

Cultivators.

No. 139,985.

Patented June 17, 1873.

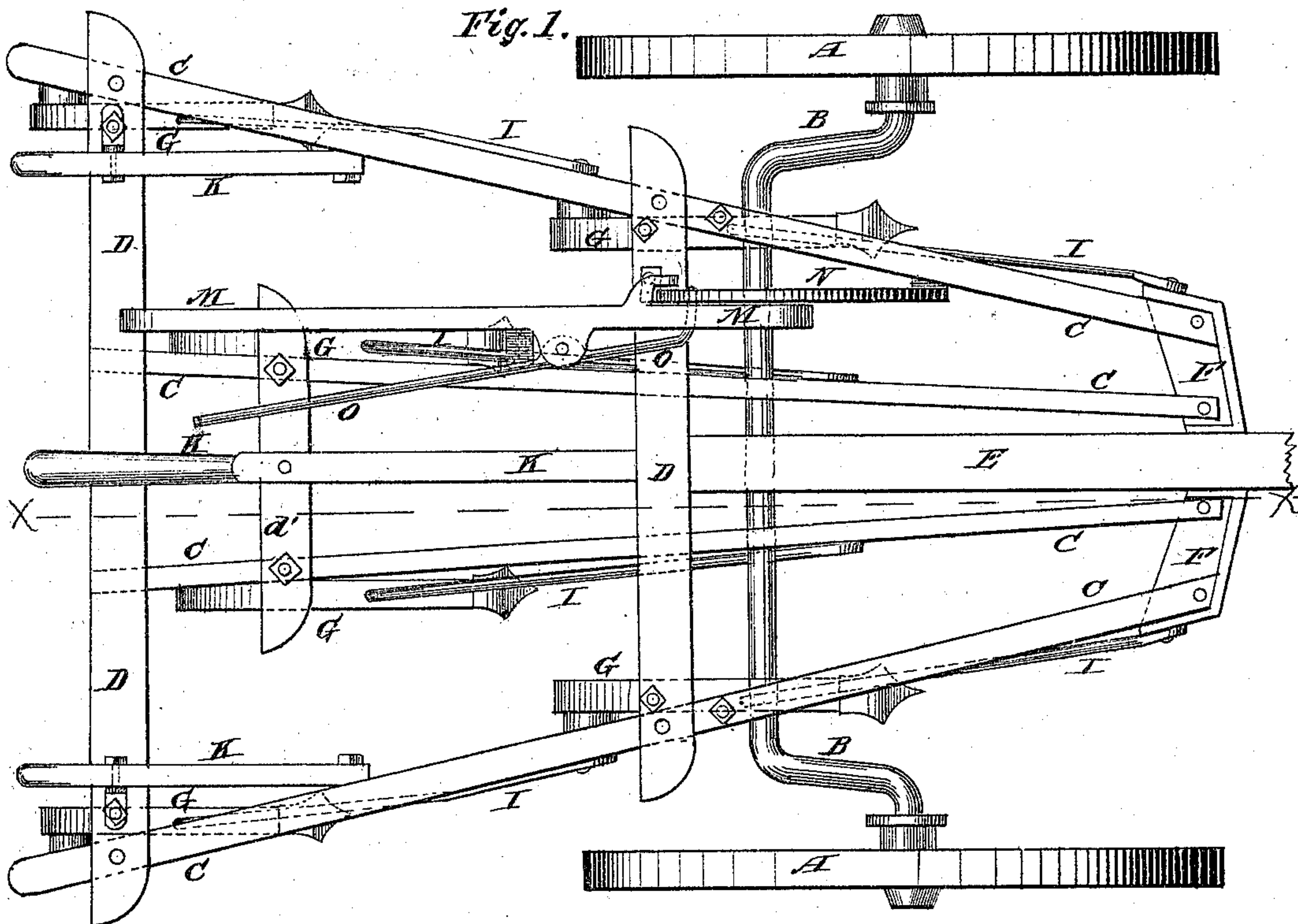


Fig. 2.

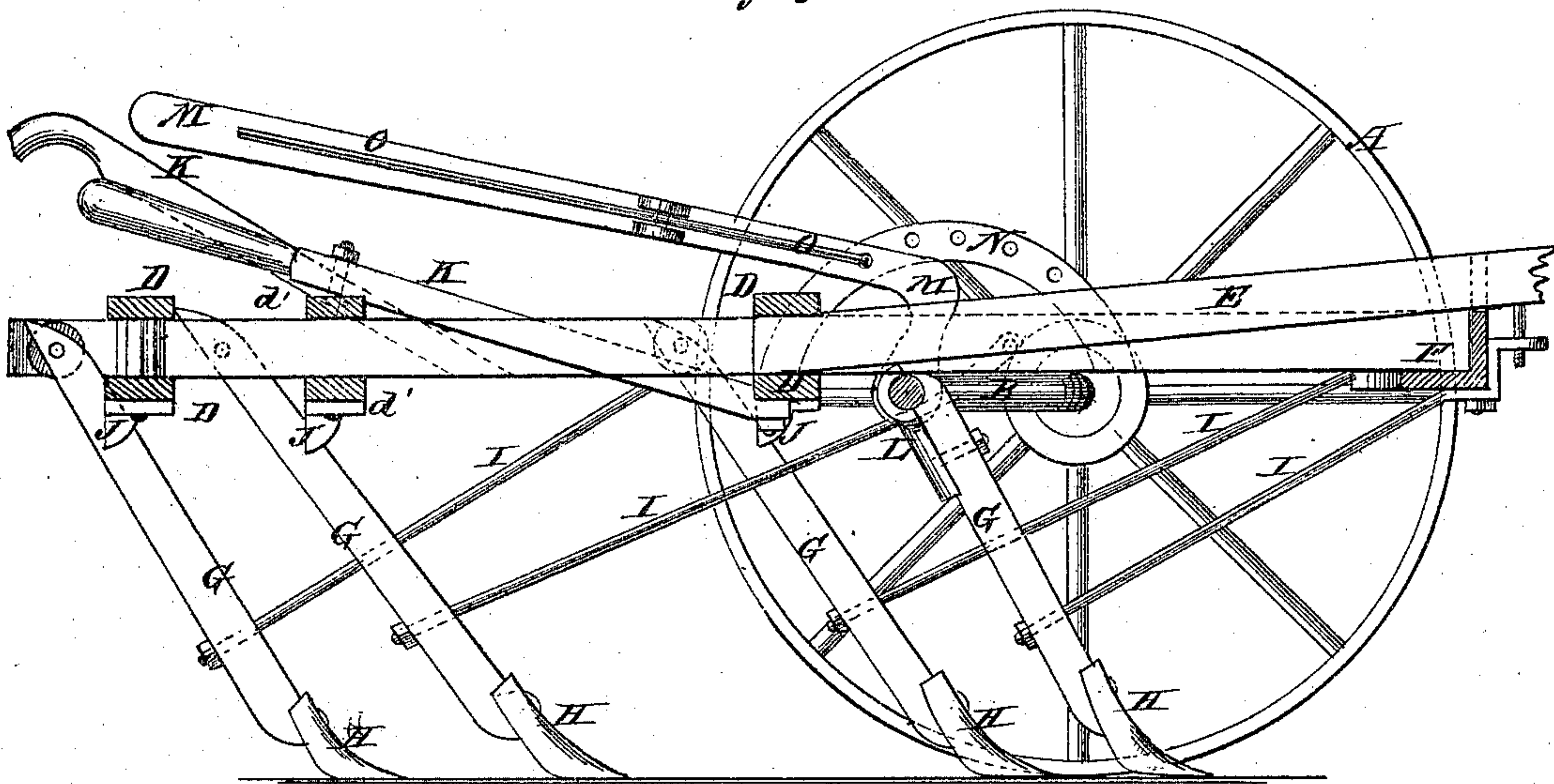
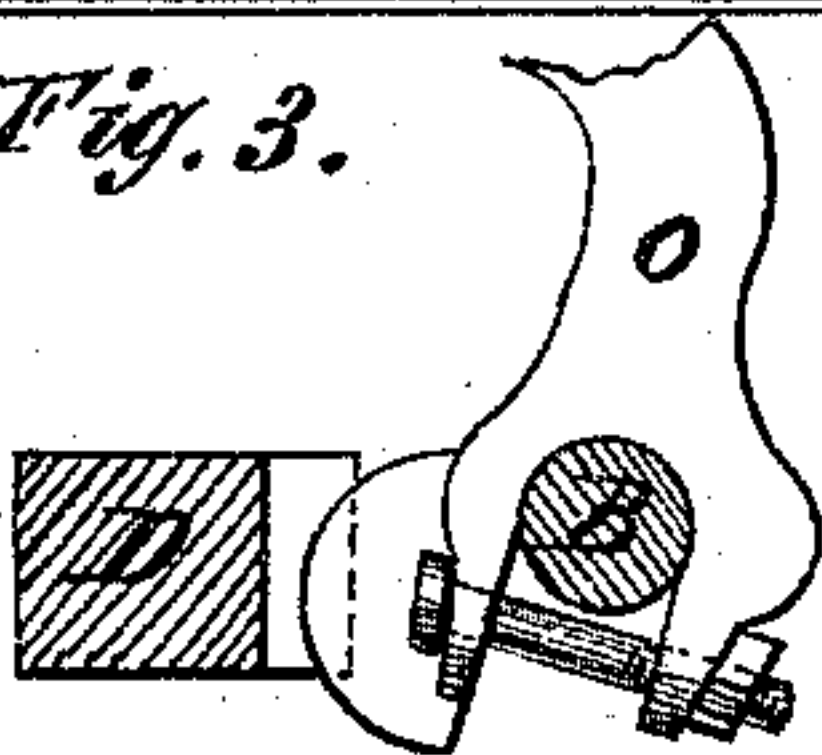


Fig. 3.

Witnesses:

P. C. Dieterich.
Prague.



Inventor:

Indentor:
P. J. Wells
PER Munnell
Attorneys.

UNITED STATES PATENT OFFICE.

PHILIP F. WELLS, OF MILFORD, MICHIGAN, ASSIGNOR TO HIMSELF AND
D. WEBSTER WELLS, OF SAME PLACE.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 139,985, dated June 17, 1873; application filed
April 12, 1873.

To all whom it may concern:

Be it known that I, PHILIP FRANKLIN WELLS, of Milford, in the county of Oakland and State of Michigan, have invented a new and useful Improvement in Cultivators, of which the following is a specification:

Figure 1 is a top view of my improved cultivator. Fig. 2 is a detail longitudinal section of the same taken through the line *xx*, Fig. 1. Fig. 3 is a detail view, showing the manner in which the lever is secured to the axle.

Similar letters of reference indicate corresponding parts.

The invention consists in the improvement of cultivators, as hereinafter described, and pointed out in the claims.

A are the wheels, which revolve upon the journals of the axle B. The axle B is bent twice at right angles, or nearly at right angles, near the wheels A, and works in bearings attached to the frame of the machine, so that by turning the crank-arms of the axle B downward the frame-work and its attached plows will be raised, and by turning said arms upward the plows will be lowered into working position. C are the longitudinal bars of the frame-work, the two inner ones of which are parallel or nearly parallel with each other. The two outer bars C incline from each other as they pass to the rearward, as shown in Fig. 1. The longitudinal bars C are connected and held in their proper relative position by two pairs of cross-bars, D, placed above and below the said bars C, and securely bolted to them. The forward ends of the longitudinal bars C are held in their proper relative position, and are connected with each other and with the tongue E by the angle-plate F, to which they are securely bolted, and which is made with a vertical and a horizontal flange, as shown in Figs. 1 and 2, to strengthen it against the strain in the different directions in which it is exposed to strain. Upon the middle part of the upper edge of the vertical flange of the plate F are formed two parallel projections to form a notch to receive the tongue E to brace it securely against lateral movement. The rear end of the tongue E is secured to and between the central pair of cross-bars D. G are the plow-

standards, to the lower ends of which are attached the cultivator-teeth or plows H. The draft strain upon the standards G is sustained by the draft-bars I, the forward ends of which are attached to the bars C, and their rear ends to the said standards G. The rear ends of the draft-bars I should be connected with the standards G by means of wooden pins, so that, should the plows strike an obstruction, the said wooden pins may break and allow the standards to swing back without being broken. The upper ends of the standards G are connected with the bars C by bolts, so that the said standards may swing back upon them, wedge-shaped washers being interposed when required, so that the standards may be parallel with the draft-line while being attached to inclined bars. The forward sides of the standards G rest in the notches of the notched blocks J, which are securely bolted to the cross-bars attached to the longitudinal bars, so that the said standards may be securely sustained against lateral movement, and may at the same time be free to swing back when the plows strike an obstruction. K are the handles, the side ones of which are attached to the rear corners of the frame-work, and the central one of which is attached to the middle cross-bars D, and to the short cross-bars *d'* attached to the two inner bars C a little in front of the rear cross-bars D. To the cross-bars *d'* are also attached the notched blocks J for the rear inner plow-standards. The rear side of the upper end of the forward or central plow-standard G is recessed to fit upon the axle B, and to its rear side is attached a block, L, the forward side of the upper end of which is recessed to fit upon the axle B. By this arrangement, when the said plow strikes an obstruction and the draft-rod I gives way, the said standard may swing back upon the axle without being broken. M is a lever, which is bent at right angles, or nearly at right angles, near its lower end, and its lower end is notched to fit upon a flattened part of the axle B, where it is secured in place by a bolt, so that the axle B may be turned to raise and lower the frame-work and plows by operating the said lever M. The lever M projects upward across a curved bar, N, attached to the frame C D *d'*,

and in which are formed a number of holes to receive the catch-pin of the spring-lever catch O, which projects along the side of the lever M, so that it may be conveniently reached and operated by the plowman to hold the framework and plows in any position into which they may have been adjusted.

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

1. A plow-standard, G, pivoted at the upper end to bar C, and held rigidly in a vertic-

al plane between the bifurcations of a stud, J, on the cross-bar; as and for the purpose described.

2. The front plate F upwardly flanged and constructed to receive and retain the tongue and longitudinal bars, in the manner shown and described.

PHILIP F. WELLS.

Witnesses:

D. W. WELLS,
WALTER CRAWFORD.