

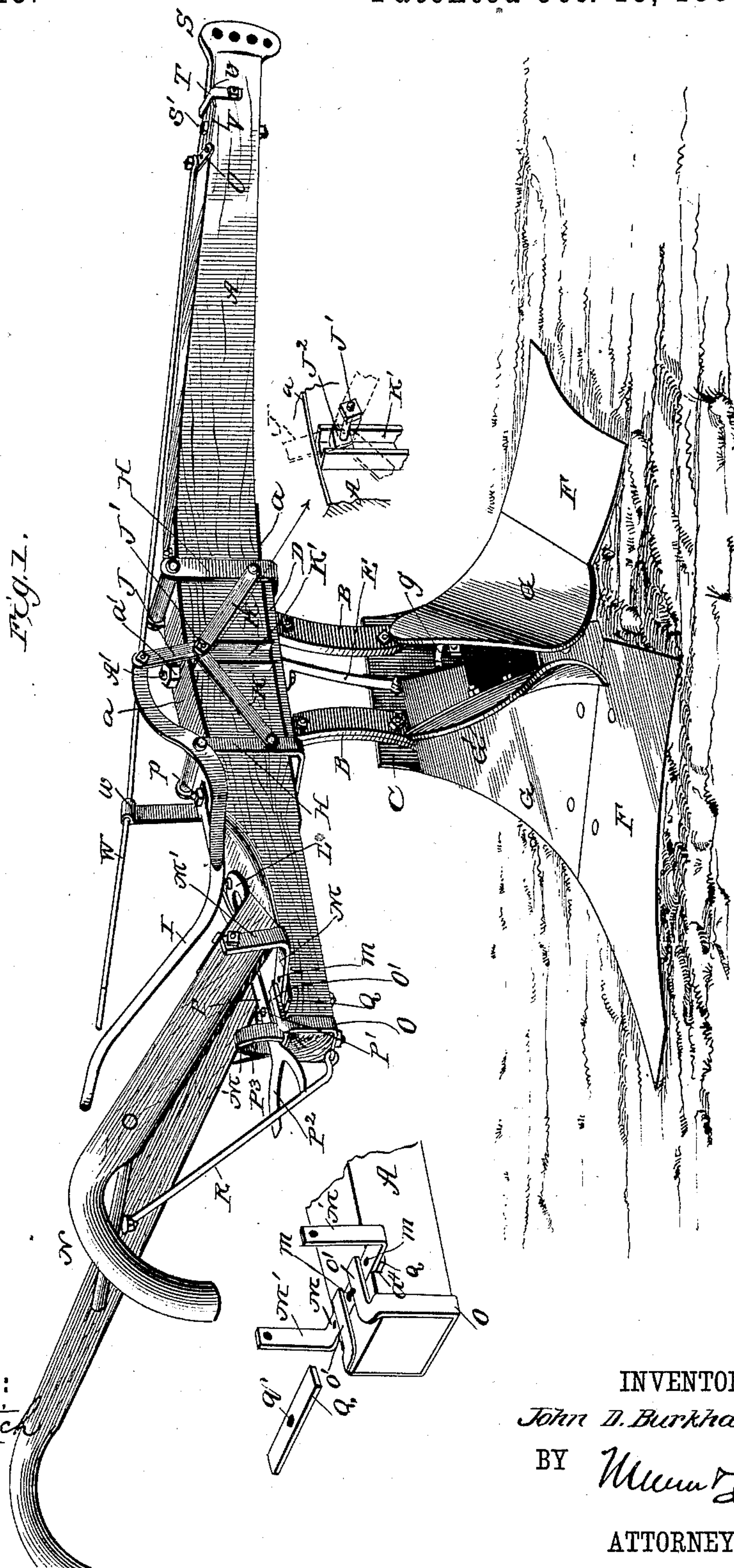
(No Model.)

3 Sheets—Sheet 1..

J. D. BURKHART.
SIDE HILL PLOW.

No. 412,945.

Patented Oct. 15, 1889.



WITNESSES:

Fred G. Dietrich
Jos. A. Sagan

INVENTOR:

John D. Burkhardt.

BY *Wm. C.*

ATTORNEYS.

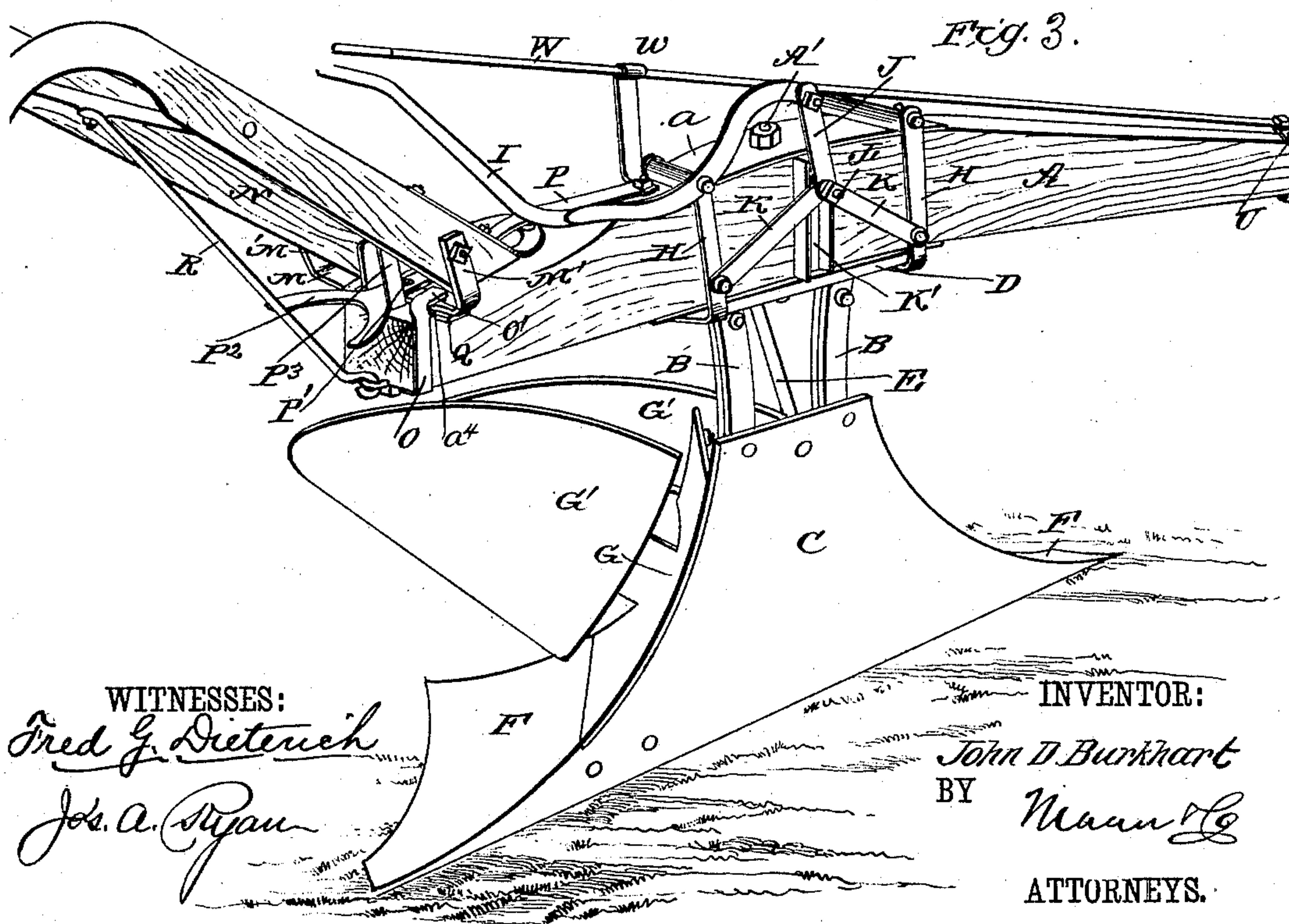
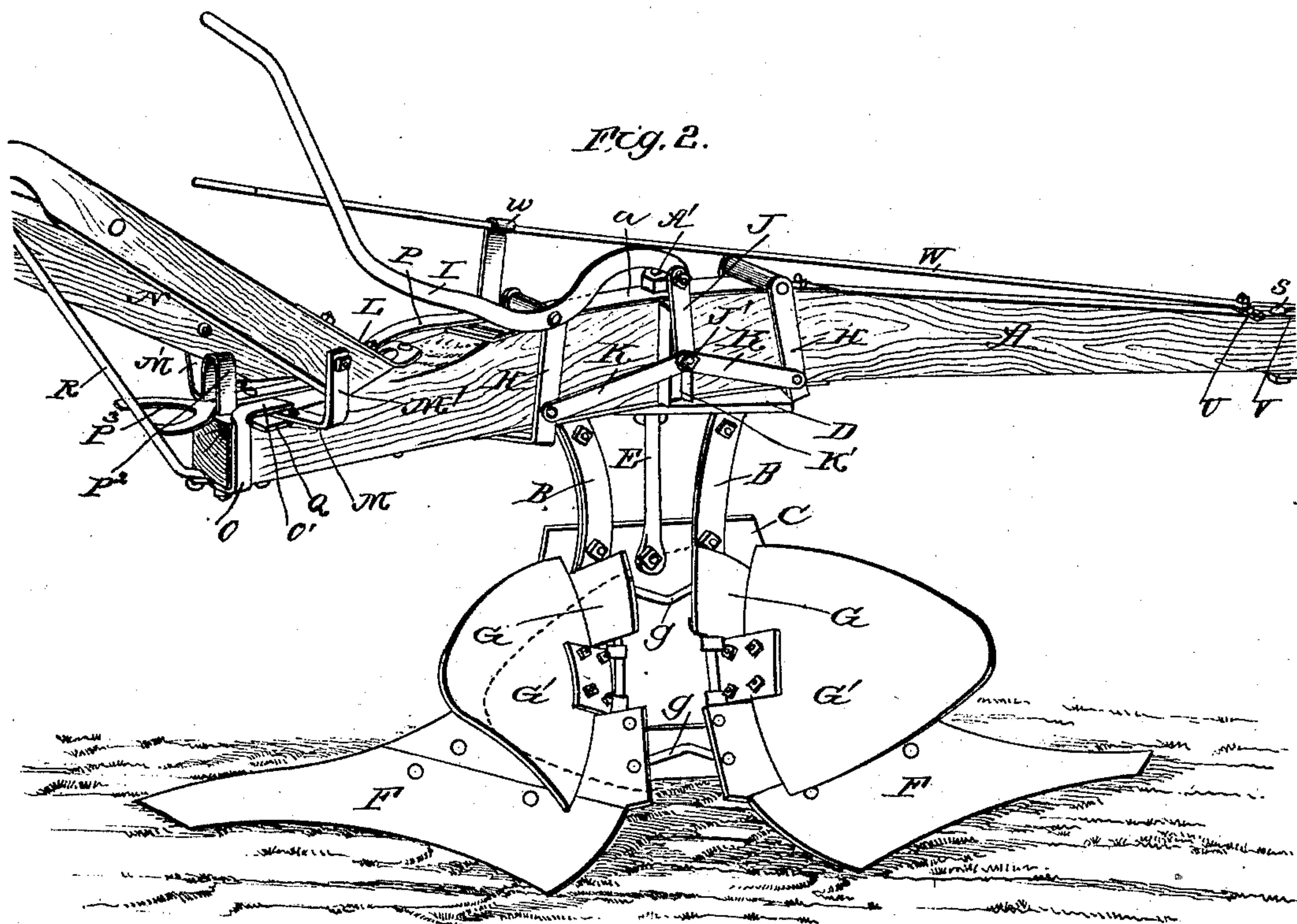
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J. D. BURKHART.
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No. 412,945.

Patented Oct. 15, 1889.



WITNESSES:

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(No Model.)

J. D. BURKHART.
SIDE HILL PLOW.

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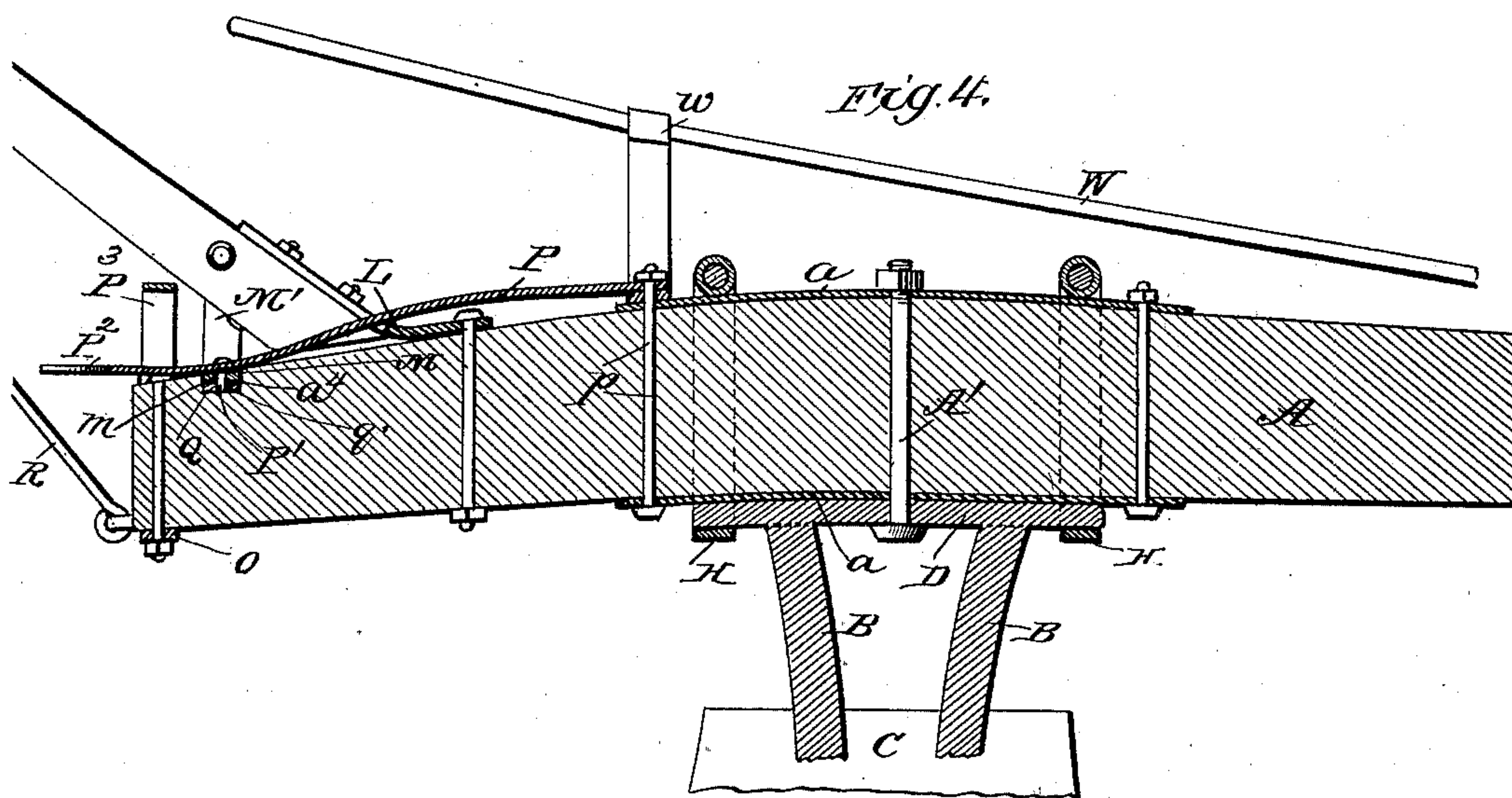
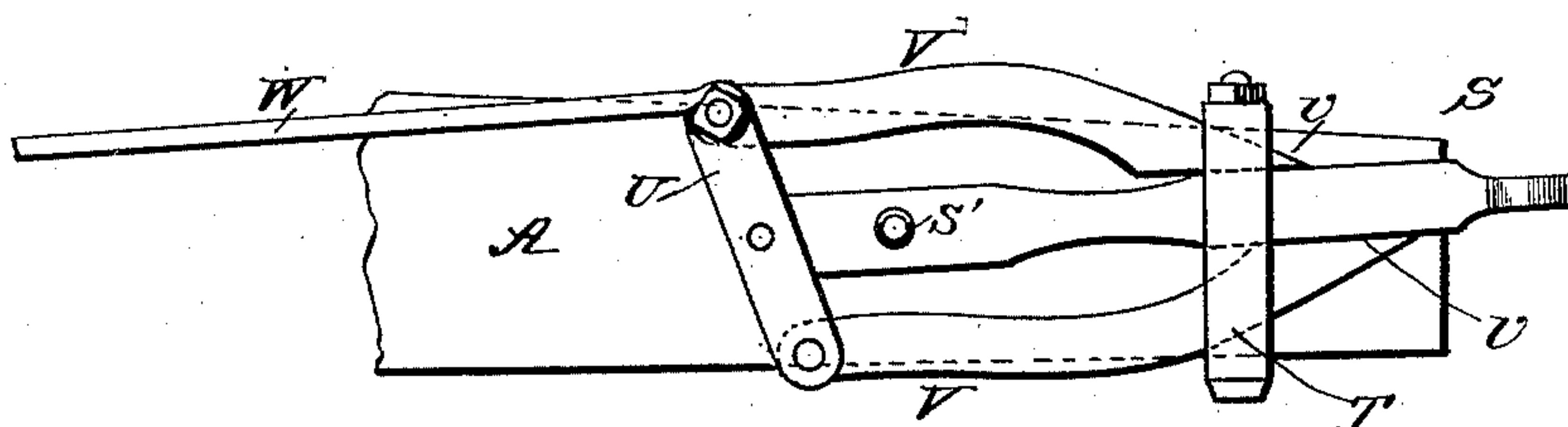


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN D. BURKHART, OF DAYTON, WASHINGTON TERRITORY.

SIDE-HILL PLOW.

SPECIFICATION forming part of Letters Patent No. 412,945, dated October 15, 1889.

Application filed March 6, 1889. Serial No. 302,195. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. BURKHART, of Dayton, in the county of Columbia, Washington Territory, have invented a new and useful Improvement in Side-Hill Plows, of which the following is a specification.

My invention consists in a new and improved plow of that class known as "side-hill" plows, and the invention will be herein-
after fully described and claimed.

Referring to the accompanying drawings, Figure 1 is a perspective side view of my new and improved side-hill plow, showing the same adjusted ready for work. Fig. 2 is a similar view showing the lever raised to unlock the standard to permit of the beam being swung around over the reversible plow, the hinged wings of the two mold-boards being both shown swung out to better illustrate the construction of the plow. Fig. 3 is a perspective side view taken after the plow has been swung around and locked by the depressed main lever. Fig. 4 is a detail view of the front end of the plow-beam, and Fig. 5 is a longitudinal vertical central sectional view taken through the rear end of the plow-beam.

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

Referring to the several parts by letter, A indicates the plow-beam, and through the center of this beam passes, at a suitable distance from its rear end, a heavy vertical bolt A', the upper and lower side of the central part of the beam being strengthened and protected from wear by thin metal plates a. The standard of the reversible double-pointed plow is formed in two pieces B B of metal, of substantially the form shown, the lower ends of these pieces B being bolted to the inner side of the high steel landside C, while their upper ends are bolted to the under side of a flat thick metal plate D. The landside and plow are further strengthened and braced by a brace-rod E, running from the inner side of the landside to the under side of plate D, where the upper end of the brace-rod is formed into an eye, through which and a central aperture in the plate D the heavy pivot-bolt A' passes, and then up through the

beam, a heavy nut a' being secured upon the threaded upper end of the bolt.

F F indicate the plowshares of the double-pointed plow, and G G indicate the mold-boards, the rear upper part of each mold-board being formed by a hinged wing G', each wing being hinged to its mold-board, as shown, so that when swung back into operative position its outer face is flush with the outer face of the mold-board. The mold-boards are braced and strengthened by brace-rods g g.

Upon the plow-beam are pivotally mounted stirrups H H, which extend under the beam, while upon the end of the pivot-bolt of the rear stirrup is centrally pivoted the main locking-lever I, the handle of which extends back within convenient reach, while the forward end of the lever is pivoted to the upper end of a short link J, the lower end of which is pivoted to the inner ends of two link-arms K K, the outer ends of which are pivoted to the lower sides of the stirrups H, as shown.

The pivot-bolt J', which pivots the lower end of link J to the inner ends of link-arms K K, is formed with an enlarged head J², which fits and moves in a vertical guideway K' on the side of the beam, serving to guide and steady the links in their movements as the locking-lever is raised or lowered.

When the rear end of the lever I is raised, it will be seen by reference to Fig. 2 of the drawings that the lower ends of the stirrups will be swung outward clear of the ends of the heavy metal plate D, to which the upper ends of the plow-standards are secured, when the double-pointed plow can be reversed, which is commonly done by swinging the beam around. When the plow is reversed, the handle end of the locking-lever is pushed down, when, through the connecting-link and link-arms, the lower ends of the stirrups H are drawn in under the ends of the heavy top plate D, thus locking the beam firmly on the top of the standard.

It will thus be seen that the double-pointed plow can be reversed in a moment by means of the locking-lever and the stirrups, and that the several parts are simple and strong in construction.

It will be seen that as soon as the plow is reversed and starts forward the hinged wing G' of the front mold-board will swing back into its operative position, while the hinged wing of the rearward mold-board will swing out of the way toward the front of its mold-board.

In order to render the handles N capable of being adjusted to either side, the lower ends of the handles are cut away at the level of the top of the rear end of the beam, and to the front of the lower ends of the handles are bolted the upwardly-inclined ends of a flat V-shaped casting L, the point or forward end of which is pivoted on the plow-beam, as shown. The ends of the upwardly-extending arms M' of a metal casting M are bolted to the outer side of the lower ends of the handles, the middle part of this V-shaped casting playing in a transverse groove a^4 , over the rear end of the plow-beam, under the flat ends O' O' of a metal guard O. It will be seen that by this construction the handles can be shifted to either side as the plow is reversed, and the handles are locked in their adjusted position by a spring locking-bar P, bolted at its forward end on a vertical pivot-bolt p on the plow-beam, curved upward, so as to pass over the V-shaped casting L, and downward at its rear part, where it is provided with a downwardly-extending locking-pin P', which passes down through apertures m in the casting M and a central aperture q in a metal plate Q, which latter is secured in the bottom of groove a^4 , and thus prevents wear of the wooden beam. The rear end of the spring locking-bar P is raised and lowered by a bifurcated handle P², the rear end of the bar playing up and down in a metal guide P³. The handles are braced by a brace-rod R, hinged at its ends, as shown.

S indicates the clevis, the ends of which are pivoted to the beam by a vertical pivot-bolt S'. The ends of the clevis extend back some distance, and near the front end of the beam is bolted a casting or clip T, which extends over the upper end of the clevis. At the rear end of the upper arm of the clevis is centrally pivoted a short cross-bar U, to the ends of which are pivoted the rear ends of locking-wedges V, the forward part of these wedge-arms being beveled to a point on their outer sides at v . To one end of the bar U is pivoted the front end of an operating-rod W, which passes back through a support w , and

is formed at its rear end into a flattened ring for convenience in operating it. It will be seen that when the operating-rod W is drawn back, thus drawing back the left-hand end of the centrally-pivoted cross-bar U, the left-hand pivoted wedge V will be drawn back and the right-hand wedge V will be pushed forward between the side of the clip T and the upper clevis-arm, and the clevis will be thus moved and locked or held to the left, while when the rod W is pushed forward the movements of the wedges will be reversed and the clevis moved to the right.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of the invention will be readily understood. It will be seen that the several parts are simple and strong in construction, not liable to break or get out of order, and very rapid and effective in their operation.

The several adjustments—reversing the plow, shifting the handles, and moving the clevis—are accomplished each by one or two movements in a few moments of time.

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

1. In a hillside-plow, the combination, with a beam, of the double-pointed plow having the standard formed in two pieces, and the top plate, the vertical pivot-bolt passing through the beam, the hinged locking-stirrups, the locking-lever, the link, the link-arms, the pivot-bolt connecting the same and having the enlarged head, and the vertical guideway, substantially as set forth.

2. The combination, with the beam, of the handles, the V-shaped casting pivoted on the beam, the perforated rear casting secured to the handles, the guard, the locking-bar and its pin, and the pivoted brace-rod connecting the handles and the beam, substantially as set forth.

3. The combination, with a plow-beam, of a clevis pivotally secured thereto, a clip extending over the clevis, the centrally-pivoted cross-bar, the wedges pivoted to the ends of the cross-bar, and an operating-rod, substantially as set forth.

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Witnesses:

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F. W. GUERNSEY.