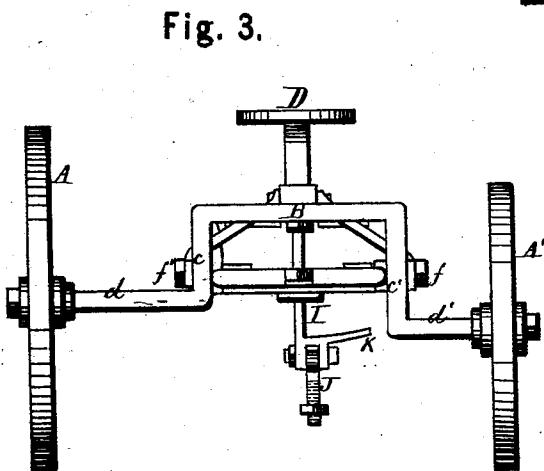
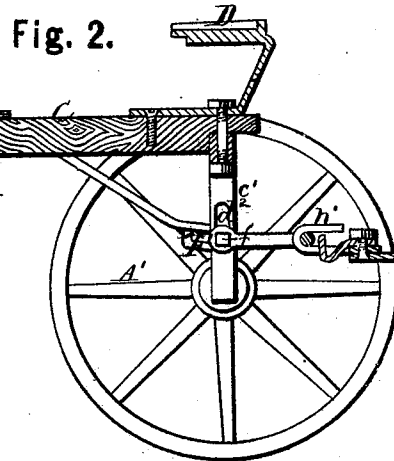
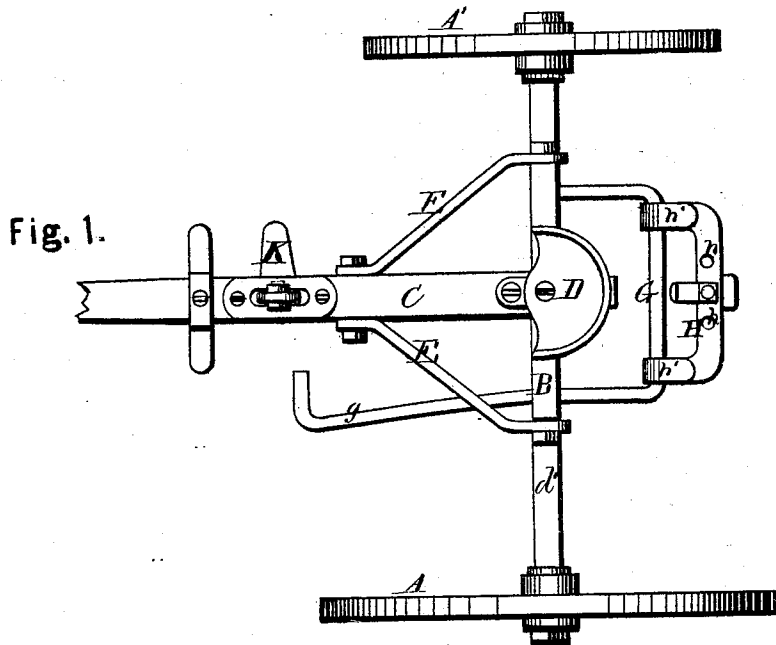


JOHN WORRELL & JAMES H. RYNERSON.
Improvement in Sulky-Attachments to Plows.
No. 127,538. Patented June 4, 1872.



WITNESSES.

Emory B. Bates
George E. Upham.

INVENTORS

John Worrell,
James H. Ryneron,
Chipman Hosmer & Co
Atty's.

UNITED STATES PATENT OFFICE.

JOHN WORRELL AND JAMES H. RYNERSON, OF CLAYTON, INDIANA.

IMPROVEMENT IN SULKY-PLOWS.

Specification forming part of Letters Patent No. 127,538, dated June 4, 1872.

To all whom it may concern:

Be it known that we, JOHN WORRELL and JAMES H. RYNERSON, of Clayton, in the county of Hendricks and State of Indiana, have invented a new and valuable Improvement in Sulky Attachment to Breaking-Plows; 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 drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a top-plan view of our invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a rear view of the same.

This invention has relation to sulky-plows; and consists in the construction and novel arrangement of devices for adjusting the plow to different heights, allowing the forward end of the plow-beam a horizontal motion, adapting the implement to use with either a right or left hand plow, and for supporting the forward-end of the plow-beam, all as hereinafter described.

Referring to the accompanying drawing, A A' represent the wheels of a sulky-plow. The larger wheel, A, is designed to run in a furrow, while the smaller wheel runs on the surface. These wheels are attached to a bent axle, B, having vertical arms *c c'* of unequal length, from the lower ends of which proceed the horizontal extensions *d d'* supporting the wheels. The extension *d'*, projecting from the longer arm *c'*, is thus brought lower than the extension *d*, and holds on its end the larger wheel when the implement is at work. The arms *c c'* are so regulated in size to the diameter of the wheels as to compensate for the difference between them. C designates the draft-pole attached to the top of the axle, and holding the driver's seat D. *d''* represents a vertical slot cut in the arm *c'*. E E' represent braces bolted to the arms *c c'* and to the sides of the draft-pole. In the lower ends of the braces are slots F, essential in the adjustment of the plow. The bolts *f f'*, securing said braces to the arms *c c'*, pass through said arms, the bolt *f* entering the slot *d''* and support the

bent pivoted bar or frame G; one of whose arms is extended forward to produce a foot-lever, *g*, for the purpose of enabling the driver to control said frame. To the rear ends of said frame is attached the plow-beam by means of a plate, H. A loop passing under the plow-beam has its ends inserted in holes *h* in said plate, and fastened on top. The plate H is furnished with two hook-shaped arms, *h'*, which clasp the frame, allowing the plate a horizontal as well as rotary play. The object of the plate H is to allow the plow a sufficient degree of flexibility, great rigidity being objectionable. The forward end of the plow-beam is supported by means of an adjustable standard, I, to the lower end of which the eye-bolt J, fastened to the plow-beam, is pivoted. The standard I is provided with a foot-plate, K, to enable the driver to depress it at will. This standard passes through a vertical slot in the draft-pole.

The adjustment of the plow to suit the desired depth of furrow is accomplished by moving the bolt *f* up or down, as required, and by adjusting the standard I.

It has been explained that when the implement is in use the larger wheel is arranged on the extension *d'*. In moving the implement along level ground, as when going to and from the field, the arrangement of the wheels should be just the reverse, the smaller wheel being on the extension *d'*.

The implement may be changed from a right to a left hand plow by removing the bolts *f f'*, and reversing the position of the axle.

What we claim as our invention, and desire to secure by Letters Patent, as improvements on the plows for which patents were granted March 28, 1871, and October 31, 1871, is—

1. In a sulky-plow, the bent axle B having the vertical arms *c c'* of unequal lengths, of which *c'* is slotted at *d''*, in combination with the frame G for supporting the plow-beam, substantially as and for the purpose specified.

2. The combination, with the bent axle B having the slotted arm *c'*, and supporting the hinged adjustable frame G, of the diagonal braces E E', slotted at F for the purpose of adjustment, and adapted for use with either a

left or right hand plow, substantially as specified.

3. The adjustable standard I, having pivoted to its lower end the eye-bolt J, and provided with the foot-plate K, substantially as and for the purpose specified.

In testimony that we claim the above we

have hereunto subscribed our names in the presence of two witnesses.

JOHN WORRELL.

JAMES H. RYNERSON.

Witnesses:

WM. CLINE, Jr.,

ELIAS BLUE.