

I. R. GILBERT.
Sulky-Plow.

No. 215,346.

Patented May 13, 1879.

Fig 1

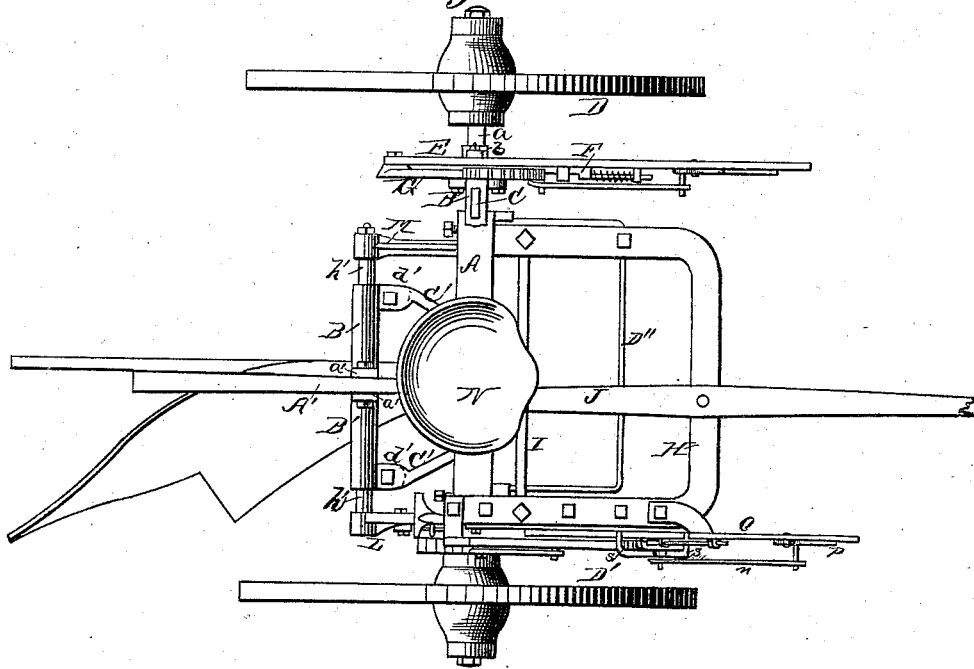
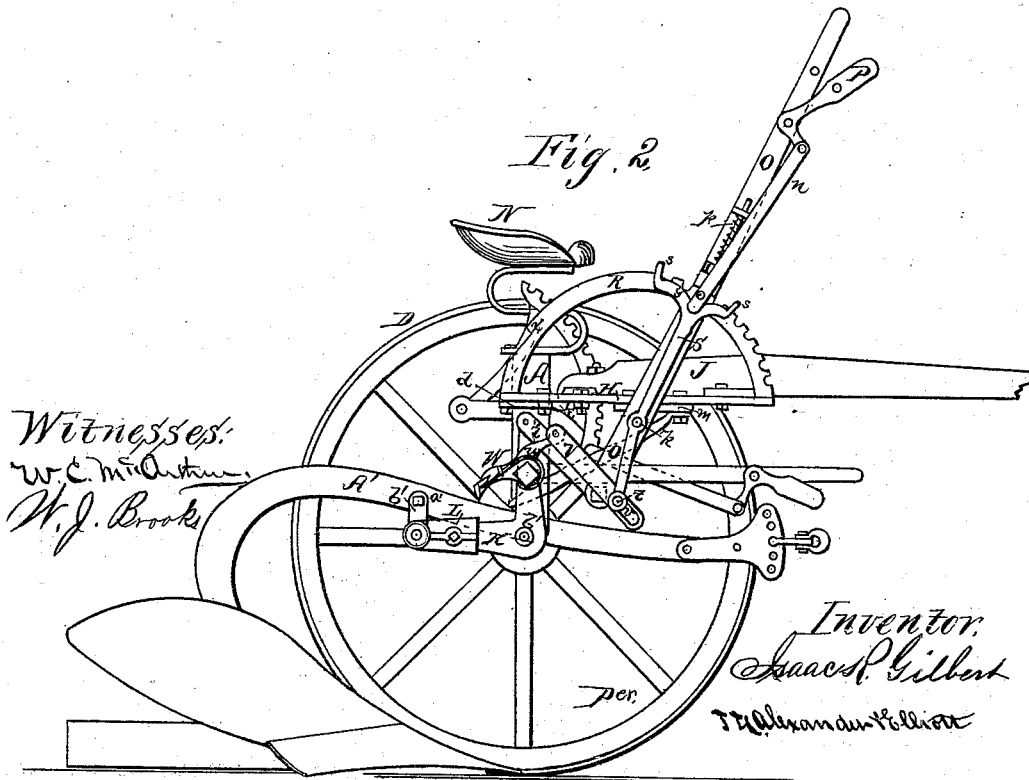


Fig. 2



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Fig. 3.

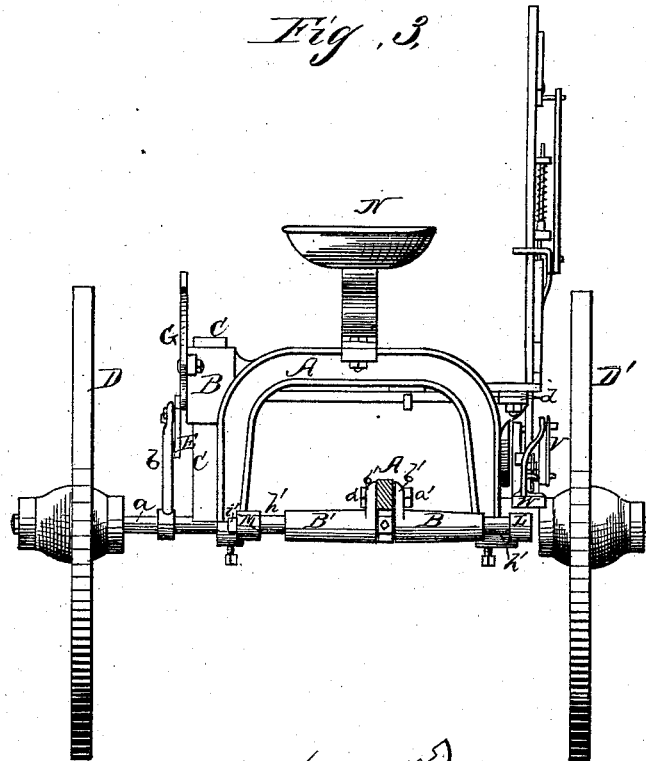
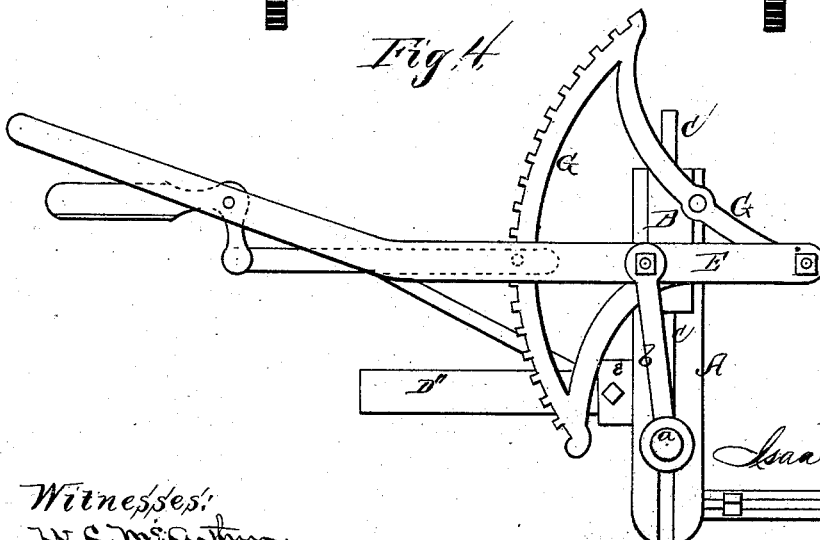


Fig. 4



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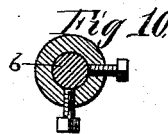
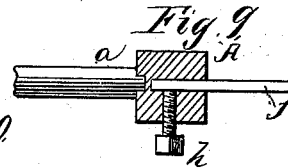
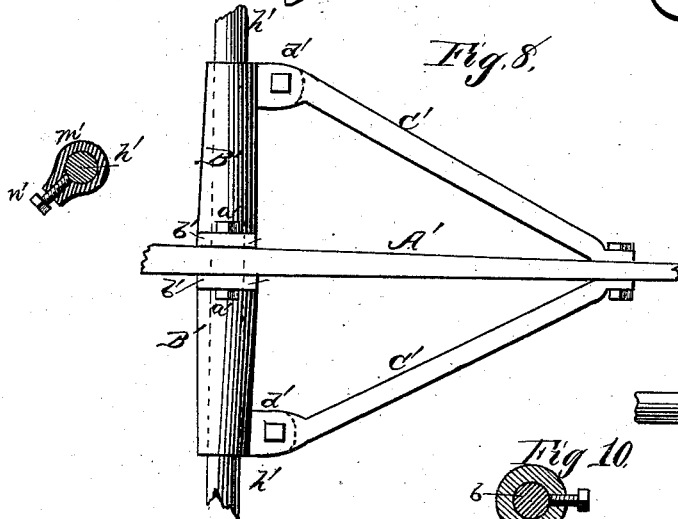
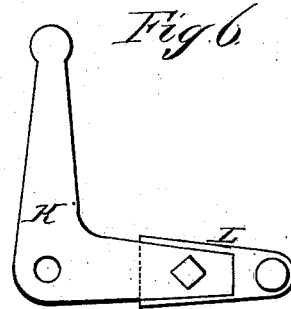
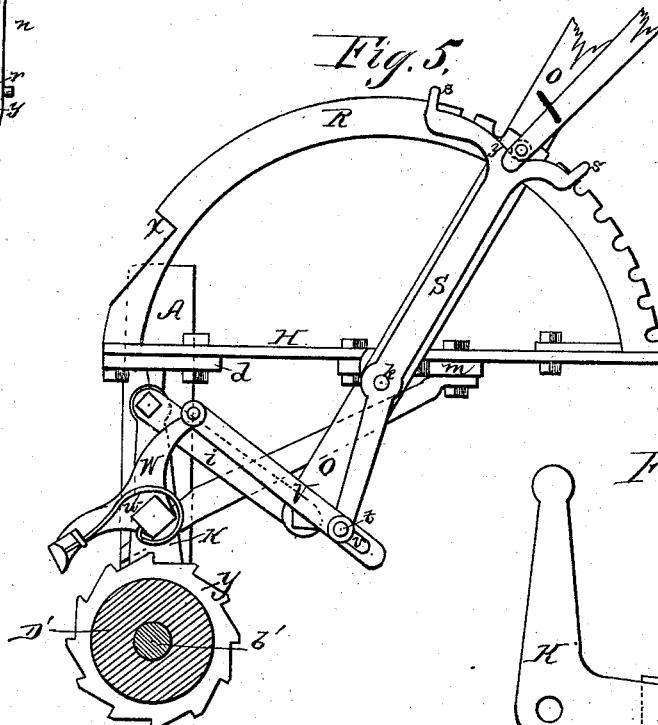
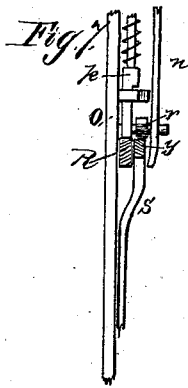
per
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UNITED STATES PATENT OFFICE.

ISAAC R. GILBERT, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN SULKY-PLOWS.

Specification forming part of Letters Patent No. **215,346**, dated May 13, 1879; application filed March 13, 1879.

To all whom it may concern:

Be it known that I, ISAAC R. GILBERT, of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Sulky-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.

My invention relates to sulky-plows; and it consists in the peculiar construction and arrangement of the parts constituting the sulky or frame, and in the coupling for connecting the plow to the sulky, all as hereinafter more fully set forth, and pointed out in the claims.

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 drawings, in which—

Figure 1 is a plan view. Fig. 2 is a side elevation with one wheel removed. Fig. 3 is a rear elevation, and Figs. 4, 5, 6, 7, 8, 9, and 10 are details of parts of my invention.

A represents the arched axle, of any suitable dimensions, provided on the left side with a vertical sleeve or socket, B, in which is a vertical sliding bar, C. To the lower end of this slide is attached the spindle *a*, which carries the wheel D.

The spindle *a* is, by a rod or tube, *b*, connected with a lever, E, which is pivoted to a rack, G, fastened to the sleeve or socket B, and the lever is provided with a spring-pawl, F, to engage with the rack, and thus hold the wheel at any desired height.

The opposite end of the axle A has a spindle, *b'*, secured to it, and on this spindle is placed the other wheel, D', of the sulky.

On the outer side of the vertical part of the arched axle A, on the right side, is a projecting ledge, *d*, upon which one end of the frame H is secured. The other end of this frame is fastened on top of a projection, *e*, formed for that purpose on the front of the vertical portion at the left side of the arched axle.

I is a cross-bar, which is fastened by bolts or otherwise to the end pieces of the frame H a suitable distance in front of the axle; and to this cross-bar, as well as to the front of the

frame, the tongue J is fastened by hooked bolts or other convenient means.

Upon the spindle *b*, inside of the wheel D', is pivoted an elbow-lever, K, the rearwardly-extending arm of which is provided with a flanged bracket, L, fastened thereto by a bolt. Between this bracket and an arm, M, the plow is connected as hereinafter described, said arm being pivoted to a stud, *f*, in the opposite end of the arched axle, and said stud fastened in the axle by a set-screw, *h*.

N is the driver's seat, secured on top of the arched axle A, as shown.

The upper end of the elbow-lever K is, by a link, *i*, connected with the lower end of a lever, O, which is pivoted on a stud, *k*, fastened in and projecting from a bracket, *m*, secured to the under side of the side arm of the frame H. To the side of the lever O is pivoted an elbow-lever or thumb-piece, P, the lower arm of which is, by a bar or rod, *n*, connected with the lower end of a spring-pawl, *p*, arranged in guides upon the side of the lever, this pawl engaging with a semicircular rack-bar, R, for holding the frame to which the plow is connected at any point desired. Near the rear end of the rack-bar R is a notch, *x*, in which the pawl *p* is to spring for holding the plow elevated above ground.

If it is desired to allow the plow to move freely according to the unevenness of the ground, the elbow-lever P is fastened to the lever O by a pin passing through holes made in them for that purpose, whereby the pawl *p* is held entirely up and away from the ratchet.

For the purpose of allowing the driver to raise the plow out of the ground without manipulating the hand-lever O, another lever, S, is pivoted upon the same stud *k*, the upper end of which lever forms two foot-pieces, *s s*, projecting over the rack R, one on each side of the hand-lever O. Between these foot-pieces is formed an incline, *y*, upon which bears a roller, *r*, mounted upon the same stud or pin which connects the bar or rod *n* with the spring-pawl *p*.

The lower end of the foot-lever S is turned slightly forward and connected to a link, V, by a pin, *t*, working in a slot, *v*, in said link. The other end of this link is pivoted to a dog

or pawl, W, which is pivoted on a stud or pin on the elbow-lever K, and has a spring, *w*, connected to it in such a manner as to hold the rear end of said pawl in a raised position. On the inner end of the hub of the wheel D' is secured a ratchet-wheel, Y, as shown. The driver, by putting his foot on and pushing one of the foot-pieces *s* of the lever S, causes said lever to turn a short distance, whereby the pawl *p* is raised out of the rack by means of the incline *y* and roller *r*, and the pawl W is caused to engage with the ratchet-wheel Y, so that as the plow continues to advance the wheel will turn the levers S and O, and by the connection of the latter with the elbow-lever K raise the plow until the spring-pawl *p* springs into the notch *x* of the rack-bar, when the plow is held in a raised position.

A' represents the plow-beam, to each side of which is fastened a tubular bearing, B', by means of an upwardly-extending lip or lug, *b'*, at the inner end of each tube, and a bolt, *a'*, passing through the beam and through both lips.

To each tube B', at or near the outer end, is attached or formed a lug, *d'*, to which a brace, C', is bolted, and the forward ends of said two braces are bolted to the plow-beam, as shown. The plow is connected to the sulky by means of a rod, *h'*, passing through the bracket L and arm M and through the tubular bearings B', with a nut, *i'*, on the end of the rod. Between the tubular bearings B' on the rod *h'* is placed a collar, *m'*, fastened to said rod by a set-screw, *n'*, whereby the plow may be adjusted laterally and held stationary at any point as regards any lateral movement, but always free to swing on the rod.

D'' represents a frame or bent bar fastened to the ends of the arched axle, projecting forward over the plow-beam, and braced to the main frame H.

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

1. The flanged bracket L, removably attached to the elbow-lever K, as and for the purposes herein set forth.

2. The movable arm M and rock-shaft *h'*, in combination with plow-beam A and tubular bearings B' B', substantially as and for the purpose set forth.

3. The lever O, combined with the elbow-lever P, spring-pawl *p*, and roller *r*, substantially as herein set forth.

4. In a sulky-plow, the arrangement of devices, substantially as herein described, whereby the spring-pawl that engages with the rack and the pawl that engages with the ratchet-wheel on the hub may be operated simultaneously for raising the plow from the ground.

5. The foot-lever S, provided with the projections *s s*, in combination with the roller *r* and spring-pawl *p*, substantially as and for the purposes herein set forth.

6. The combination of the foot-lever S, slotted link V, lifting-pawl W, and ratchet-wheel Y, 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:

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T. GEO. RUCKSTUHL.