J. M. PAYNE.

SULKY-PLOW.

No. 181,200. Patented Aug. 15, 1876.

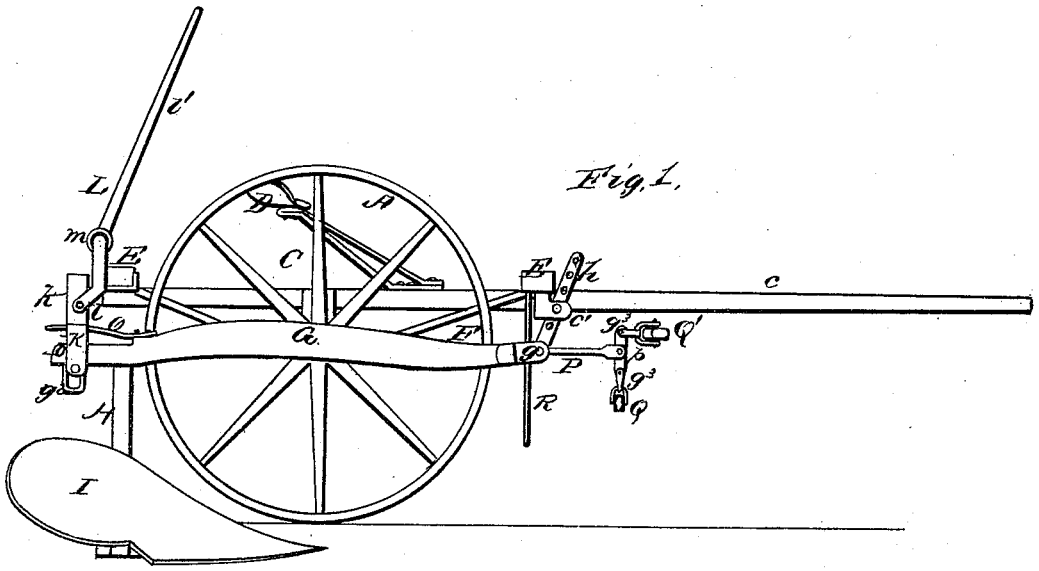

Fig. 1.

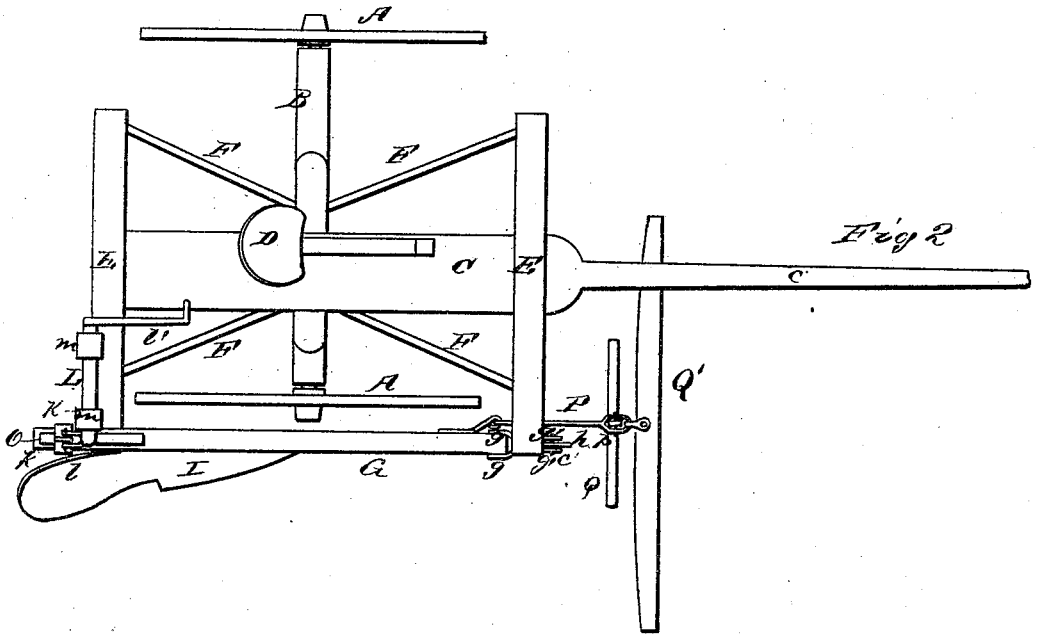

Fig 2

WITNESSES

C. M. Searle.

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INVENTOR,

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UNITED STATES PATENT OFFICE

JOSEPH M. PAYNE, OF DALLAS, TEXAS.

IMPROVEMENT IN SULKY-PLOWS.

Specification forming part of Letters Patent No. **181,200**, dated August 15, 1876; application filed May 27, 1876.

To all whom it may concern:

Be it known that I, JOSEPH M. PAYNE, of Dallas, in the county of Dallas and State of Texas, have invented a new and valuable Improvement in Sulky-Plows; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation of my sulky-plow, and Fig. 2 is a plan view of the same.

My invention relates to sulky-plows; and the nature of my invention consists in devices for hanging a plow outside of the wheels, in a draft-beam supported by links at both ends, and in auxiliary devices, substantially as set forth.

In the accompanying drawings, A A designate the wheels, and B an axle on which they turn, and to which is rigidly secured a reach, C, that ends in a tongue, *c*, and carries a seat, D, for the driver. E E are cross-bars, which are bolted or otherwise rigidly secured to the reach C in front and behind, and supported at or near their ends by angular brace-rods F F, that are secured to the under side of axle B.

At one end of each one of cross-bars E E (preferably that on the right side of the vehicle) is loosely hung a plow-beam, G, which carries at or near its rear end a standard, H, and plow I. The means of suspension consist (at the forward end of the beam G) in a bracket, *c'*, secured to the end of front cross-bar E, a pair of plates, *g g*, secured to the sides of beam G at the end thereof, and ending in lips g^1 g^1, and a link or swinging bar, *h*, which connects bracket *c'* loosely with plates *g g*. Link-bar *h* is constructed with a series of perforations, whereby the front end of the plow-beam may be adjusted at a higher or lower level, as desired.

The rear end of plow-beam G is suspended in a stirrup, K, which is provided with an upper extension, *k*, that is pivoted in the split end *l* of bent operating-lever L. Said operating-lever is pivoted in sleeves *m* to back cross-bar E. Lever L at all times supports the rear end of plow-beam G, and, in addition, it may be employed either to raise the plow nearer to the surface, thereby making a more shallow furrow, or to lift it quite clear of the ground, and so prevent it from operating. These results are effected by pressing with more or less force upon the long arm *l'* of lever L. A toothed segment or equivalent device may be attached to the reach C to hold arm *l'* in any of these adjustments.

On the rear end of plow-beam G, on the upper side thereof, is secured a spring, O, which bears against the inside of stirrup K, as shown, and operates to force the plow down with a yielding pressure, so as to prevent injury when any obstacle is struck, and to enable the apparatus to accommodate itself to inequalities of the ground. Immediately below spring O, on the under side of plow-beam G, is secured a loop or staple, g^2, the office of which is to limit the vertical play of the rod which constitutes the bottom of stirrup K. Spring O is thereby prevented from being strained or compressed too far. I have shown a flat spring attached to the plow-beam at one end; but a spiral, helical, elliptical, or any other suitable form of spring may be substituted therefor without departing from the spirit of my invention.

On one side of plow-beam G, near the front end thereof, is loosely hung draft-rod P, to the outer end of which is pivoted, by the middle, the vertical piece *p*. This piece *p* is linked at either end to pivoted clips g^3 g^3, one of which bears whiffletree Q, for use when only one horse is employed to draw the plow, while the other carries double-tree Q', for use in case two horses are so employed. For plowing with three horses any of the common forms of three-horse equalizers may be substituted for double-tree Q'.

To allow vertical play in the draft-rod P, so as to conform to the rise and fall of the plow-beam G, when adjusted as heretofore described, and also to the inequalities of the ground, and at the same time to preserve a perfectly straight draft, I attach guide-loop R to the under side of front cross-bar E at the end nearest to the plow-beam G.

If preferred, the whiffletree may be attached directly to the end of tongue *c*, so that the

line of draft will be midway between the wheels, instead of being on one side thereof.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of operating and suspending lever L with stirrup K, spring O, and plow-beam G, substantially as set forth.

2. The combination of draft-rod P, plow-beam G, guide-loop R, and perforated link *h*, substantially as described, and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH MOTT PAYNE.

Witnesses:

JAMES MILNER,

DANIEL GREENE.