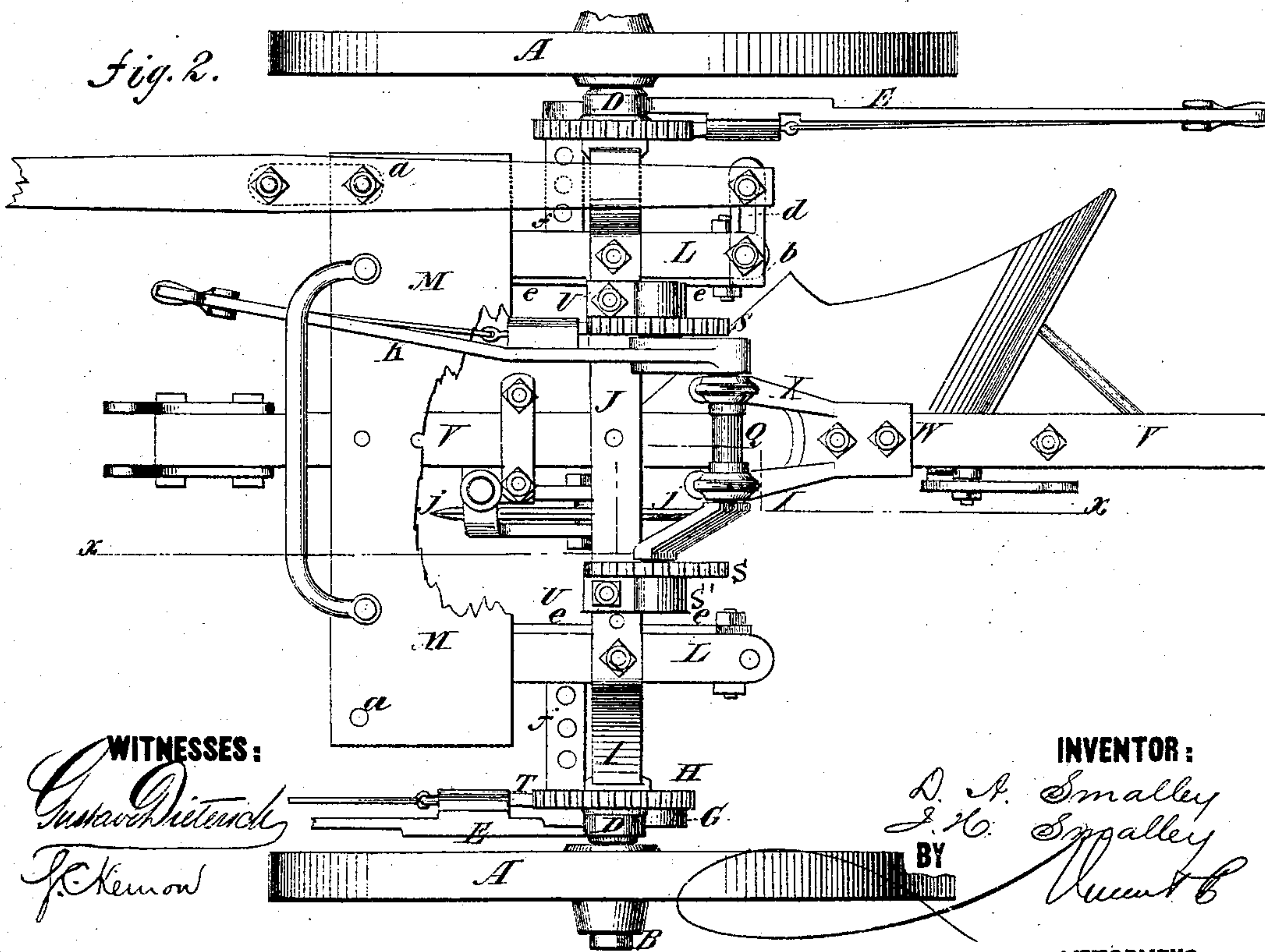
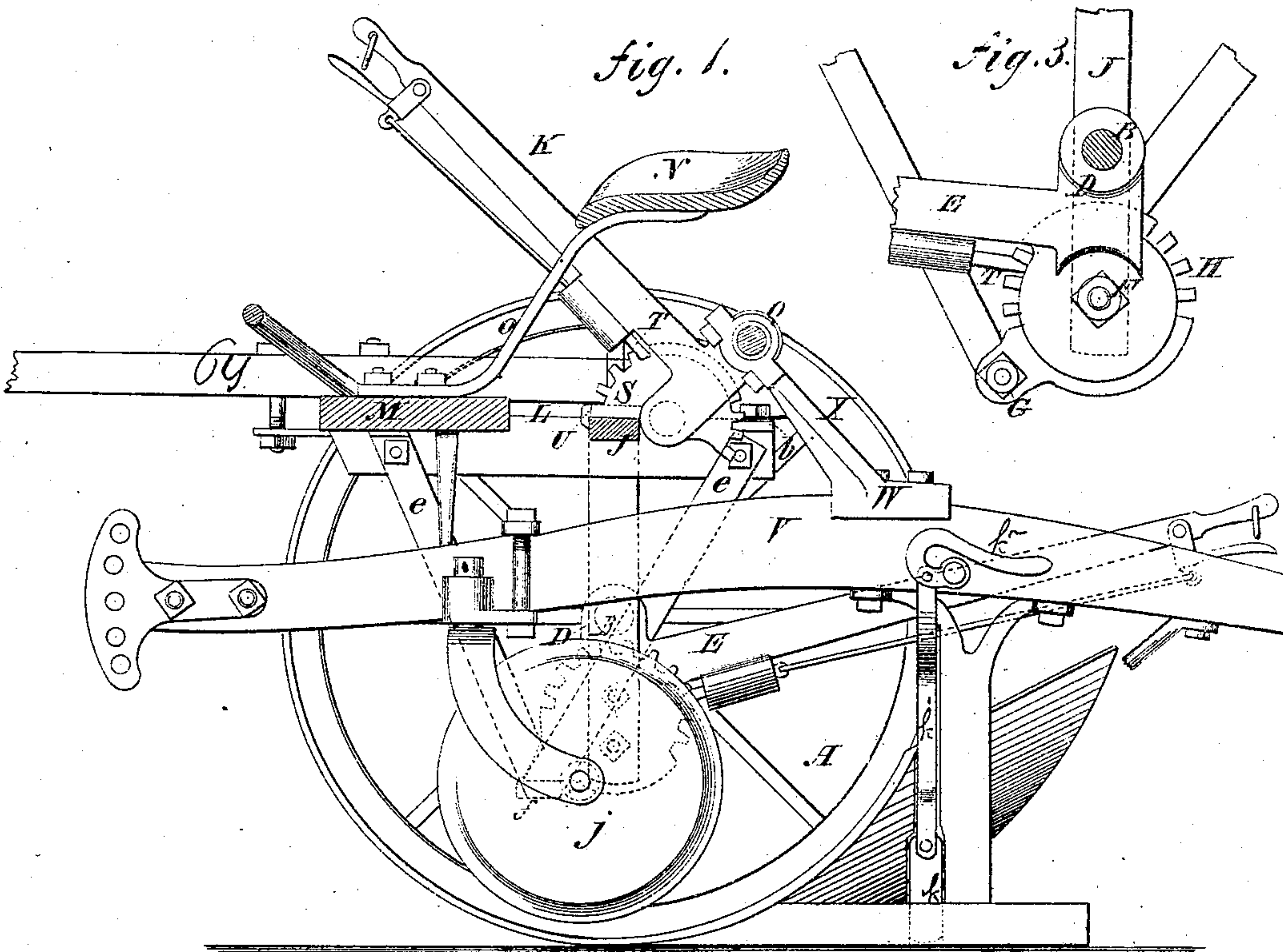


Sulky Plows and Cultivators.


No. 152,018.

Patented June 16, 1874.



WITNESSES:
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UNITED STATES PATENT OFFICE.

DAVID A. SMALLEY AND JAMES H. SMALLEY, OF BUNKER HILL, ILLINOIS.

IMPROVEMENT IN SULKY PLOWS AND CULTIVATORS.

Specification forming part of Letters Patent No. **152,018**, dated June 16, 1874; application filed January 29, 1874.

To all whom it may concern:

Be it known that we, DAVID A. SMALLEY and JAMES H. SMALLEY, of Bunker Hill, in the county of Macoupin and State of Illinois, have invented a new and Improved Sulky Plow and Cultivator, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claims.

Figure 1 is a sectional elevation of the sulky-plow, taken on the line *x x*. Fig. 2 is a plan view with a part broken out. Fig. 3 is a detail of the apparatus for raising and lowering the sulky-wheels on the cranked axle, for adjusting them to run one on the land and another in the furrow.

Similar letters of reference indicate corresponding parts.

The sulky-wheels A are mounted on a short axle, B, which has a short crank, D, and a hand-lever, E, cast on its inner end. This crank is pivoted at F, which is the center of a disk, G, formed on its free end, to a toothed disk, H, attached to the lower end of the upright or nearly upright portion I of the bent axle J, connecting the two wheels of the sulky, and also supporting the frame. The lever E is provided with a spring catch or stop, T, for engaging the toothed disk on the axle J, to hold the truck-wheel high or low relatively to said axle. The frame is composed of the two side pieces L and the foot-board M, the side pieces being bolted to the under side of the axle J, a little in advance of their rear ends, and the foot-board being bolted to the upper side of the side pieces at their front end, connecting them rigidly together. The seat N is mounted on the foot-board M by a bent support, O, bolted on the top of it. There is also a bent rod, P, mounted on it, as shown in Figs. 1 and 2. The cranked connections of the truck-wheels to the bent axle above described are employed to adjust the sulky for running one wheel in the furrow and the other on the land. Both wheels are connected in like manner, so that the sulky can be used for a right or left hand plow. In order to enable the attendant to adjust the plow so as to vary its depth without changing the wheels relatively to the axle J, a crank-shaft, Q, with an adjusting-lever, K, toothed holding-disk S, and a

spring-stop, T, are employed for connecting the plow to the frame and adjusting it. Said axle is journaled in the notched disks, and they are bolted to the axle J, detachably, by lugs U. To attach the plow to this crank-shaft, its beam V is bolted near about the plow-standard to a strong casting, W, having two rigid arms, X, which extend upward to the shaft Q, and are pivoted to it, so that, by turning said axle in its bearings by the lever K, the plow can be readily raised or lowered, and the depth desired by the operator secured, without varying the height of the sulky-frame. The beam of the plow extends forward of the foot-board, for the connection of the whiffletrees for drawing it. The tongue Y is connected by bolting it to the upper side of the projecting end of the foot-board through the hole *a*; also, bolting the rear end to a bracket, *b*, which is attached to the rear end of a side piece, L, of the frame, and projects outward toward the wheel, and also has a slotted hole, *d*, for the bolt to move in, so that the tongue can swing forward and backward laterally to some extent without having any effect on the plow, which will thus be free to be guided independently of the tongue.

For a right-hand three-horse plow the tongue will be attached to the right-hand end of the foot-board and side of the frame, and for a left-hand plow it will be attached to the other side, both sides being provided with the requisite holes for the purpose, and the bracket *b* being adjustable from one side to the other.

e represents braces extending downward from each end of the side pieces L of the frame for the support of one end of a bar, *f*, on each side of the frame, whose other end is supported in the ear *g* of the notched disk H, said bars being for the connection of the walking cultivators, and as fender-bars to break down weeds, corn-stalks, and for either right or left hand plows.

The cutter *k* is applied to the sulky-plow, and is so arranged in practice that it can be raised or depressed by a handle in reach of the operator, to depress the cutter when finishing up a land, so as to guide the plow at such times, when it is more likely to run out of its true course than at others.

The small cutter or rudder *k* works inside

of the bar of plow, and is connected by a vertical bar, k^1 , with a cam-lever, k^2 , on the side of plow-beam, for locking the rudder in position. This facilitates the guiding of the plow where the breadth of land has been reduced.

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

1. The combination of the metal piece W, having rigid arms X X, and the crank-shaft Q, having toothed disks S, with the lever K and spring-stop T, as and for the purpose described.

2. The combination, with bar f , of toothed disk H, having front extension with hole or

slot, and the pendent strap C, as and for the purpose specified.

3. The combination, with the plow, of the adjustable cutter or rudder k , connecting-rod, and locking-cam, as and for the purpose specified.

4. The combination of axle B, having crank D, hand-lever E, and disk G, the toothed segment H, having side loop h' , and the pendent arm I of the main axle, all conjoined by a single bolt, as and for the purpose specified.

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Witnesses: JAMES H. SMALLEY.

DAVID MORRIS,

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