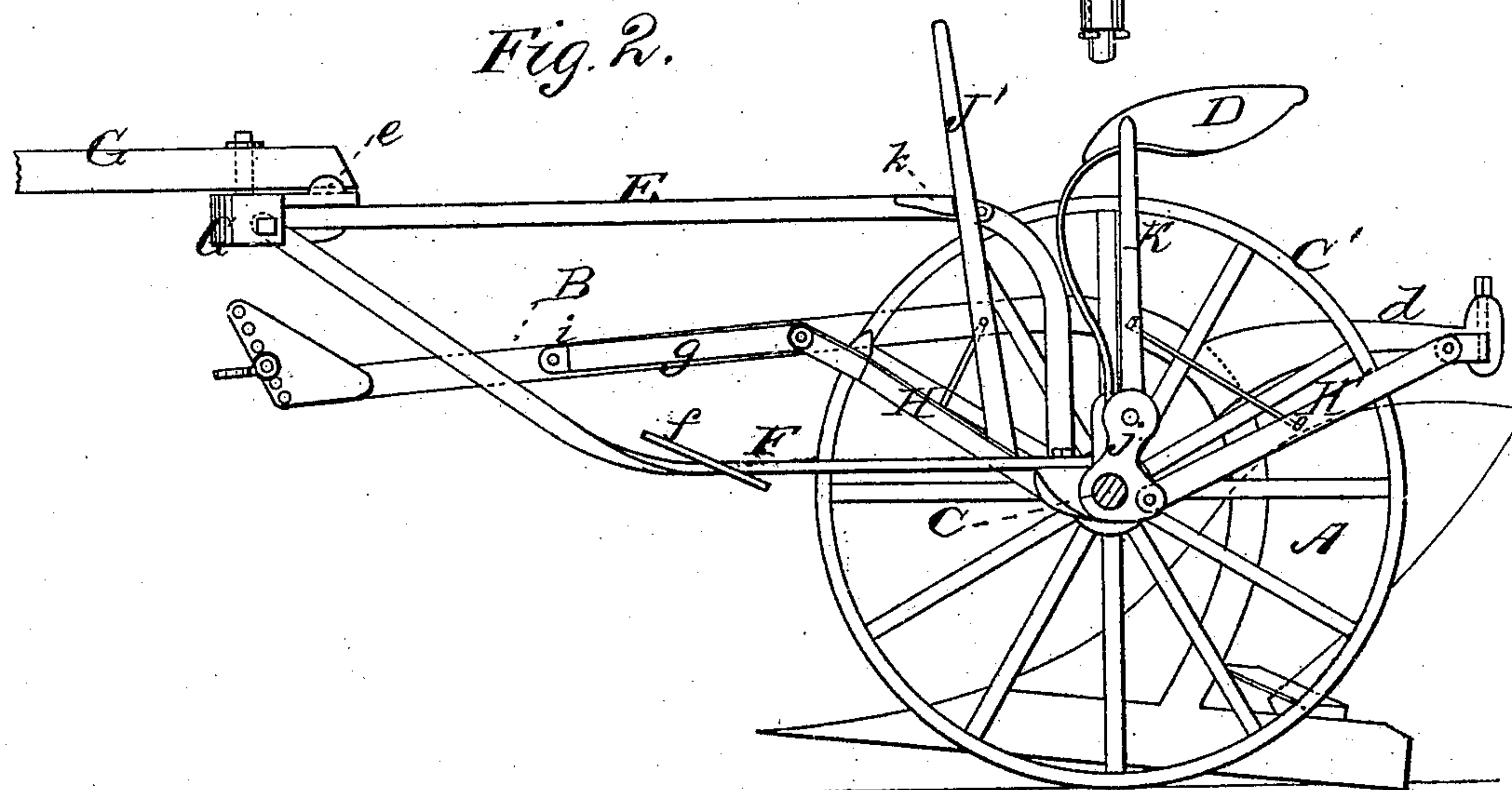
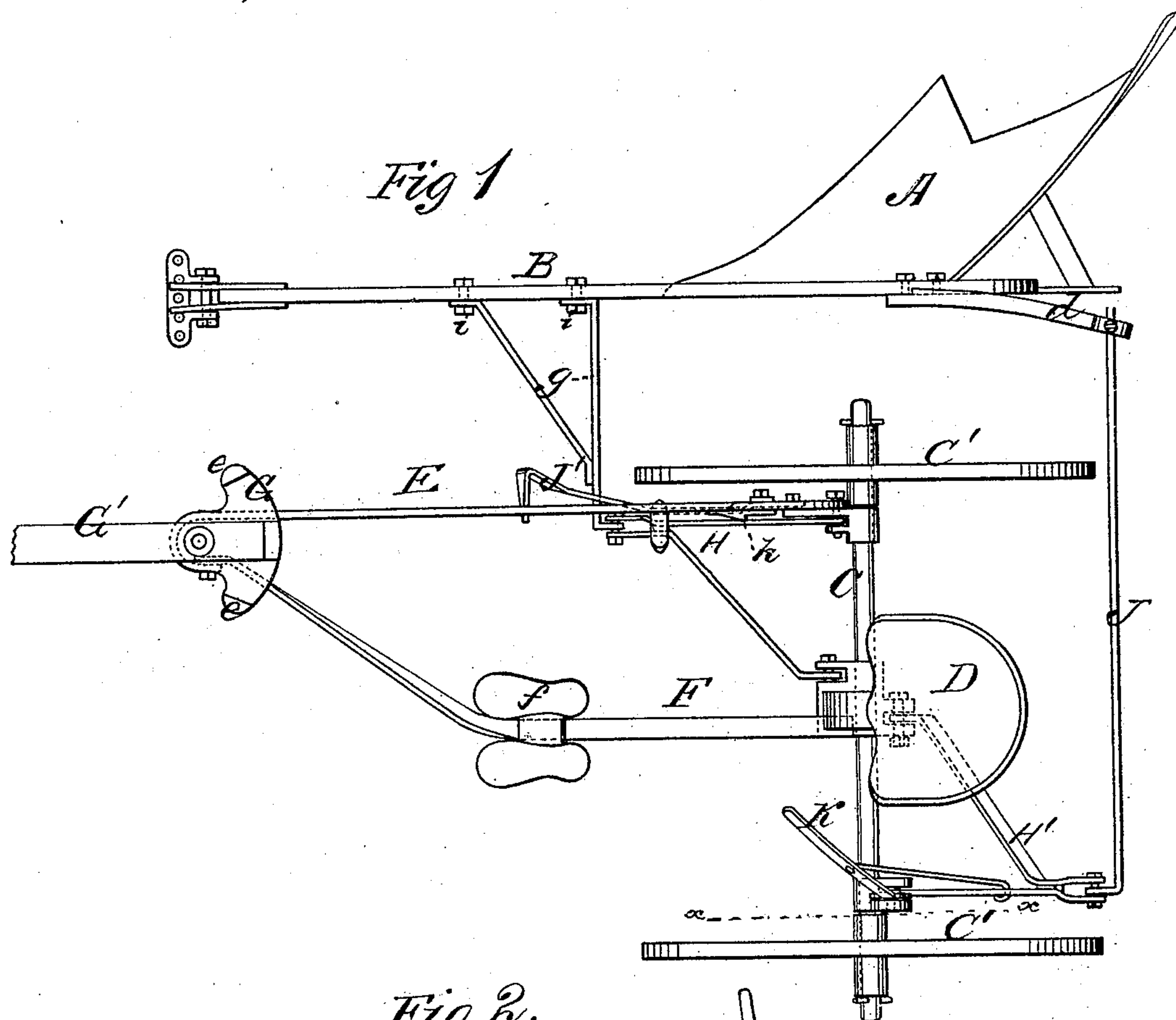


D. W. HUGHES.  
Riding-Plow.

No. 210,425.

Patented Dec. 3, 1878



WITNESSES

*Villette Anderson*  
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INVENTOR

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# UNITED STATES PATENT OFFICE.

DAVID W. HUGHES, OF BUTLER COUNTY, OHIO.

## IMPROVEMENT IN RIDING-PLOWS.

Specification forming part of Letters Patent No. **210,425**, dated December 3, 1878; application filed February 9, 1878.

*To all whom it may concern:*

Be it known that I, DAVID W. HUGHES, of the county of Butler and State of Ohio, have invented a new and valuable Improvement in Riding-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 top view of my improved riding-plow, and Fig. 2 is a sectional view taken through the line *x x*.

This invention has relation to improvements in riding-plows wherein the plow is located outside of the carriage; and the nature of the invention consists in the novel means employed for attaching the plow to the sulky, and for operating the same, as will be hereinafter more fully shown and described.

In the annexed drawings, the letter A designates an ordinary plow, secured in the usual manner to a beam, B, being provided with a clevis of ordinary construction for attaching the team. The beam at its end is provided with a rearwardly-projecting arm, *d*, the object of which is hereinafter set forth.

C represents an axle, supported upon transporting-wheels C', and supporting at the center of its length a seat, D.

E and F represent two metallic arms, rigidly secured at one end to the axle-tree and at the other to the tongue-plate G. The arm E is attached to the axle near the right-hand wheel. It extends therefrom vertically upward to about the height of the wheel, from which point it is extended a sufficient distance horizontally to the front, and is rigidly secured to the tongue-plate. The arm F is attached to the axle at the middle of its length, and extends horizontally to the front a certain distance, and is then carried obliquely upward to the tongue-plate, to which it is then rigidly secured.

The arms E F form the principal framework of the carriage. The tongue G' is pivoted to the plate G, and plays horizontally

between the lugs *e* on said plate. Upon the front end of the horizontal portion of the arm F a foot-rest, *f*, is rigidly secured.

H H' are angular vertically-vibrating forked braces, projecting the one to the front and the other to the rear of the axle, and hinged thereto in any suitable manner. The end of the brace H is pivoted to an angular horizontal arm, *g*, rigidly secured to the beam B at *i*, outside of the wheel and in front thereof, while the end of the brace H' is coupled to a horizontal bar, J, extending across the frame in rear of the wheels, which is rigidly secured to the arm *d* of the beam, as shown in Fig. 1.

The brace H is controlled by means of a lever, J', pivoted to an arm projecting from the axle, and connected by a rod to the said brace, and the back brace, H', by means of a lever, K, which is held in any desired position by means of friction-plates *j*, or other equivalent devices.

By drawing upward upon the lever J' and engaging it with a catch, *k*, on the bar E, the plow is raised out of the ground; but by letting it drop its point is allowed to enter the ground, and can be held firmly by the foot of the operator. By throwing the lever K to the rear the rear brace is swung downward, and, through the medium of the bar J and its connection with the arm *d* of the beam, tilts the plow on its land-side, and by throwing it forward the plow is tilted on the share or held level at any desired depth in the ground.

The wheels are set to crowd against the plow, whereby the furrow-slice is pushed over and the land-side relieved of strong friction common to the ordinary plow, thereby materially diminishing the draft. The tongue being pivoted to the plate, all strain or side pressure on the team or carriage-frame is relieved while turning the plow at the ends of lands without raising it out of the ground, thus making square corners and keeping the wheels on unplowed ground.

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

1. The combination, with an axle of a riding-plow sulky, of a side frame consisting of the angular bar E, having a vertical and hori-



zontal branch, and the bar F, having a horizontal and inclined branch, converged to form a plate for a pivoted tongue in front, substantially as specified.

2. In combination with a sulky-plow frame and a plow outside of the wheels, the angular arm H, pivoted to the axle, the arm-brace g, attached to the plow-beam and coupled therewith, and the lever J', fulcrumed on said axle and connected with said arm, substantially as specified.

3. The combination, with a plow and its carriage, of the vibrating brace H', the connecting-rod J, and a lever, K, as and for the purpose specified.

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

DAVID W. HUGHES.

Witnesses:

JOS. H. LONG,  
H. B. SNIDER.