J. F. GLIDDEN & P. W. VAUGHAN.

SULKY-PLOWS.

No. 195,119. Patented Sept. 11, 1877.

Fig. 1.

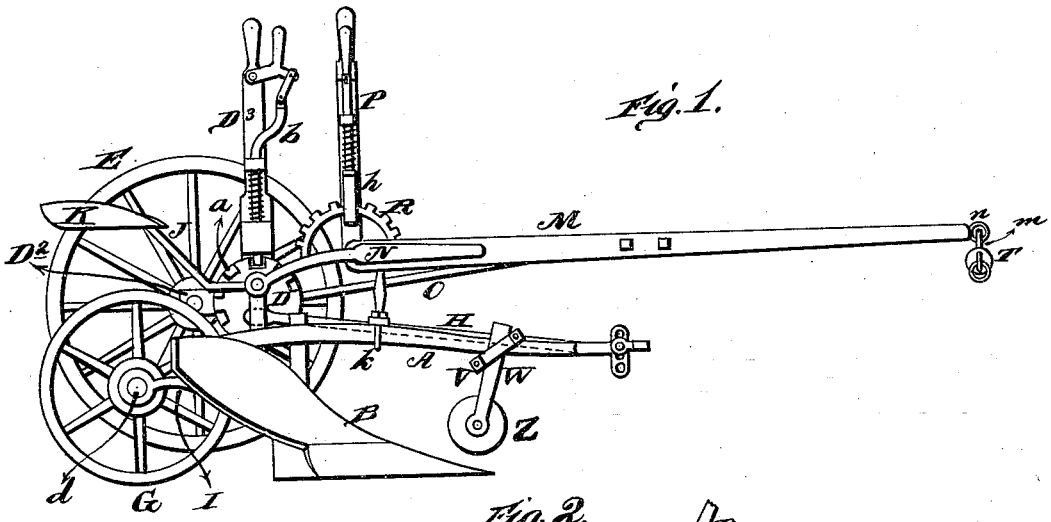


Fig. 2.

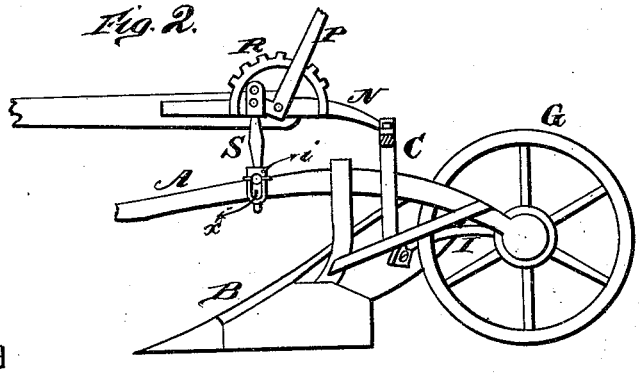


Fig. 3

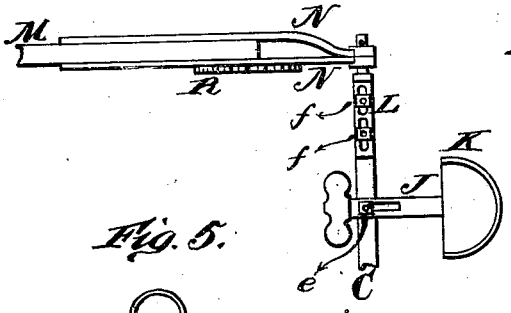


Fig. 4.

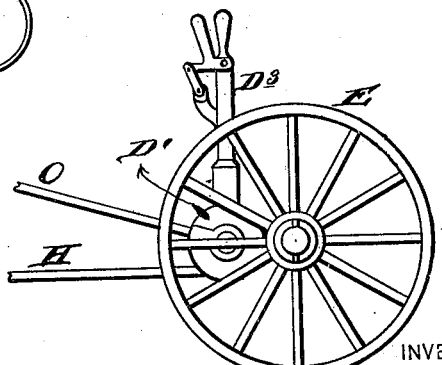
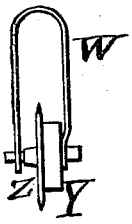


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOSEPH F. GLIDDEN AND PHINEAS W. VAUGHAN, OF DE KALB, ILLINOIS.

IMPROVEMENT IN SULKY-PLOWS.

Specification forming part of Letters Patent No. 195,119, dated September 11, 1877; application filed August 18, 1877.

To all whom it may concern:

Be it known that we, JOSEPH F. GLIDDEN and PHINEAS W. VAUGHAN, of De Kalb, in the county of De Kalb and State of Illinois, have invented a new and valuable Improvement in Sulky-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 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 side view of our sulky-plow. Fig. 2 is a central sectional view; and Figs. 3, 4, and 5 are details thereof.

The nature of our invention consists in the construction and arrangement of a sulky-plow, as will be hereinafter more fully set forth.

The annexed drawing, to which reference is made, fully illustrates our invention.

A represents a plow-beam, with plow B, constructed in any of the known and usual ways.

C represents the axle, which has one end bent downward at right angles, and this arm fastened to the plow-beam A by bolts, by welding, or by any other suitable means. At the other end of the axle is attached a circular plate, D, formed in its upper edge with a series of notches, *a*. The axle projects through this plate, and upon the projecting end is placed loosely another circular plate, D^1, which is formed with a crank-spindle, D^2, and the wheel E is placed on said spindle.

The stationary plate D is connected with the front end of the plow-beam by a brace, H.

The movable or loose plate D^1 is provided with a lever, D^3, to which is connected a spring-dog, *b*, to take into any one of the notches *a* on the plate D, and hold the wheel in any position desired.

By these means the wheel E may be adjusted up and down with relation to the axle, and thereby level the plow, or tilt it more or less to either side, as may be required.

The rear end of the plow-beam A is provided with a spindle, *d*, projecting toward the mold-board side of the plow, and upon this spindle is placed the wheel G, which runs in the furrow behind the plow. The outer end of the spindle *d* has its bearing in an arm, I, attached to and projecting rearward from the mold-board of the plow.

K is the driver's seat, attached to a standard, J, which is slotted, as shown, and fastened to the top of the axle by a bolt, *e*. The seat-standard is adjustable backward and forward, to regulate the weight of the driver upon the plow.

On top of the axle C, at the inner end, is fastened a bar, L, by means of bolts *f f*, which bolts pass through slots in the bar, so that said bar can be adjusted outward and inward, as desired. On the outer end of this bar L are pivoted two arms, N N, between which the tongue M is permanently attached, said tongue or pole being also provided with a brace, O, the rear end of which surrounds the projecting end of the axle outside of the circular plates D D^1.

To the inner arm N is pivoted an elbow-lever, P, provided with a spring dog or pawl, *h*, that takes into a ratchet, R, secured to said arm. To the smaller arm of the lever P is pivoted a link, S, the lower end of which is slotted, and passes over a pin, *i*, projecting from a clip, *k*, fastened on the plow-beam. This clip is movable on the beam, so that it can be adjusted to suit circumstances. By means of the lever P the plow is raised and lowered as required, while in any position a certain limited movement or play of the tongue is permitted without disturbing the plow, on account of the slot *x* in the lower end of the link S. This slot also admits of a limited movement of the plow when meeting obstructions, without any corresponding movement of the tongue.

At the front end of the tongue is the neck-yoke T, connected thereto by means of an elongated staple, *m*, passing through an eye, *n*, in the end of the tongue. This allows the horses or team to move a little from side to side without influencing the direction of the plow.

Near the front end of the plow-beam is, by means of a clip, V, attached a frame or foot, W, which carries in its lower end the guide-wheel Y, said wheel being formed or provided with the circular colter Z, forming a combined guide-wheel and colter. This can be

adjusted up and down and backward or forward, as required.

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

1. In a sulky-plow, the furrow-wheel placed upon a spindle supported directly in the rear end of the plow-beam, and in an arm attached to the plow, substantially as set forth.

2. The combination of the axle C, adjustable bar L, pivoted arms N N, and tongue M, as set forth.

3. The combination of the tongue M N, elbow-lever P, link S, with slot *x*, and the plow-beam with adjustable clip *k*, having projecting pin *i*, substantially as and for the purposes set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOSEPH F. GLIDDEN.
PHINEAS W. VAUGHAN.

Witnesses:
JOHN F. BLACKMAR,
JAMES J. SHEEHY.