The upper parts of the bars O are slotted longitudinally to receive the bolts Q, that secure them to the bars M, and which are provided with hand-nuts R, so that by loosening the said hand-nuts R the bars O can be adjusted higher or lower, to regulate the depth to which the plows enter the ground. With this construction, also, when the bars F and their attachments have been raised, the bars O can be moved down to bring the stops P against the upper edges of the bars C, so as to clamp the bars F and their attachments in place for convenience in drawing the cultivator from place to place.

S are the standards of the outer plows, the upper ends of which are secured by the bolts V to the bars F at a little distance from the forward ends of the said bars F. The draft-strain upon the standards S is sustained by the brace-bars T, the lower ends of which are secured to the middle parts of the said standards by bolts or rivets. The upper ends of the brace-bars T are secured to the forward parts of the bars F by bolts U. Another set of holes is formed in the rear parts of the bars F, to receive the bolts V, so that the outer standards, S, can be attached to the forward parts of the bars F when the soil is to be thrown from the plants, and to the rear parts of the said bars F when the soil is to be thrown toward the plants.

W are the standards of the inner plows, which standards are pivoted to the beams X by bolts Y. The draft-strain upon the standards W is sustained by the brace-bars Z, the lower ends of which are secured to the lower parts of the standards W by bolts or rivets, and their upper ends are secured to the beams X by bolts *a*.

The ends of the beams X are rounded, or have round tenons formed upon them, which work in holes in the arms H K of the inner frames. The forward tenons of the beams X are made of sufficient length to allow the said beams X to be moved so far forward as to withdraw the rear tenons from the holes in the rear arms, K. The beams X are held from being drawn forward accidentally by keys *b*, passed through their rear tenons at the rear sides of the rear arms, K. Several holes should be formed in the rear arms, K, to receive the rear tenons of the beams X, so that the said beams can be adjusted to turn the points of the plows toward or from the plants, to cause the said plows to move more or less soil, as may be required. The standards W extend above the tongue J, and have round tenons formed upon their upper ends to pass through holes in the outer ends of the two bars *c*. The inner ends of the bars *c* are pivoted to the lever *d*, upon the opposite sides of and equally distant from the pivoting-point of the said lever *d*. The rear end of the lever *d* extends into such a position that it can be readily reached and operated by the driver from the seat E. The lever *d* is pivoted to the upwardly-bent forward end of a bar, *e*, attached to the bolt that secures the bars M to the tongue J, or to any other suitable support. The rear end of the bar *e* is bent upward, and is notched to receive the rear part of the lever *d* and hold the said lever, and with it the standards W, in place when the said standards W are in an upright position. With this construction, by operating the lever *d* the lower parts of the standards W can be moved to one or the other side, to cause the plows to follow crooked rows or to avoid irregular hills, the supporting-beams X rocking in the arms H K.

f are the plows, which are made in the form of turn-plows, and have rearwardly-projecting flanges *g* upon their inner or landside edges, to overlap the sides of the lower ends of the standards S W and receive the bolts *h*, by which the said plows are secured to the said standards. Two holes are formed in each flange *g* and standard S W, in one of which is placed a bolt,

h, and in the other is placed a wooden pin, *i*, of such a strength as to hold the plow in place under ordinary circumstances, but which will break and allow the plow to swing back should the said plow strike an obstruction. The plows *f* can be adjusted to turn the soil from or toward the plants, as may be required.

If desired, two large plows can be used instead of the four small ones, which large plows should be attached to the inner standards, W. In this case the outer standards, S, and their braces T should be detached.

j are the whiffletrees, which are attached to the ends of the downwardly-projecting arms *k*, formed upon the ends of the double-tree *l*. The double-tree *l* is pivoted at its center to the tongue J by a bolt, *m*.

To the ends of the arms *k* of the double-tree *l* are pivoted the forward ends of two connecting-rods, *n*, the rear ends of which are pivoted to the ends of a second double-tree, *o*. The double-tree *o* is pivoted at its center to the tongue J. With this construction the arms *k* of the double-tree *l* lower the points of the draft attachment, so that there will be no downdraft upon the horses' necks, and the rods *n* and second double-tree, *o*, cause the draft to hold the plows down to their work.

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

1. In a sulky-cultivator, the combination, with the main frame F, of the pivoted seat-frame C D, the bars M, having stops N, and the adjustable slotted bars O, bent to form stops P, as shown and described.

2. The standards W, supporting plows at their lower ends, connected at the top with hand-lever pivoted between the standard-connections, and intermediately attached to a rocking beam, X, to provide means of throwing the plow-points toward or from each other, as described.

NELSON DULANEY.

Witnesses:

THOMAS STURDY,
CHAS. PACKARD,
THOMAS REESE.