

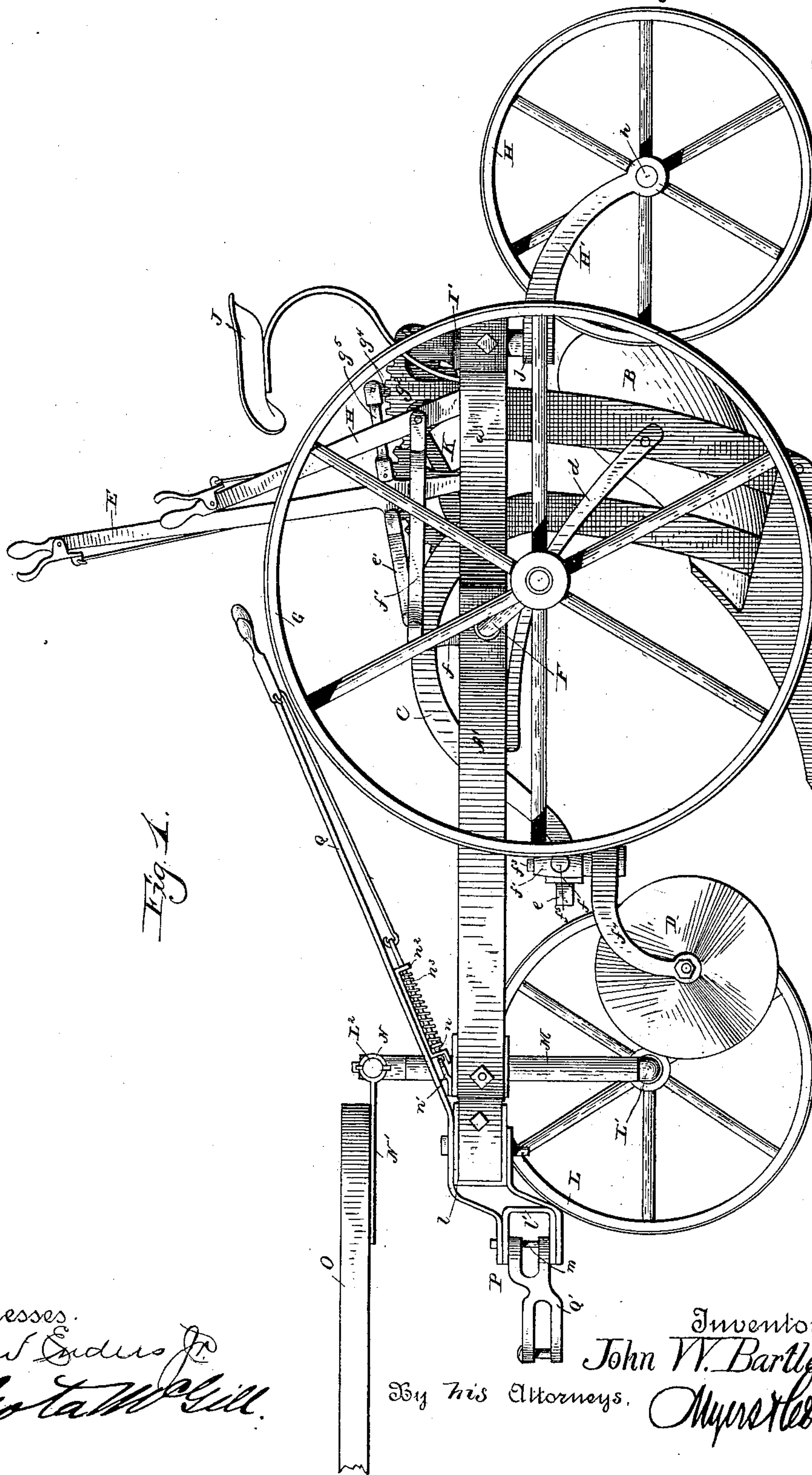
(No Model.)

3 Sheets—Sheet 1.

J. W. BARTLETT.
PLOW.

No. 386,374.

Patented July 17, 1888.



Witnesses.
John Sanders Jr.
John W. Bartlett.

Inventor.
John W. Bartlett.
By his Attorneys. *Myers & Co.*

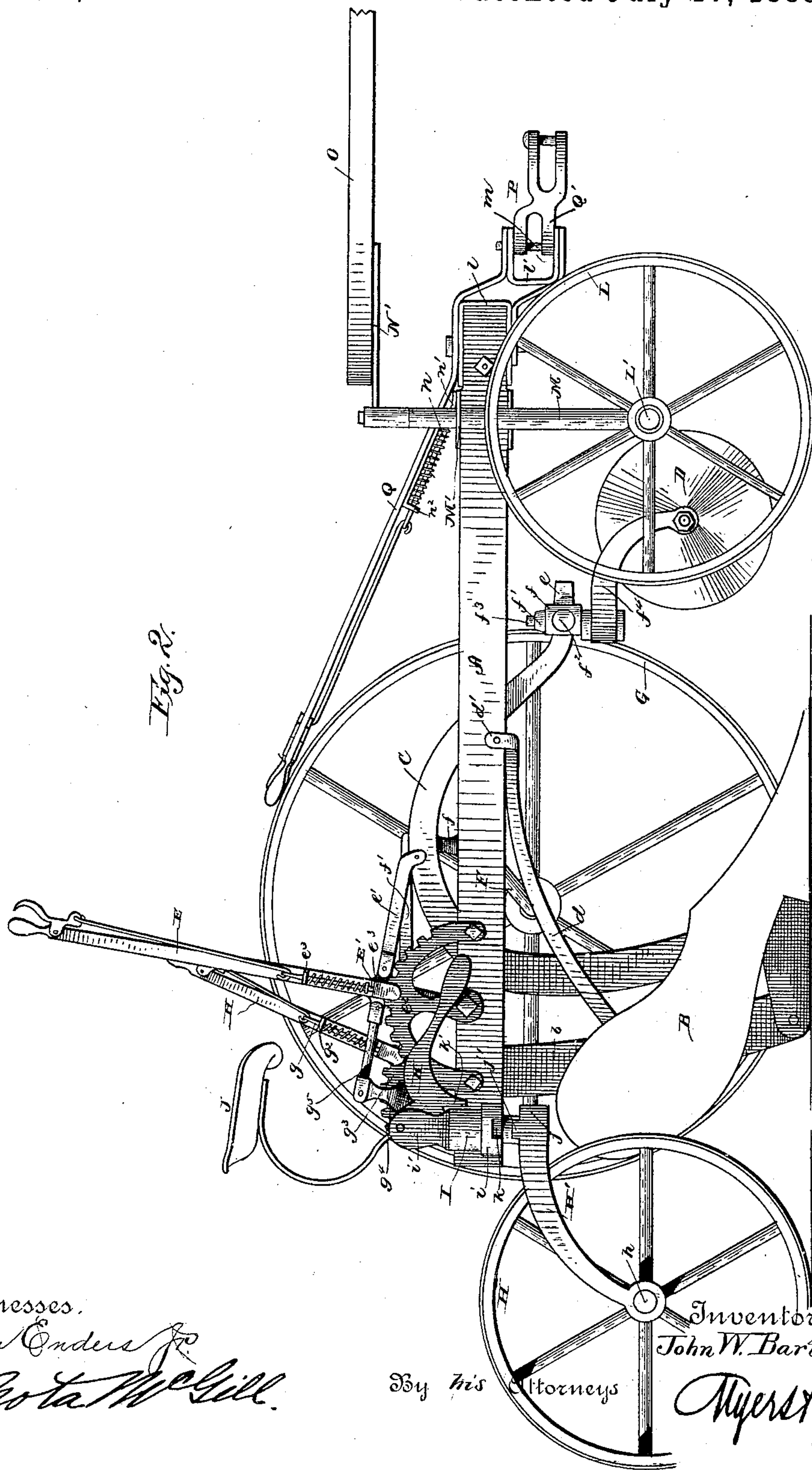
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John McGill.

By his Attorneys

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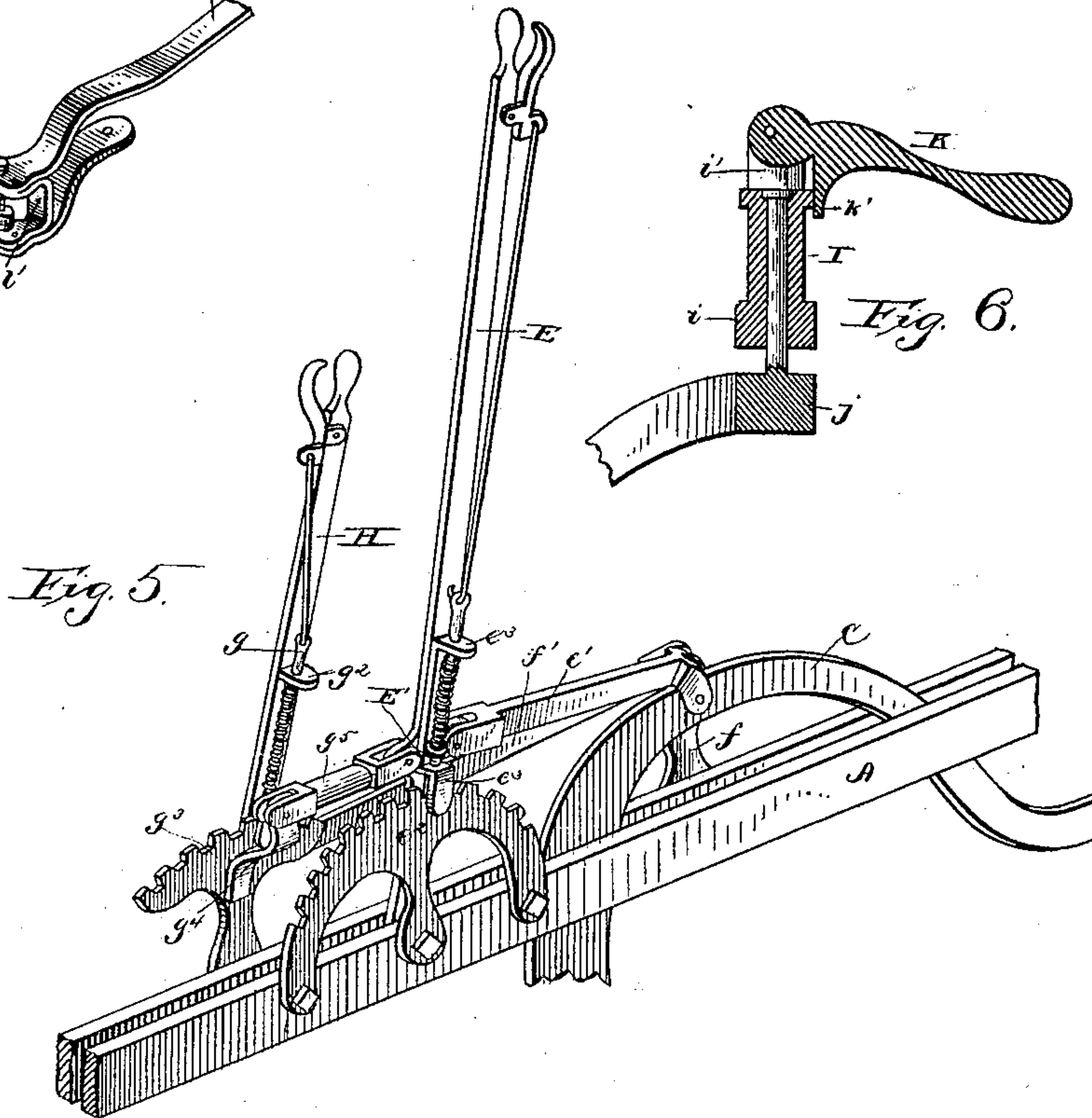
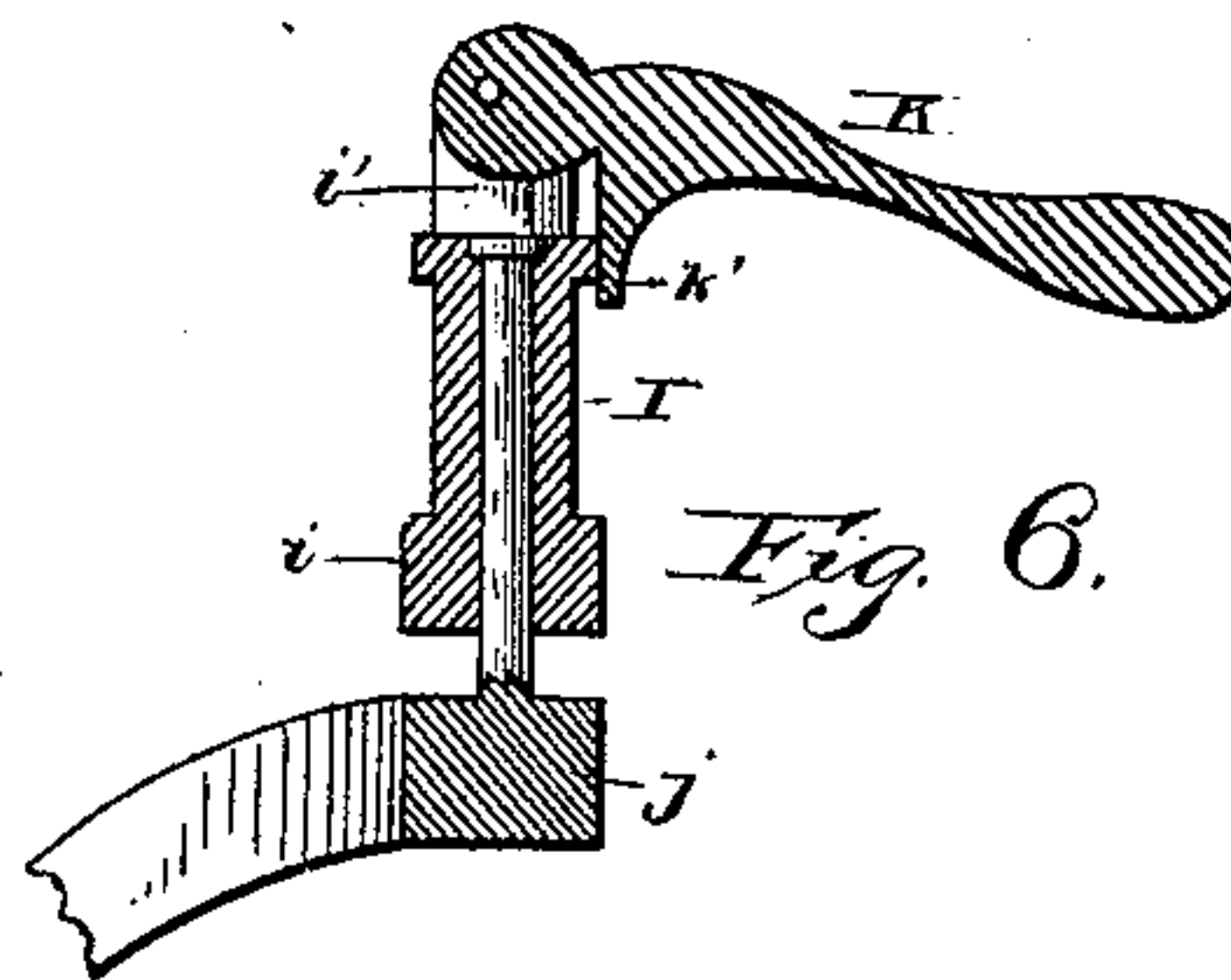
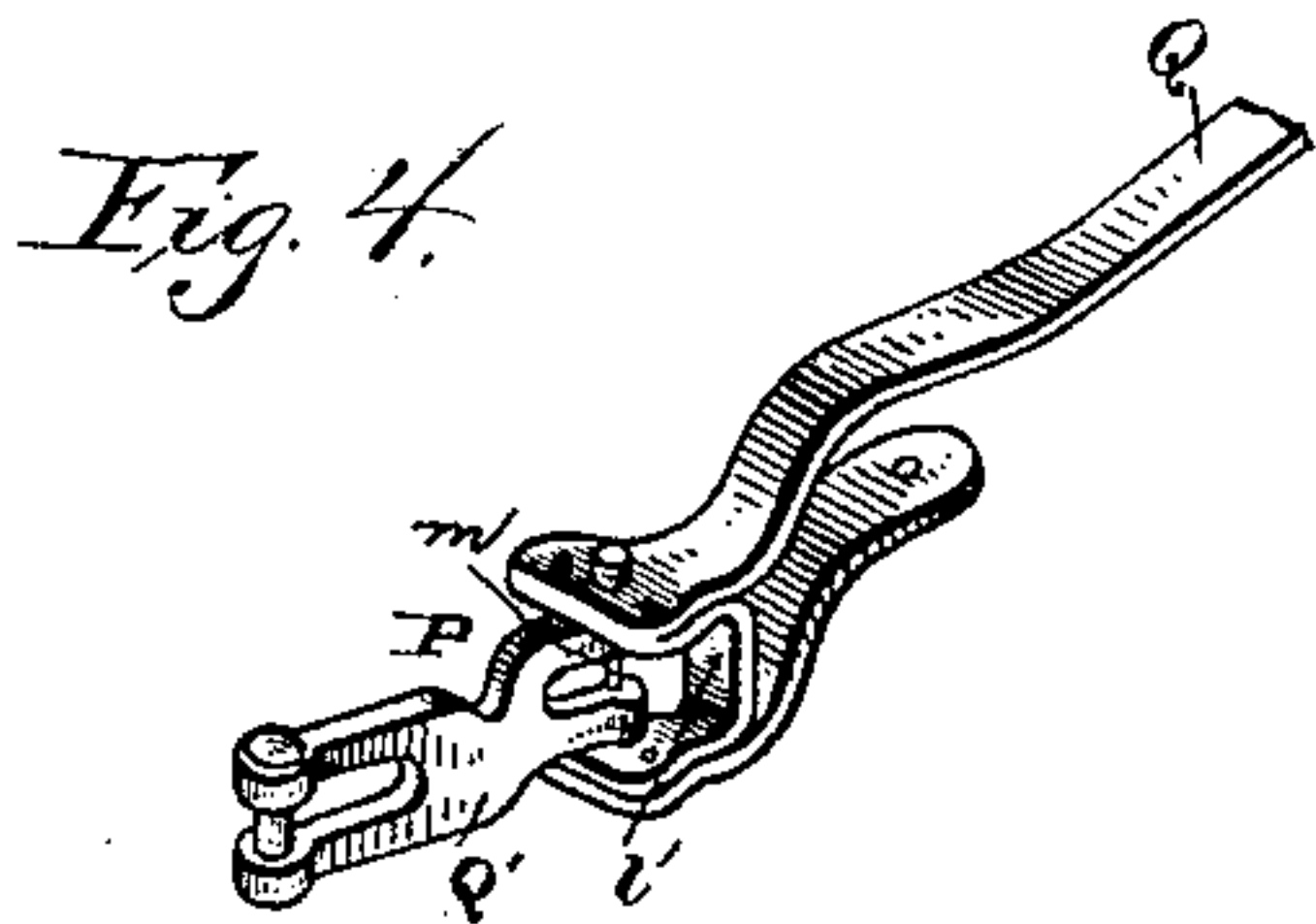
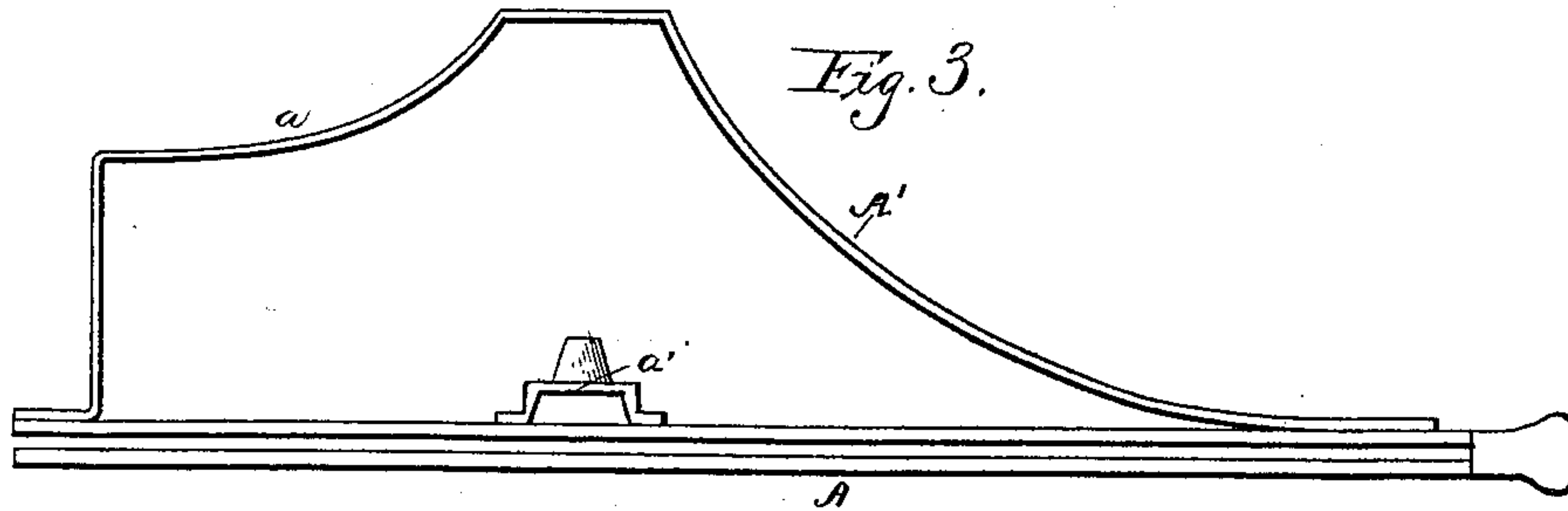
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John W. Gill.

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John W. Bartlett,
By his Attorneys Myer & Co.

UNITED STATES PATENT OFFICE.

JOHN W. BARTLETT, OF MOLINE, ILLINOIS.

PLOW.

SPECIFICATION forming part of Letters Patent No. 386,374, dated July 17, 1888.

Application filed April 16, 1887. Renewed January 5, 1888. Serial No. 259,924. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. BARTLETT, a citizen of the United States of America, residing at Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Plows, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention pertains to improvements in sulky-plows, having for its object to facilitate and expedite the manipulation of the sundry individual parts of the machine as well as the whole of the same bodily; and it consists of
15 the combinations of various parts, including their construction, substantially as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figures 1 and 2 are opposite side elevations of my plow.
20 Fig. 3 is a plan view thereof. Fig. 4 is a detached view of the forward or draft clevis and its adjunctive parts. Fig. 5 is a similar view of the combined plow and colter beam adjusting or manipulating lever mechanism, together with the cranked axle adjusting or
25 manipulating lever and rack mechanism; and Fig. 6 is a detailed sectional elevation of the rear caster-wheel attachment.

In the organization of my invention I construct the frame of the machine of two parallel longitudinal plate-like bars or members, A A, to which is connected at one side a third plate-like bar or member, A', which has a right-angled rear end bolted to the plate-like
30 bars A at their rear ends, and which has its remaining or side portion offset, as at *a*, about opposite the mid-length of the bars A, while it is curved inward upon each side of said offset portion *a*, being curved forward of said latter portion to its point of connection with one
40 of the bars, to which it is bolted, the purpose of which will be hereinafter explained.

B is the plow, which is preferably of the construction shown, and is pivoted at the rear end of the landside or its heel to the lower end of a standard, *b*, bolted to and between the rear ends of the plate-like bars A A at its upper end. Said standard is also braced in position by means of parallel slightly-curved
45 braces *d d*, bolted at their lower ends to the said standard about its mid-length and at their upper ends to the plate-like bars A, said braces

having their upper portions resting against the lower edges of said latter bars, while upon their upper edges, at the extreme outer or upper ends, they are provided with lugs *d'*, fitting against the outer sides of the said bars, to which they are bolted. Bolted in the usual way to the plow B is the beam C, which in itself, however, is of novel construction, being
55 curved at its upper end forward and downward into an approximately "goose-neck" shape, while at its extreme forward end is a short horizontal arm, *e*. This arm carries a clip or collar, *f*, held removably and adjustably thereon by means of a set or adjusting screw, *f*², and
60 cast or provided with a vertical tubular portion or sleeve, *f'*, which receives a spindle or axis, *f*³, on which is swiveled the axle-carrying frame *f*⁴ of the colter D. The spindle or axis *f*³ is held adjustably and removably in the sleeve *f'* by means of a set or adjusting
65 screw, *f*⁵, to permit of the vertical adjustment or lowering of the said spindle or axis, whereby the colter may be set to run a greater or less depth in the ground, while by means of
70 the collar *f* and the adjusting set-screw *f*² the colter may be wholly removed and may be adjusted relatively to the point of the plow.

By means of the aforesaid construction of plow-beam reaching up and held, as against lateral movement, between the parallel plate-bars A and the braces *d d*, as it is, the said beam is adapted to carry both the plow and the colter, thus avoiding the use of a separate means of
80 connection between the colter and the said bars, and means for the guidance of the beam is also provided as it is raised and lowered in the adjustment of the plow, as will be more fully explained farther on.

E is a hand-lever which is pivoted between the bars A A near the rear ends of the latter and connected by a link, *e'*, to the upper end or portion of the curved plow-beam C, by means of which the said plow-beam can be
85 adjusted or manipulated to effect either the simultaneous elevation or depression of both the colter and the point of the plow, as may be necessary. The lever E is provided with a retaining spring pawl or detent, E', which engages with a segmental rack, *e*², bolted upon
90 one of the bars A, and which detent or pawl is fitted to slide in apertured lugs *e*³, projecting from one side of the lever E.

F is a cranked axle which carries at its outer cranked end a large wheel, G, and is journaled in the offset portion *a* of the bar A' near its outer end and at its inner end in a keeper-like plate or bracket, *a'*, bolted at its ends to one of the bars A. To said inner end of this axle is fixedly applied an upwardly-projecting plate-like arm, *f*, which connects by a link, *f'*, with a hand-lever, H, pivoted to one side of a bar A, near the rear end of the latter, by means of which the cranked axle F is rocked in its bearings in order to permit of the vertical adjustment of the wheel G according as circumstances may require to keep the plow level in working in uneven or hilly ground. This lever H is also provided with a retaining spring pawl or detent, *g*, which engages with a segmental rack, *g'*, supported by a bar A, and which detent or pawl is arranged to slide between lugs *g''* upon the lever. This rack *g'*, however, has a pivotal connection with its support and is provided with an offset arm, *g''*, connected by a link, *g'''*, to the hand-lever E, from which it will be seen that both the adjusting mechanism of the cranked axle and that for adjusting the plow-beam are capable of manipulation from the same source—the lever E—as well as separately, each of which is desirable, as the conjoint adjustment thereof is expedient at times, while their individual adjustment is only necessary at other times.

H is a caster-wheel hung upon its axle *h* between the downwardly-curved arms of a spindle, H', swiveled in a sleeve, I, embraced by and brazed to a collar, *i*, at the one end and arms *i'' i'''* at the other end of an approximately staple-shaped plate or clip, I', bolted to and between the bars A A at their rear ends, which spindle is provided at its lower end with an enlargement or shoulder, *j*, upon the upper edge of which at one side is an upwardly-projecting stud or projection, *j'*, which is designed to enter a recess or notch, *k*, made in the lower edge and side of the sleeve I to hold the spindle with its wheel-carrying arm relatively fixed to the sleeve, and thus cause the wheel to follow in the path of the plow.

K is a cam-lever pivoted at its cam-carrying end to and between lugs formed upon the upper end of the sleeve I and in alignment with the upper end of the spindle H', whereby the cam may be brought in contact with said end of spindle when the lever is swung in a reverse position from that which it occupies when the spindle and sleeve are interlocked by the projection or stud and recess. The cam-lever K has also a pendent projection or stop, *k'*, near its pivotal or cam end, which comes into action (resting against the sleeve I) when its cam is in use. The cam action of the lever K forces the projection or stud *j'* out of the recess or notch *k*, and thus permits of the elevation of the heel end of the plow and the swiveling or ready turning of the caster-wheel H, as is desirable in taking the plow out of the completed furrow and in turning the plow to pass out upon the road or across the field at right angles to

the plowed portion thereof, as is done in shifting the plow from point to point. At this end of the plow is disposed or mounted upon a suitable support, with its lower end bolted to the rear end of the bar A', the driver's or operator's seat J, within convenient reach of which are arranged all the hereinbefore-described adjusting-mechanism levers, including the cam-lever K.

At the forward end of the plow is also a caster-wheel, L, whose axle L' has a vertical portion swiveled in a sleeve, M, brazed or cast upon the outer ends of a skeleton arm, M', which is passed at its inner end between and bolted firmly to the bars A A near their extreme forward ends. The upper end of the caster-wheel axle L' has securely fitted thereon a cylindric arm, L'', upon which is slipped and held in one way by a pin passed through said arm at its free end a webbed sleeve, N, to the web or plate extension N' of which is bolted the tongue or pole O. Also at this end of the plow is applied the hitching or draft clevis P, the adjusting mechanism or lever of which is of peculiar construction, the latter consisting, primarily, of a lever, Q, pivoted at the extreme forward end of the bars A A, its pivoting-bolt or fulcrum passing through a clip, *l*, fitted upon said ends of said bars, which clip has a central web fitting and secured in between said bars by a bolt passing transversely through them. The lever Q, while of a convenient width at its rear portion for grasping or manipulation, is gradually widened toward and extended into a plate-like form at its pivotal point and into a clip form beyond the clip *l*, being curved down over and beyond the latter into step form. A plate, Q', stepped or bent so as to form the counterpart of the stepped widened portion of the lever Q, is, together with an interposed approximately U-shaped piece, *l'*, placed with its connecting part so as to form the rear end of the clip, brazed to the under side of the forward or stepped end of the lever Q, the rear end of the plate Q' being connected to the under side of the clip *l* by the pivot-bolt of the lever Q. Through the extreme forward ends the clip formed by the lever Q, the plate Q', and the part *l'* is passed a bolt, *m*, upon which is swiveled the clevis P. To the lever Q is also applied a retaining spring pawl or detent, *n*, engaging a rack, *n'*, secured upon the upper surface of the inner end of the arm M', said pawl being fitted to slide in apertured lugs *n''*, as shown, said lever Q being designed to be grasped in giving the plow more or less "land."

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

1. The combination, with the parallel frame-bars, of the colter and plow-beam of an approximately goose-neck shape, the same being adapted to carry at its rear end a plow and at its forward end a colter, substantially as set forth.

2. The combination, with the parallel frame-bars and the plow and colter, of the beam curved upward, forward, and downward between the frame-bars and provided with a forward extension which receives an adjustable collar having a vertical sleeve provided with an adjusting-screw and receiving the colter-carrying-frame spindle, substantially as and for the purpose set forth.
3. The combination, with the approximately goose-neck-shaped beam carrying a plow, of the parallel bars receiving between them said beam and having a pendant or standard, to which the heel end of the plow is pivoted, and the manipulating-lever linked to said beam, substantially as shown and described.
4. The combination, with the pivoted plow, with its curved beam guided between parallel bars, and the crank-axle-adjusting lever, with its retaining pawl or detent, of the pivoted rack engaged by said detent or pawl and connected to the beam-adjusting lever, substantially as and for the purpose specified.
5. The combination, with the parallel frame-bars having a clip at their forward ends, of the lever having a plate-like form at its pivotal point and its end curved beyond a clip form thereof, and the clevis secured in said end of

the lever between a U-shaped piece, substantially as shown and described.

6. The rear caster-wheel with its carrying-frame spindle provided with a projection or lug and the sleeve applied to rear end of the frame-bars and provided in its lower edge with a notch or recess, in combination with the cam-lever adapted to bear upon the upper end of the caster-wheel-frame spindle and to raise and lower the spindle and wheel, substantially as and for the purpose specified.

7. The combination, with the plow-beam having an approximately goose-neck shape and carrying a plow, and the cranked axle carrying a wheel at its other end, of the frame consisting of the parallel longitudinal bars, which receive between them said beam, and the third bar having an end bar at a right angle thereto offset about at its mid-length and contracted toward its ends, the same being bolted to the parallel bars, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. BARTLETT.

Witnesses:

J. S. GILLMORE,
E. H. SEIFFERT.