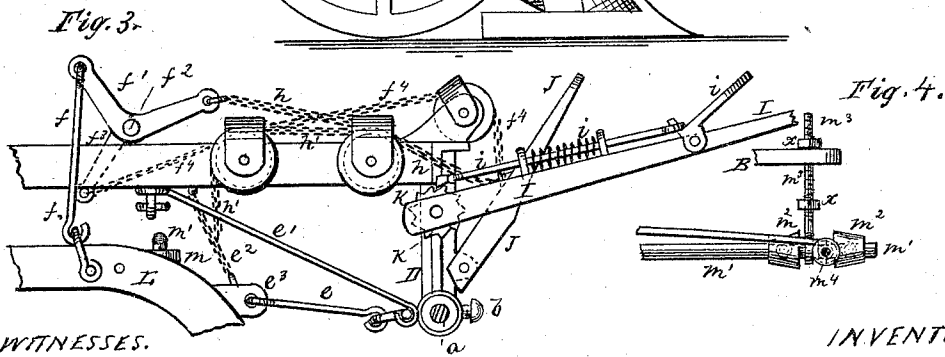
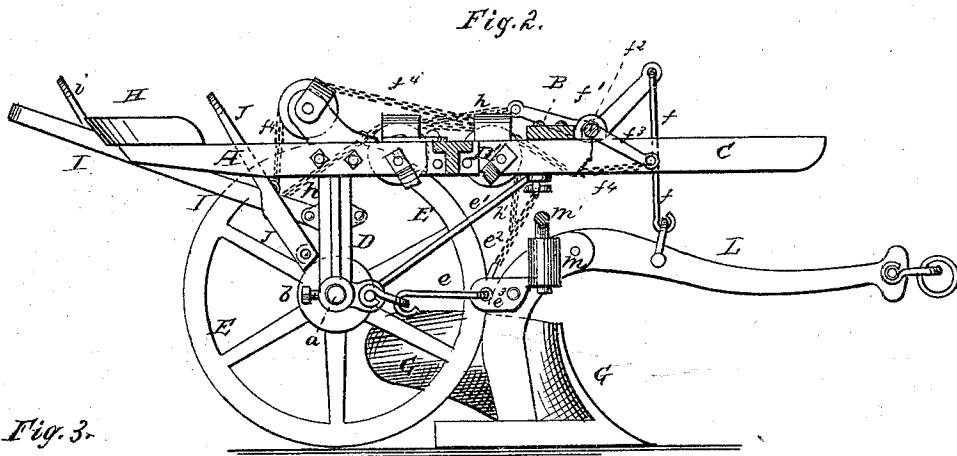
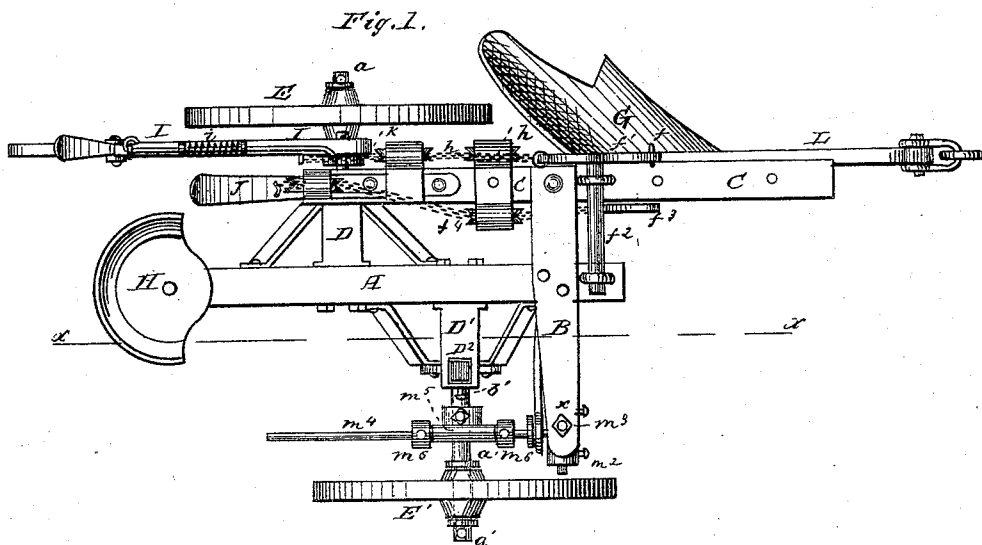


Wheel Plows.

No. 151,114.

Patented May 19, 1874.



WITNESSES.
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IMPROVEMENT IN WHEEL-PLOWS.

Specification forming part of Letters Patent No. 151,114, dated May 19, 1874; application filed March 19, 1874.

To all whom it may concern:

Be it known that I, ISAAC R. GILBERT, of Champaign, in the county of Champaign and State of Illinois, have invented certain new and useful Improvements in Riding Attachments for Plows; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a riding attachment for plows, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view; Fig. 2, a side elevation; Fig. 3, an enlarged side view; and Fig. 4, a detail view of shaft and collars.

A represents a straight beam of any suitable dimensions, upon the front end of which is secured a cross-bar, B, the left end of said bar being also fastened on top of the tongue C. This tongue runs back parallel with the beam A, and its rear end is bolted to an L-shaped arm, D, which is bolted to the side of the beam A. The lower end of the arm D forms a horizontal socket, through which is passed the spindle *a*. This spindle carries on its outer end the wheel E, and is adjusted out and in as required, and fastened by means of a set-screw, *b*. On the opposite side of the beam A, and a suitable distance in front of arm D, is secured another L-shaped arm, D¹, the vertical part of which is in the form of a vertical socket, for the passage of a vertical arm, D², adjusted up and down at will, and fastened by means of one or more set-screws, *b'*. From the lower end of the arm D² extends a spindle, *a'*, for carrying the wheel E'. This wheel can thus be adjusted up and down to suit the depth of the furrow in which it runs. By setting one wheel forward of the other the weight of the plow-beam becomes more equally divided upon the two wheels, the forward wheel being nearer the plow, and thereby allowing the plowman to sit nearer the plow than he could if the two

wheels were side by side. H is the plowman's seat, adjustable upon the rear end of the beam A, to suit the weight of the plowman, and by this means the plow is more easily carried by and balanced upon the attachment, and no weight on the horse's neck. G represents the plow, connected by a jointed rod, *e*, with the lower end of the arm D, from which latter a brace, *e*, extends up to the tongue C. *e*² is a chain, connecting the plow with the tongue, the chain *e*² and rod *e* being both attached to a short bar, *e*³, fastened to the rear part of the plow-beam. From the top of the plow-beam a rod, *f*, connects it with an elbow-lever, *f*¹, on the end of a shaft, *f*², which has its bearings on top of the tongue and beam, as shown. From the other end of the lever *f*¹ a chain, *h*, extends to a lever, I, which is pivoted on the side of the arm D. This lever is provided with an ordinary thumb-piece and spring-pawl, *i*, to catch into a ratchet, *k*, and hold it at any point desired. A chain, *h'*, extends from the chain *h* to the bar *e*³ at the back of the plow-beam. On the shaft *f*² is a downward-projecting arm, *f*³, from which a chain, *f*⁴, extends to a foot-lever, J, pivoted to the back of the arm D. The chains *h*, *h'*, and *f*⁴ pass over suitable pulleys arranged on the frame. On the land-side side of the plow-beam is attached a vertical socket, *m*, in which is inserted the bent end of a shaft, *m*¹, which at its other end is provided with two adjustable collars, *m*² *m*². Between these collars and the shaft *m*¹ is placed an eye-rod, *m*³, and a lever, *m*⁴, the rod *m*³ passing up through the end of the cross-bar B, and having two nuts, *x x*, placed upon it, one above and the other below the cross-bar. The lever *m*⁴ passes through a sleeve, *m*⁵, pivoted on the spindle *a'*, and has an adjustable collar, *m*⁶, at each end of said sleeve.

Any ordinary plow may be connected to this attachment in such a manner as to be guided by the double-trees or eveners, and at the same time be perfectly adjustable, either point up or point down, from share to land-side or land-side to share, without stopping to make changes.

By means of the foot-lever J and its connections with the plow, the plow may be thrown on its point and compelled to take its depth at once or go through very hard soil.

By means of the hand-lever I and its connections, when the plow is in motion and the lever thrown back, the point of the plow comes up first for a short distance, which makes the plow rise much easier, and cleans the dirt off better. Then the chain h' tightens, and brings the heel of the plow up with the point, which makes the plow carry nicely, and is convenient in going backward or getting about in any direction. The rod m^3 , with its nuts $x x$, is to set the plow level. If plowing four inches deep, the bottom nut is to be set four inches down from the cross-bar B, then when in finishing up land, the wheels straddle the land and are both in furrows. Just as this occurs the driver presses his foot down on the long rod or foot-lever m^4 , which brings the under nut up to the cross-bar, and the plow remains level. Thus the plow can be level from the land-side to the share, or from the share to the land-side, without stopping to make any change.

This attachment may be transformed into a cultivator in the following manner: Take off the tongue, and remove the arms D D', and bolt them on the tongue opposite each other. Remove the foot-lever J, and take out the spindle a . Then remove the sleeve or coupling m^5 from the spindle a' , and place it on the spindle a , and insert this spindle in its place again. Through the sleeve m^5 is then passed a shaft, n , projecting from the culti-

vator-beam I, whereby a coupling is formed that will give a lateral as well as an up-and-down motion, and will work free and easy.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The rock-shaft f^2 , having the elbow-lever f^1 and the arm f^3 rigidly attached, and adapted to raise the plow by means of hand-lever I and its connecting-chains, and to depress it by means of foot-lever J and the connecting-chains f^4 .

2. The combination of the beam A, cross-bar B, tongue C, arms D D', adjustable wheels E E', and adjustable seat H, all constructed substantially as and for the purposes herein set forth.

3. The combination of the foot-lever J, chain f^4 , arm f^3 , shaft f^2 , elbow-lever f^1 , rod f , and a plow, G, substantially as and for the purposes herein set forth.

4. The combination, with the plow G, of the shaft m^1 , rod m^3 , with nuts $x x$, lever m^4 , and sleeve m^5 , all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ISAAC R. GILBERT.

Witnesses:

JOHN THOMAS,

JAMES MILLEN.