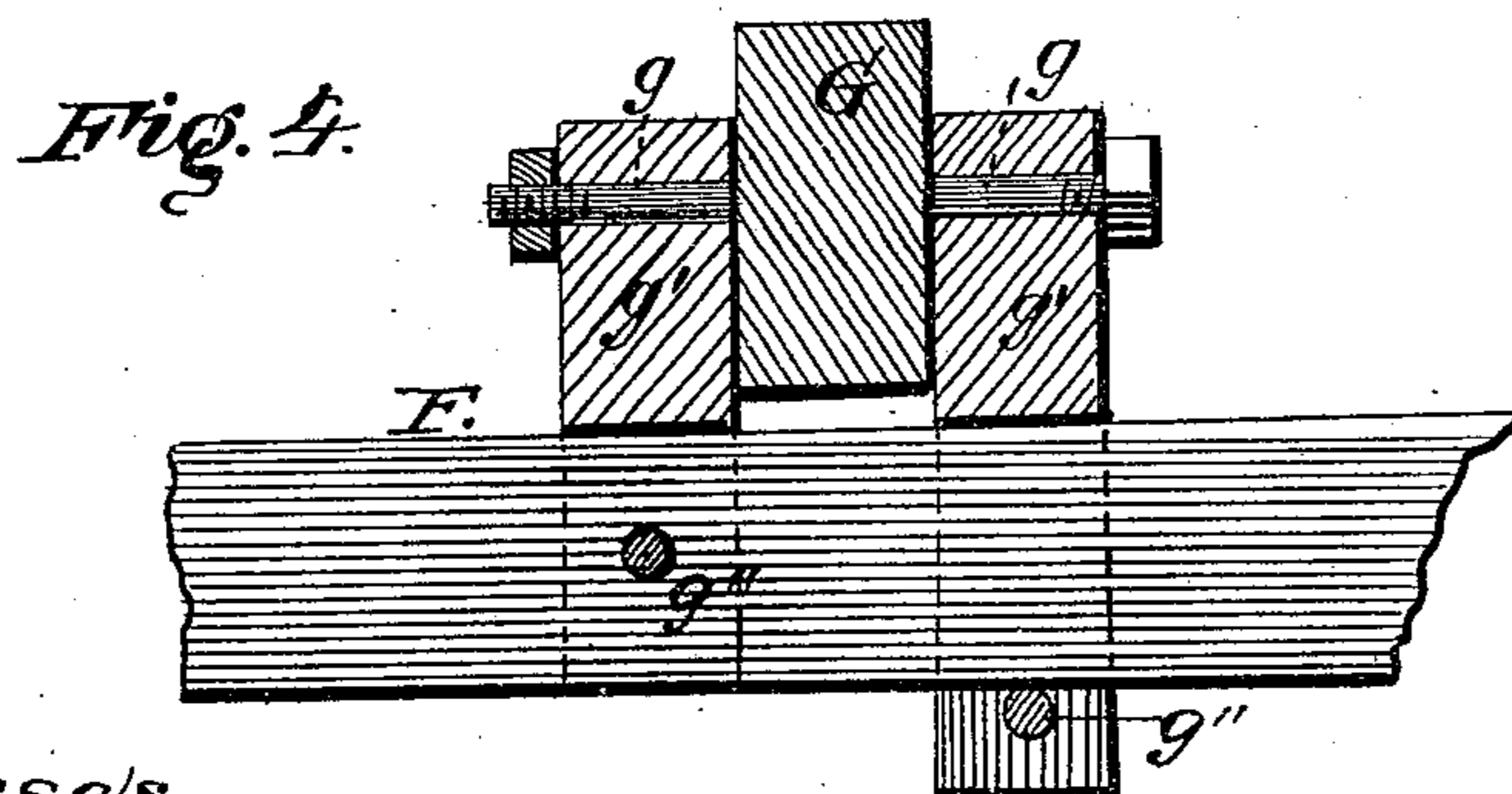
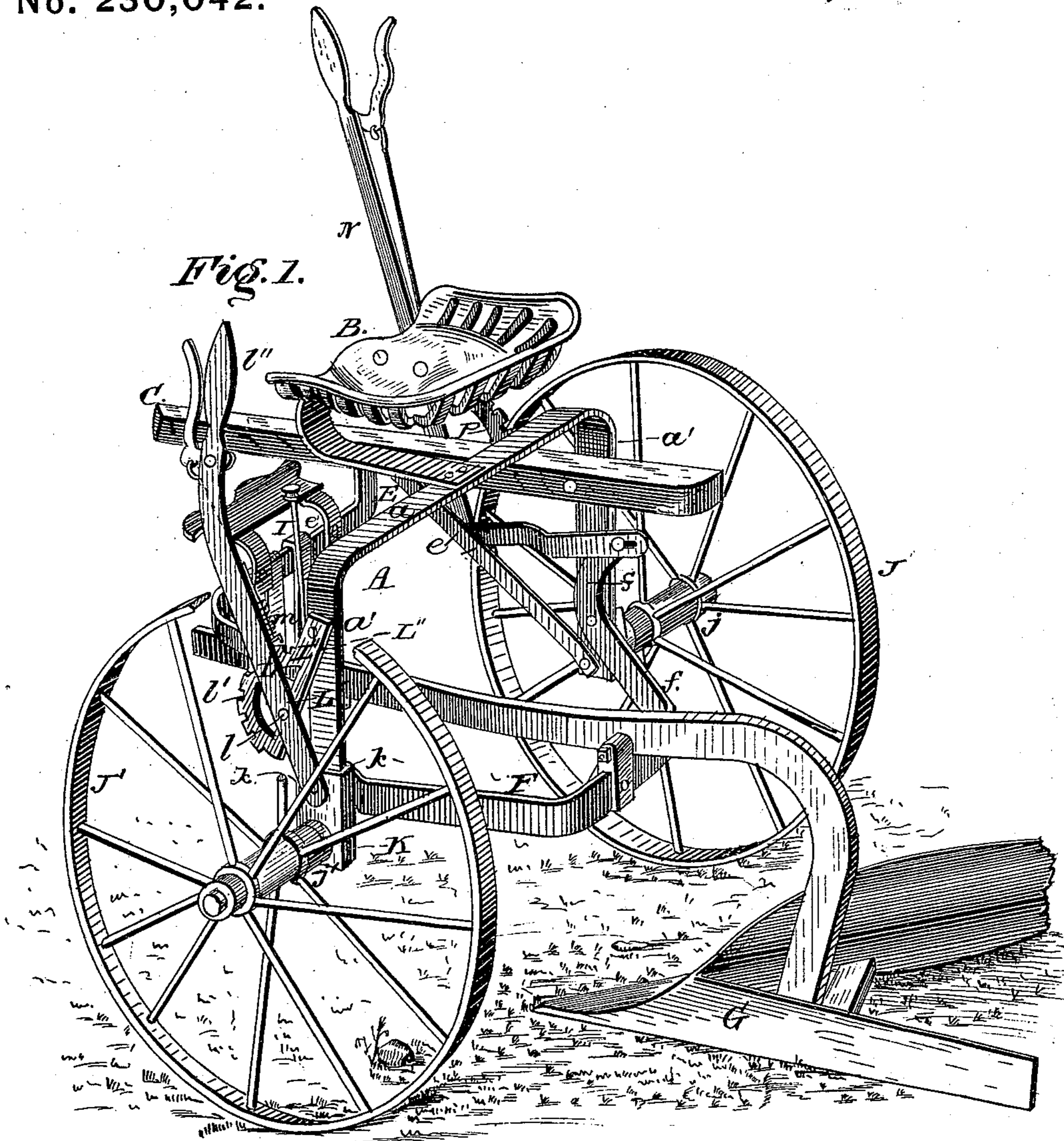


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Sulky Plows.

No. 230,042.

Patented July 13, 1880.



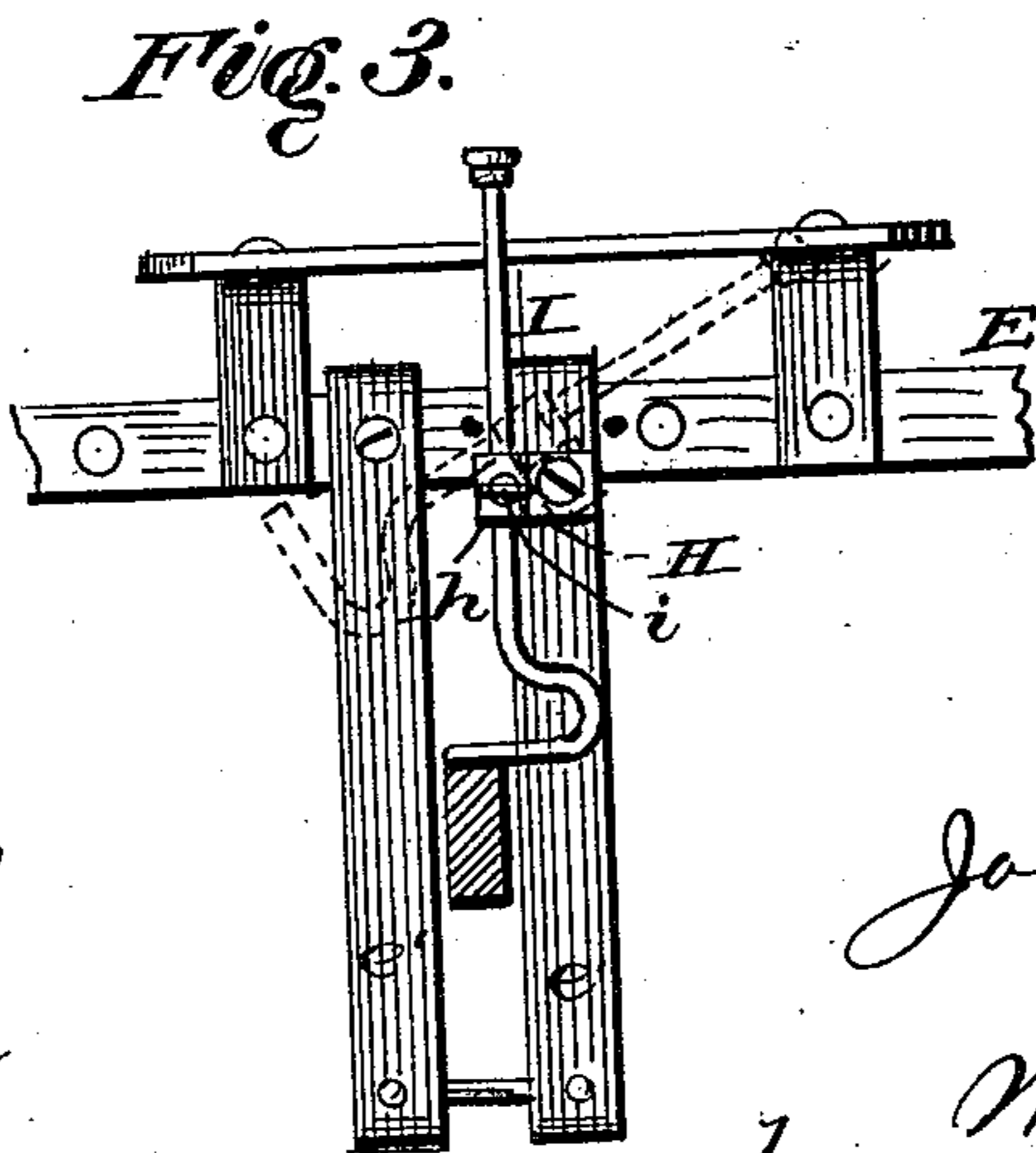
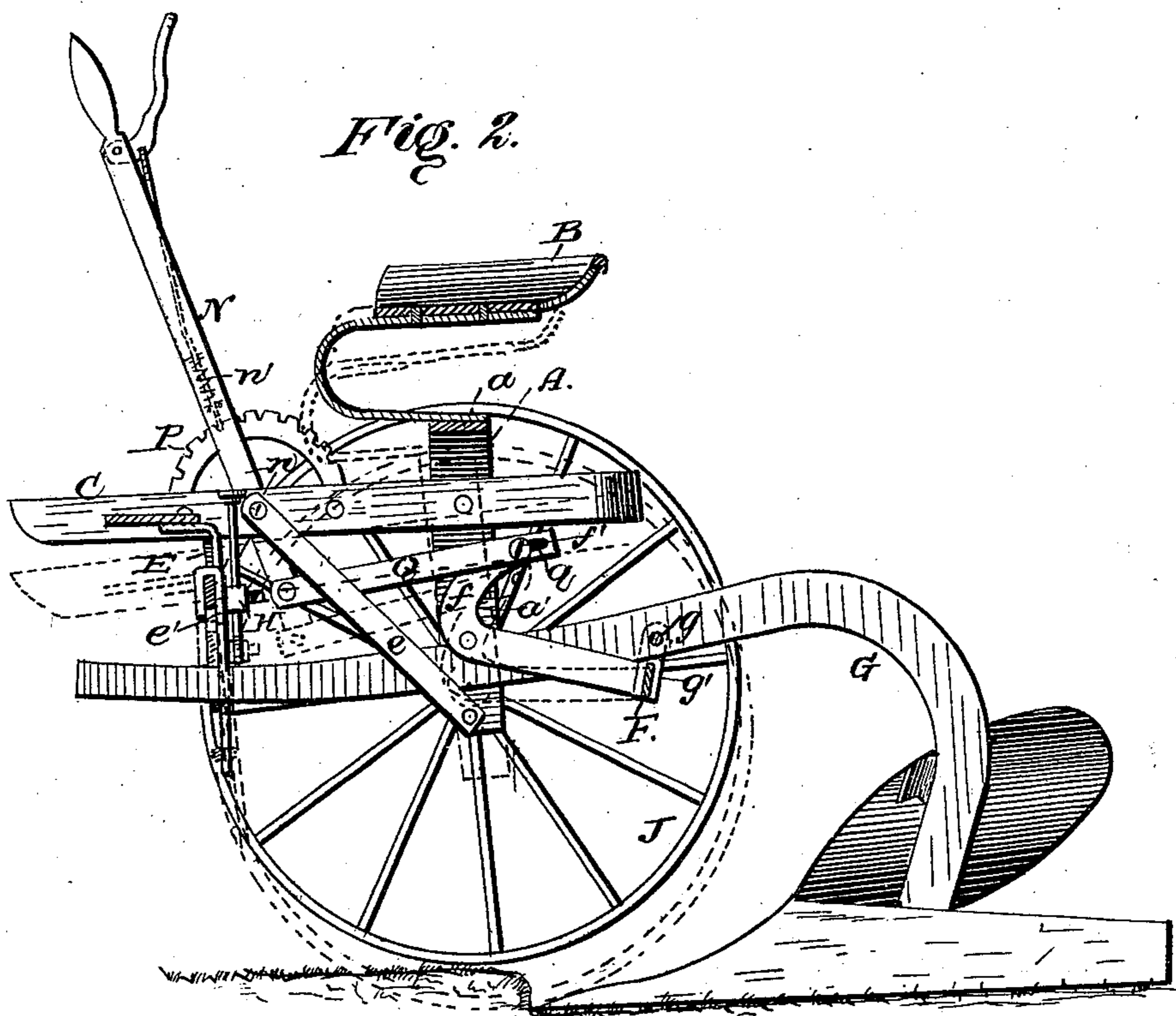
Witnesses
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Inventor
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UNITED STATES PATENT OFFICE.

JOSEPH B. NEFF, OF BUSHNELL, ILLINOIS.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 230,042, dated July 13, 1880.

Application filed January 10, 1880.

To all whom it may concern:

Be it known that I, JOSEPH B. NEFF, of Bushnell, in the county of McDonough and State of Illinois, 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 of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a perspective view of a sulky-plow embodying my invention. Fig. 2 is a longitudinal vertical sectional view. Fig. 3 is a transverse vertical sectional view. Fig. 4 is a detail view, hereinafter referred to.

This invention relates to sulky-plows; and it consists in a toggle-joint having one of its bars extended to form a lever for operating the joint, and its other bar provided with a rack, with which a pawl on the extended arm may engage to lock the bars of the toggle-joint at different angles to each other.

The invention further consists in constructions and combinations hereinafter referred to, and set forth in the drawings hereto annexed.

Referring to the drawings by letters, A represents the central part of the axle or truck-frame, with an elevated central part, *a*, and side vertical portions, *a'*, of ordinary construction. B is the driver's seat, mounted on the axle A, and C is the tongue or guide-pole, secured at its rear end to the axle A and forward to a brace-bar, E, and it is further braced by a bar, *e*. The axle A, tongue C, and braces E *e* form a rigid truck or sulky-plow frame of ordinary construction.

F is a yoke, pivoted at its ends to the vertical parts *a'* of the axle A, and one of its ends, *f*, bent upward.

G is the plow, its beam placed over the yoke F, and extending forward between pendants *e'* from the bar E. The beam of the plow is pivoted to the yoke F by trunnions *g*, which are journaled in eyes in the upper ends of plates *g'*, which plates are adjustably secured to the yoke F by bolts *g''*, so that they may be adjusted laterally to adjust the rear end of the plow to either side of the machine.

H is a plate, pivoted at one end to one of the pendants *e'*, and its other end formed into an eye, *h*, through which the upper part of a tilting stop, I, passes.

The stop I may be turned outward by rotating the plate H, as shown by dotted lines at Fig. 3 of the drawings, and may be adjusted vertically by means of a set-screw, *i*, in the plate H.

J J' are the supporting-wheels, the one, J, of which is carried on a spindle, *j*, which is secured to one of the vertical parts *a'* of the axle, and the other, J', is journaled on a spindle, *j'*, which is secured to a plate, K, which has flanges *k* on its edges, that embrace the edges of the other vertical part *a'* of the axle, so as to permit of sliding the plate K up and down on the axle to raise and lower the wheel J' in relation thereto, and thereby raise the adjacent side of the axle.

The plate K may be connected with the vertical part of the axle in the ordinary manner shown in the drawings, or in any other desired manner which permits of sliding the plate up and down on the axle.

L is a toggle-joint formed of bars L' L'', hinged or pivoted to each other at *l*. The lower end of the bar L' is pivoted to the sliding plate K, and the upper end of the bar L'' is pivoted to the vertical side of the axle. A segment rack-bar, *l'*, is attached to or formed upon one side of the bar L''. One end of the bar L' is extended to form a hand-lever, *l''*, convenient to the driver's seat. The hand-lever *l''* is provided with an ordinary spring-pawl, *m*, which engages with the rack-bar *l'*. By throwing the lever *l''* forward the bars L' L'' are brought at an angle to each other, and the sliding plate K and wheel J' thus raised on the axle, and by throwing the lever *l''* backward the bars L' L'' are straightened out and the sliding plate and wheel lowered, and as said bars straighten out the power increases in the evident manner.

The bars L' L'' may be locked at any desired angle by means of the spring-pawl *m* engaging with the segment rack-bar *l'*.

N is a lever, pivoted at *n* to the tongue C, and provided at its upper portion with a spring-pawl, *n'*, which engages with a segmental rack-bar, P, which is also fixed to the tongue C. The

lower extended end of the lever N is connected by a link, Q, with the upper end of the extension *f* of the yoke F, and the link Q has a slot, *q*, which receives the stud *f'*, by which it is pivoted to the extension or arm *f*. While the lever N is locked to the segment-bar P, the slotted link Q will permit the forward end of the tongue C to be raised and lowered to a limited extent without affecting the yoke F or the plow, as shown by dotted lines at Fig. 2 of the drawings, and thus prevent any effect on the plow arising from the vertical oscillation of the tongue in use.

For beginning new lands, opening dead furrows, and other plowing where the wheels J J' are to be kept in the same horizontal plane, the lever *l''* may be placed in about the position shown by full lines at Fig. 1 of the drawings. The lever N may then be placed about as shown at same figure, to allow the yoke F and plow to lower into working position.

While plowing, the stop I may be turned down upon the front end of the plow-beam, as shown by full lines at Fig. 3 of the drawings, and may be adjusted vertically by the set-screw *i*, to hold the front end of the plow down, as desired.

When it is desired to raise the plow from the ground to turn around, or for other purposes, the driver, with his foot, may tilt or turn the stop I to one side, as shown by dotted lines at Fig. 3 of the drawings, and thus allow the plow to rise, point first, as the lever N is thrown backward to elevate the yoke F, and thus raise the plow above the ground.

For use in ordinary furrow-turning the lever *l''* may be thrown forward and the pawl *m* engaged with the rack-bar *l'*, so as to hold the bars L' L'' at different angles to each other, and thus adjust the wheel J' at different heights relatively to the wheel J, corresponding with the different depths at which it is desired to run the plow in the soil, and the plow may be

adjusted and elevated as hereinbefore described.

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

1. In combination with the wheel and axle of a plow, a toggle-joint having one of its bars provided with a rack-bar, arranged to operate with its other bar provided with a pawl, by means of which the toggle-bars may be locked at different angles to or in a straight line with each other, substantially as and for the purpose herein shown and described.

2. In combination with the wheel and axle of a plow, a toggle-joint having one of its bars provided with a rack-bar, arranged to operate with its other bar extended to form a hand-lever, and provided with a pawl, by means of which the toggle-bars may be locked in different relative positions, substantially as described, and for the purpose specified.

3. In combination with the axle or frame of a wheel-plow and a sliding plate which carries the wheel, a toggle-joint having one of its bars provided with a rack-bar, arranged to operate with its other bar extended to form a hand-lever, and provided with a pawl, by means of which the toggle-bars may be locked in different relative positions, to adjust the height of the sliding plate and wheel relatively with the axle, substantially as and for the purpose specified.

4. In combination with a wheel-plow frame and plow, the vertically and laterally adjustable stop I, arranged so as to tilt or turn to one side, substantially as and for the purpose specified.

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

JOSEPH B. NEFF.

Witnesses:

J. C. VAIL,
FRANK MARINER.