J. & A. T. WARWICK.

Plow-Sulky.

No. 213,717. Patented Mar. 25, 1879.

Fig. 1.

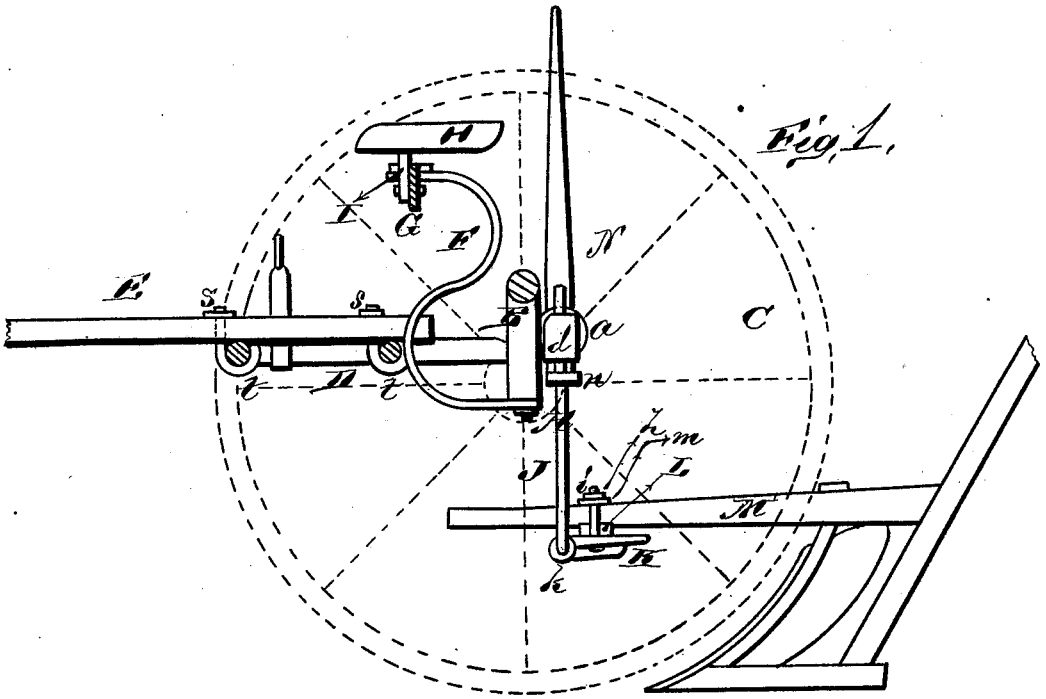


Fig. 2.

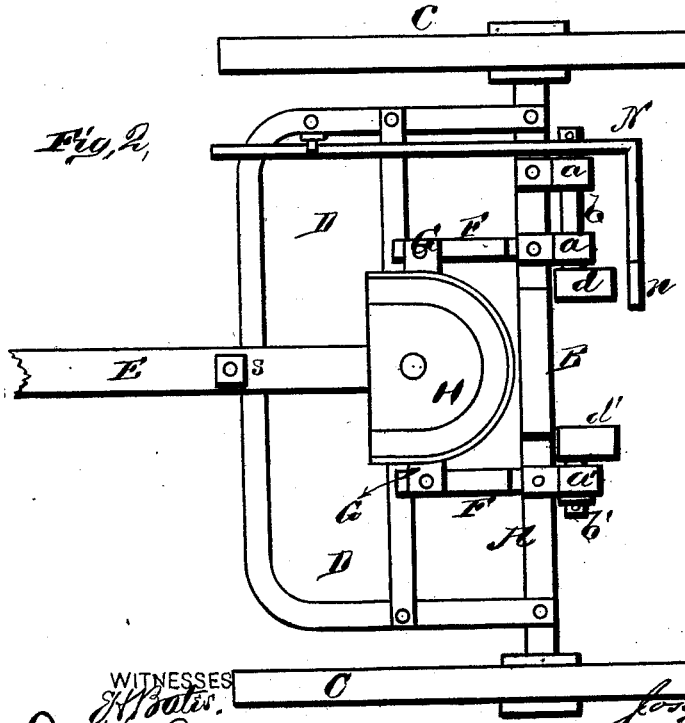
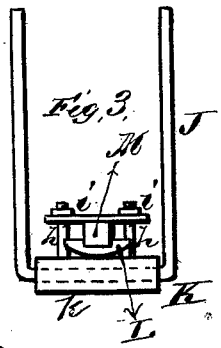


Fig. 4.

Fig. 3.



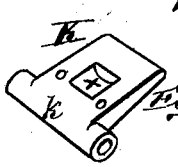


Fig. 5.

WITNESSES.

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UNITED STATES PATENT OFFICE.

JOSEPH WARWICK AND ALFRED T. WARWICK, OF FRANKLIN, ASSIGNORS OF ONE-HALF THEIR RIGHT TO SARAH CLEAVER, OF WEST CARROLLTON, OHIO.

IMPROVEMENT IN PLOW-SULKIES.

Specification forming part of Letters Patent No. **213,717**, dated March 25, 1879; application filed March 30, 1878.

To all whom it may concern:

Be it known that we, JOSEPH WARWICK and ALFRED T. WARWICK, of Franklin, in the county of Warren and State of Ohio, have invented a new and valuable Improvement in Plow-Sulkies; and we 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 part-sectional side view of our plow-sulky. Fig. 2 is a plan view, Fig. 3 is a detail view, and Figs 4 and 5 are perspective details, thereof.

The nature of our invention consists in certain improvements in a plow-sulky, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate our invention.

A represents the axle, formed with an arch, B, in the center, and provided on each end with a driving-wheel, C.

To the axle A is secured the frame D, and to this frame the tongue E is firmly attached. To the under side of the axle, on each side of the arch B, is secured the lower end of an S-shaped spring, F, which extends forward and upward, and the upper ends of said springs are connected by a cross-bar, G, forming a support for the driver's seat.

H represent the driver's seat, provided on its under side with a downwardly-projecting lug or plate, I, which is pivoted in the center to the front of the cross-bar G, so that the driver can throw his weight on either side as may be required, and the seat still be supported by the springs F F.

On top of the axle A, on one side of the arch, are secured two tubular boxes or bearings, *a a*, and on the other side of the arch is a similar bearing, *a'*, said bearings all projecting in rear of the axle and running parallel therewith.

Through the boxes *a a* is passed a rod or shaft, *b*, provided on its inner end with a tube, *d*, at right angles to the rod.

Through the bearing *a'* is passed a similar, but shorter, rod, *b'*, also provided with a tube, *d'*, at its inner end.

Through the tubes *d d'* are passed the parallel arms of a stirrup or bail, J, adapted to slide loosely in said tubes, to the center of which the plow is connected in the following manner: K represents a plate or casting, provided at one end with an elongated tube, *k*, through which the bail or stirrup J is passed, so that said casting will be pivoted in the center of the stirrup. In the upper side of the casting is made a transverse concavity, *x*, in which fits a rounded ridge or rib, *y*, formed on the under side of a leveling-plate, L. The plow-beam M is passed on top of this leveling-plate, and is held by two bolts, *h h*, passed upward through the casting K, one on each side of the plow-beam, a plate or bar, *m*, being then placed on top of the plow-beam, and having holes in its ends, through which the bolts *h* pass, the whole being then fastened by nuts *i i* screwed tightly on the ends of the bolts.

It will readily be seen that the plate L can be turned or rocked more or less to either side, so as to level the plow perfectly for running on uneven ground.

The loosely-sliding stirrup allows the wheels to pass over any obstruction or uneven ground, while the plow runs level and plows a uniform depth—for instance, the wheels pass over the corn-ridges and the plow will still run as level as on level ground.

On the outer end of the rod or shaft *b* is pivoted an elbow or L-shaped lever, N, the lower horizontal arm of which runs in rear of and parallel with the axle, and has an eye, *n*, formed in its end, and through this eye passes one arm of the stirrup J. By turning down the upper arm of this lever it raises the plow backward and upward, so as to draw the point of the plow out from under a root or rock without backing the team.

The tongue E is fastened to the frame D by means of hooked bolts *t* and nuts *s*, as shown, so that by loosening said nuts the tongue can be adjusted laterally to adapt the machine for two or three horses, as desired.

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

1. The combination, with the seat, of the supporting cross-bar provided on one of its vertical sides with a pivot or lug, upon which said seat is pivoted, substantially as shown and described.

2. The combination, with the seat-support, of the seat pivoted thereto and adapted to be rocked or vibrated laterally thereon, substantially as shown, and for the purpose set forth.

3. The combination, in a wheel-plow, of the laterally-vibrating plow-beam and the pivoted seat, adapted to vibrate or rock laterally upon a horizontal axis, substantially as and for the purpose described.

4. The combination of the loosely-sliding stirrup J, casting K, with tube *k* and recess *x*, the adjustable leveling-plate L, and the bolts *h*, plate *m*, and nuts *i*, all substantially as and for the purposes herein set forth.

5. The combination of the stirrup J, which slides loosely through the pivoted tubes *d d'*, and the elbow-lever N, with eye *n*, substantially as and for the purposes herein set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOSEPH WARWICK.
ALFRED T. WARWICK.

Witnesses:
MORDECAI T. CLEAVER,
JAMES N. BELL.