(No Model.)

F. T. MILLER.

SULKY PLOW.

No. 345,068. Patented July 6, 1886.

Fig. 1.

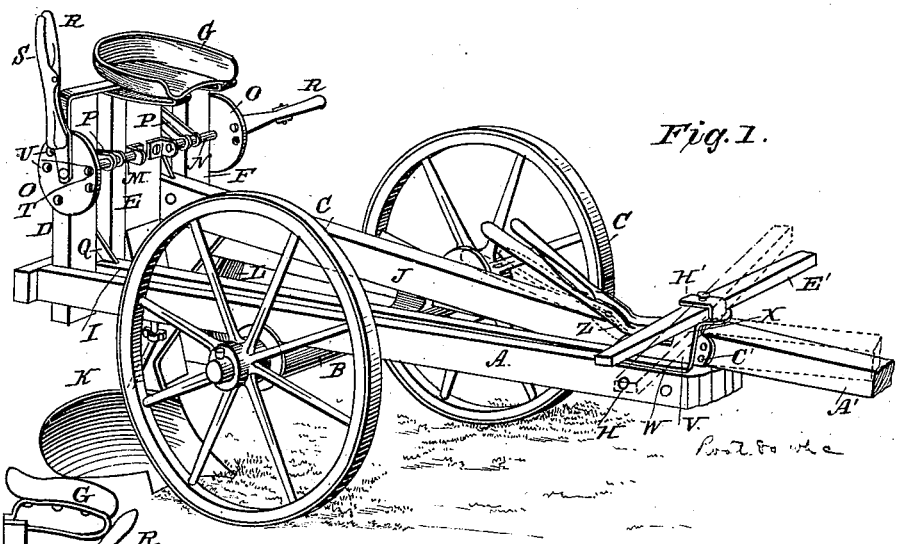


Fig. 2.

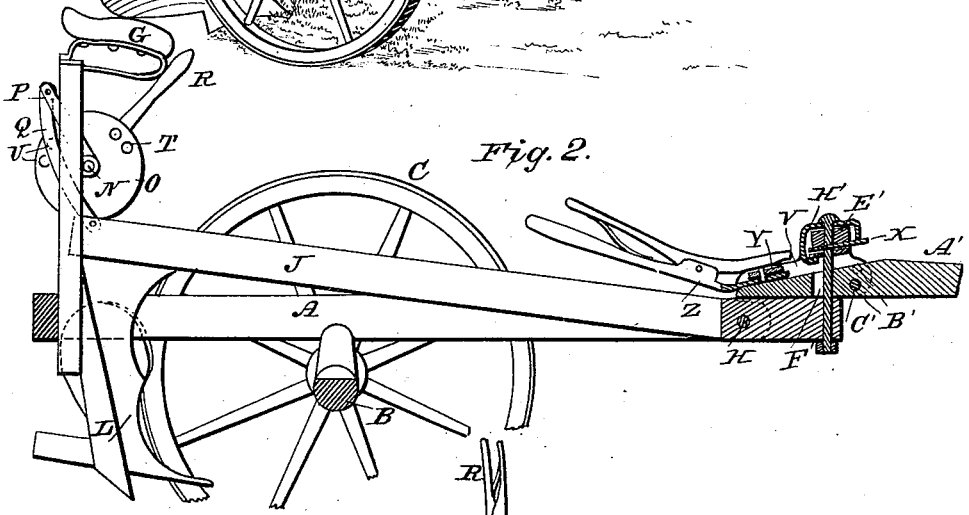


Fig. 3

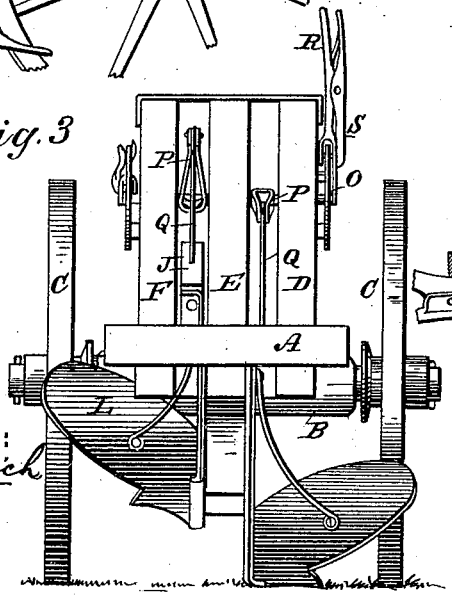
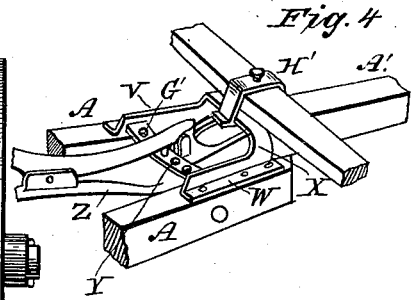


Fig. 4



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SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 345,068, dated July 6, 1886.

Application filed April 30, 1886. Serial No. 200,729. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK THEODORE MILLER, of Fredericksburg, in the county of Spottsylvania and State of Virginia, have invented a new and useful Improvement in Sulky-Plows, of which the following is a specification.

My invention consists in the improved construction, arrangement, and combination of parts of a reversible sulky-plow, as will be hereinafter fully described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a perspective view of my improved sulky-plow, showing the right-hand plow lowered into its operative position, and showing in dotted lines the tongue adjusted to increase the width of the furrow cut by the said plow. Fig. 2 is a longitudinal vertical sectional view taken on line *x x*, Fig. 3. Fig. 3 is a rear elevation, and Fig. 4 is a perspective detail view, of the adjustable tongue attachment.

The same letters of reference indicate corresponding parts in all the figures.

Referring to the several parts by letter, A represents the main frame of my improved sulky-plow, the said frame being supported on the axle B, which has at its ends the usual wheels, C C. The rear end of this frame A is provided with the three parallel uprights D E F, and at the top of these uprights is secured the seat G, of suitable construction.

Between the converging forward ends of the side pieces of the frame A are pivotally secured by means of the transverse pivot-bolts H H the forward ends of two plow-beams, I J, and the rear ends of these plow-beams fit and slide between the central and outer parallel uprights, D, E, and F, which form guides for the rear ends of the plow-beams, and to these plow-beams, near the rear ends thereof, are secured the right and left plows K and L, the plow K having its mold-board on the right side, as shown, and being secured to the right-hand plow-beam, I, while the plow L has its mold-board on the left side, and is secured to the left-hand plow-beam, J.

The mechanism for lowering whichever plow it is desired to use into its operative position and for raising the same when the other plow is to be used, is as follows: On the forward side of the uprights D E F are journaled in suitable bearings two short transverse shafts, M N, the inner ends of these shafts being journaled in a bracket on the inner upright, E, while their outer ends pass through the center of disks O O, rigidly secured to the outer edges of the outer uprights, D and F, and on that portion of each shaft which extends across the space between the central and outer uprights is rigidly secured an arm, P, to the free end of which is pivoted the upper end of a short pitman, Q, which is pivotally secured at its lower end in the rear end of its respective plow-beam.

To the outer end of each of the adjusting-shafts M N is secured the lower end of a hand-lever, R, which extends up within convenient reach of the driver's seat; and this hand-lever is provided with a spring-catch, S, adapted to engage with the forward aperture or notch, T, or the rear series of apertures or notches, U, formed in the peripheries of the disks O O, by which arrangement the lever is secured in its adjusted position; and it will be seen that by pushing forward and downward the free end of either hand-lever it will operate to raise the rear end of the plow-beam to which it is connected, as described, while by throwing back either the right or left hand lever either the right or left hand plow can be lowered into its operative position, the spring-catch of the hand-lever being caught into any one of the series of apertures or notches U, according to the depth to which it is desired to cut the furrow.

Upon the forward end of the frame A, to which the side pieces converge, is secured a metallic frame, V, having the bottom flanges, W, for attachment to the main frame, and being formed with the cross-bars X and Y, and in this frame fits the forward portion of the lever Z, the said forward portion being forked to adapt it to receive the rear end of the tongue A′, and having at this forward forked end the series of transverse apertures B′, through which passes a transverse bolt, C′, which secures the rear end of the tongue in the said forked portion of the lever, and, the tongue at that point being of less thickness than the height of the jaws between which it is secured, it will be seen that its outer end may be raised

or lowered and secured in its adjusted position by the bolt C′, so as to regulate the depth of the furrow cut by the plows, or to suit the height of tongue to the height of the horses drawing the plow. A vertical bolt, which forms the king-bolt, (as it also secures the double-tree E′ upon the forward cross-piece, X, of the frame V,) passes down through the said cross-piece and through a short vertical slot, F′, in the rear end of the tongue A′, forming a pivot on which the tongue and lever may be swung from side to side to increase the width of the furrow being cut, the rear end of the pivoted lever being upturned and provided with a spring-catch which engages with any one of a series of apertures, G′, formed in the rear cross-bar, Y, of the metallic frame V; and it will be seen that by this arrangement the lever may be swung from side to side, so as to adjust the tongue to either the right or left hand side, so as to regulate the width of the furrow and always keep the tongue straight between the horses and perfectly equalize the draft, and as the double-tree is on the top of the case or frame V and separate from the tongue there is no side draft whatever on the tongue, leaving it loose and balanced on its pivot-pin, so that the tongue can be adjusted even while the team is in motion.

In operation the tongue is adjusted at the right angle through the mechanism just described, and either the right or left hand plow lowered into its operative position, according to the direction to which the sulky-plow is being driven across the field. At the end of a furrow the plow is raised, the vehicle turned to return across the field, and the other plow lowered, so that the earth from each furrow is always turned by the mold-boards in one direction. The lower end of the central upright at the rear end of the main frame A is extended down to form a guide for the two standard-plows, as clearly shown in Fig. 3 of the drawings. The double-tree is further held in position by the hinged curved plate or follower H′, through which the king-bolt also passes.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my improved reversible sulky-plow will be readily understood.

It will be seen that my improved plow is simple in construction, and is therefore not liable to break or get out of order, while at the same time it is very efficient in its operation. By its use I can turn a perfect furrow on hillside or level ground.

I am aware right and left plows have been attached to beams pivoted at their forward ends; also, that levers and pivoted rods have been employed to elevate such beams at the rear end, and that plow-tongues have been pivoted and provided with pivoted levers for adjusting them laterally. My invention, therefore, lies in certain novel details of construction and combination of parts, as specified in the following claims.

I claim—

1. The combination, with the plow-frame, of the metallic piece V, secured to the front end of the same, and having the apertured cross-bar Y, the tongue A, pivoted as specified, the lever Z, attached to said tongue, and a spring-catch attached to the lever, whereby the tongue may be adjusted at different angles and secured in each adjusted position, as shown and described.

2. The combination, with the pivoted plow-beams and the fixed parallel uprights, of the pitman Q and the separate but aligned transverse shafts M M, having fixed radial arms P, and hand-levers R, the apertured disks O, fixed on the uprights, and the spring-catches S, attached to said levers and adapted to engage with the disks, all as shown and described.

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