

(No Model.)

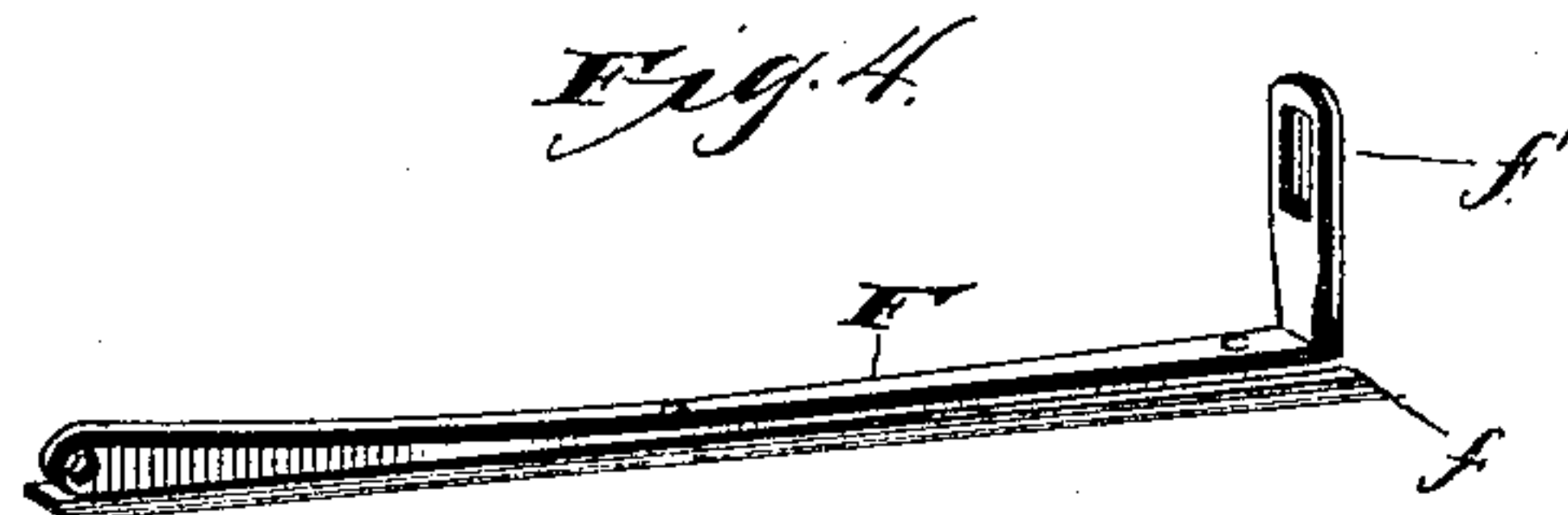
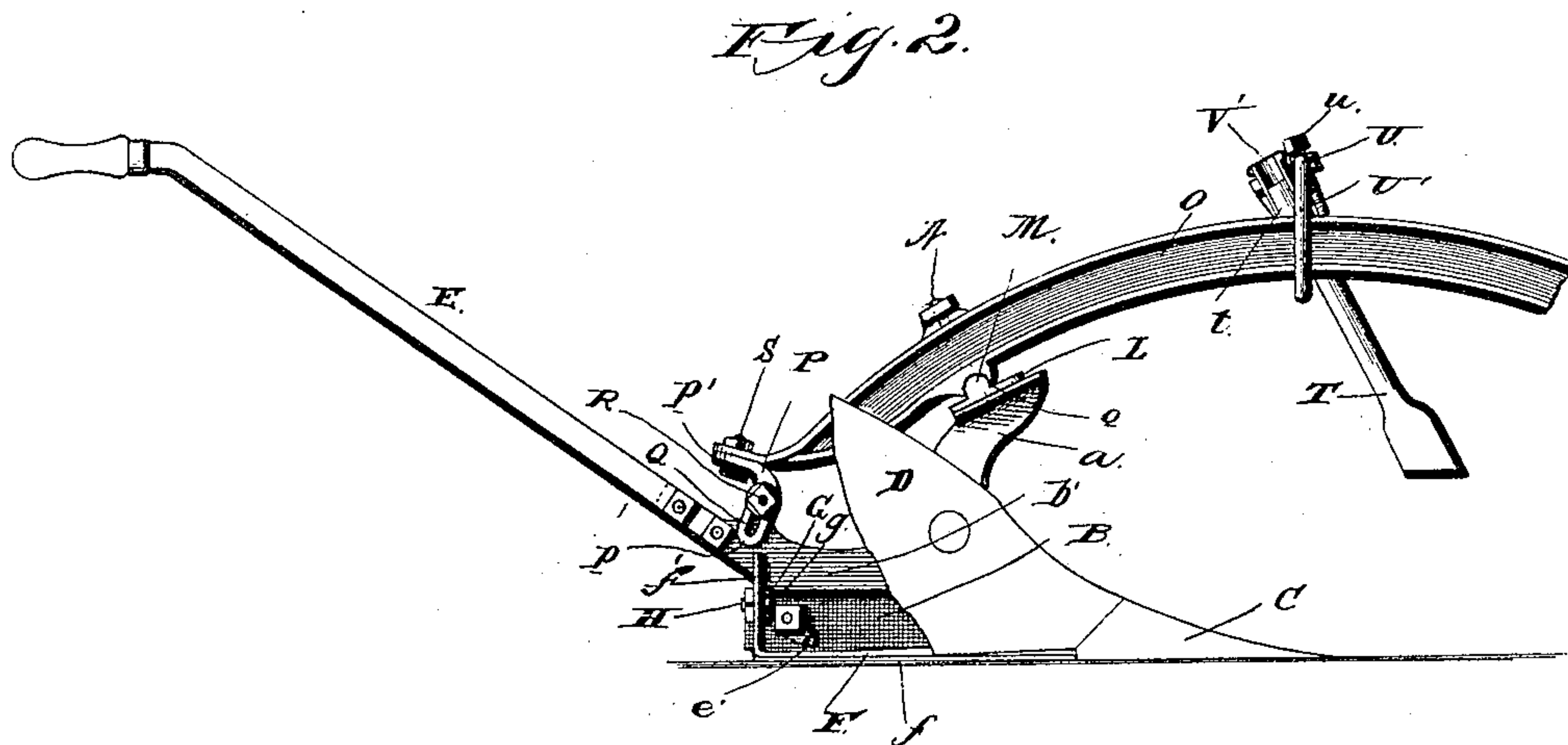
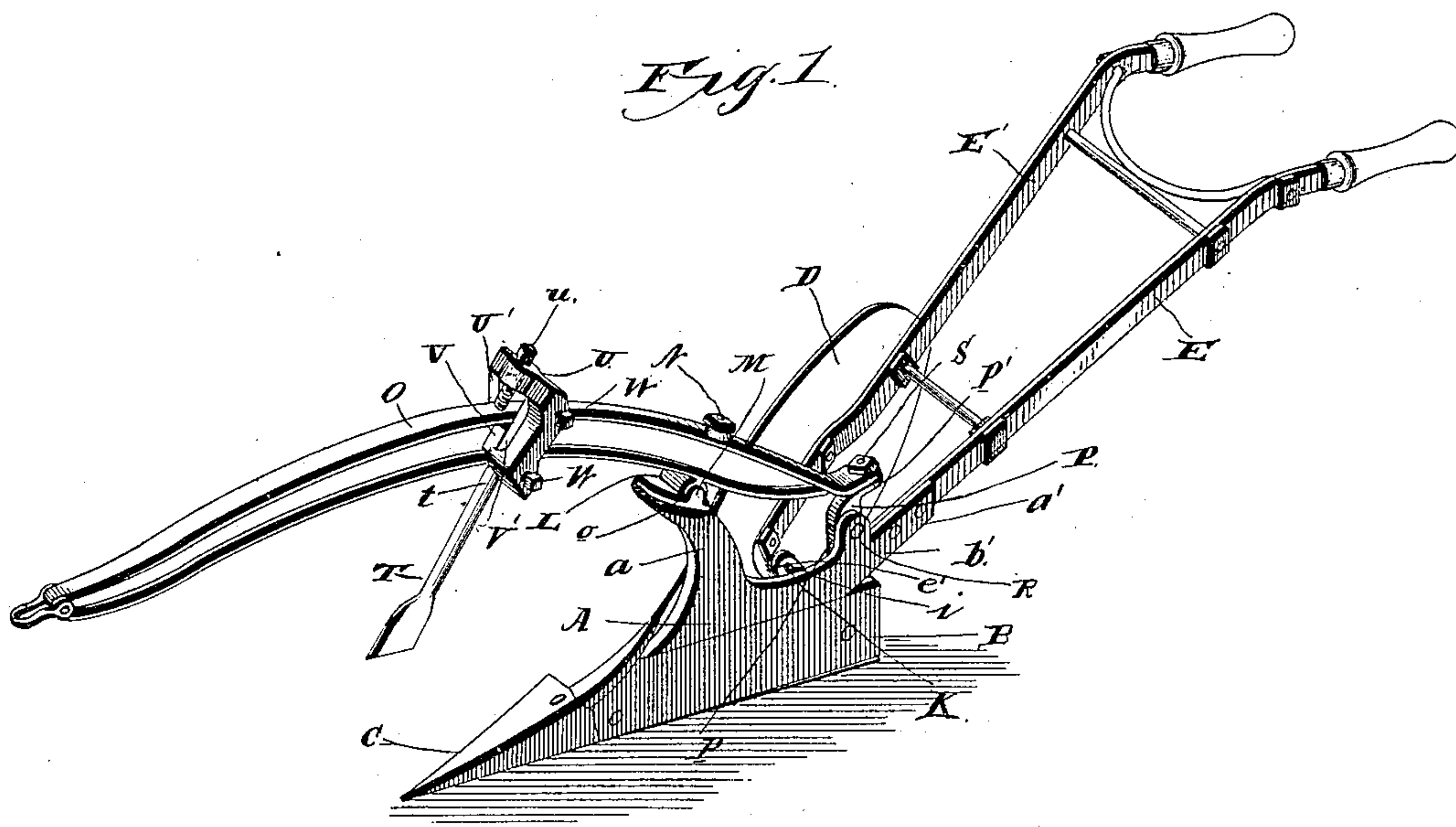
2 Sheets—Sheet 1.

A. F. BJÖRKSTRÖM.

PLOW.

No. 397,891.

Patented Feb. 19, 1889.



Witnesses

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Inventor.

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

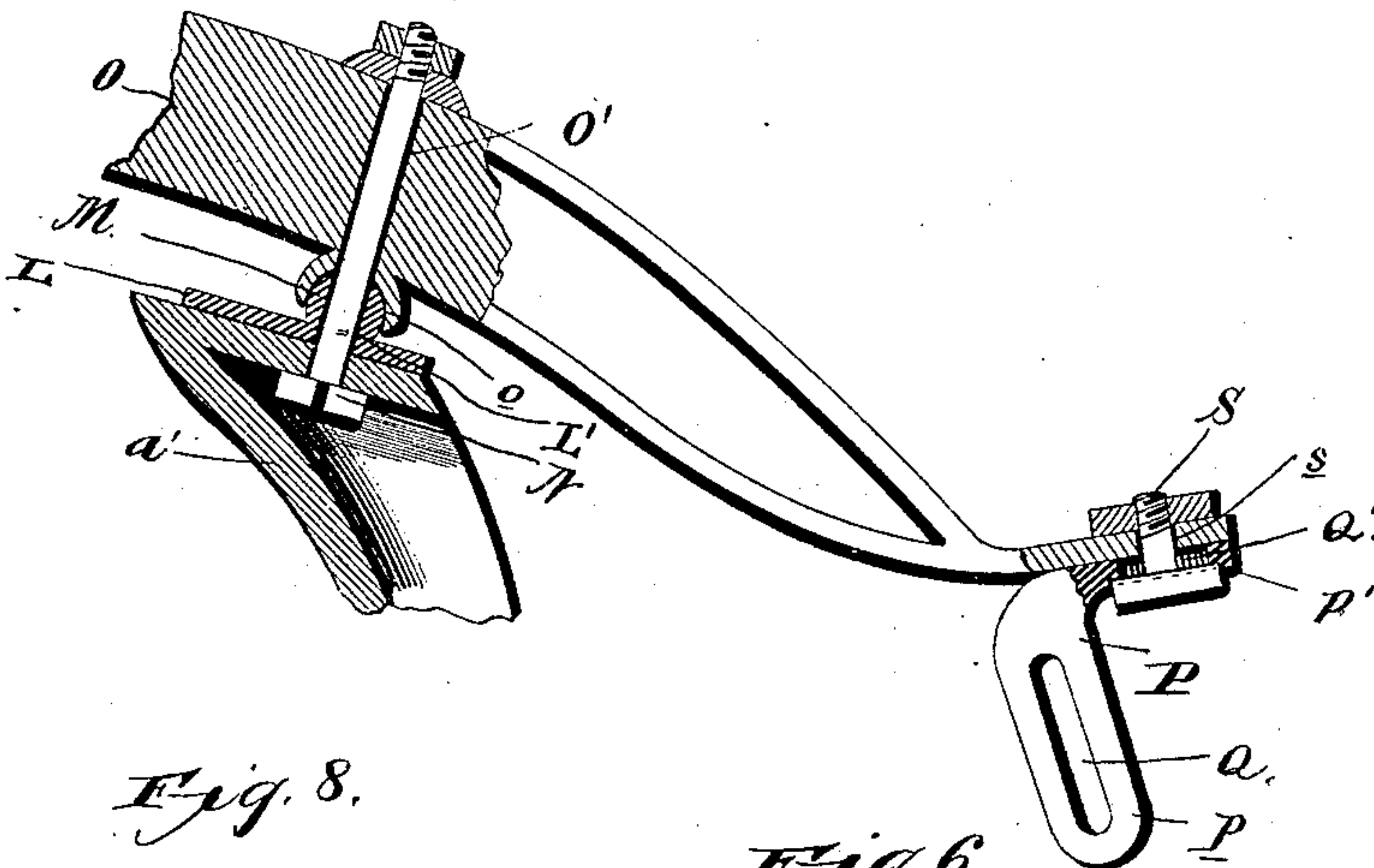


Fig. 8.

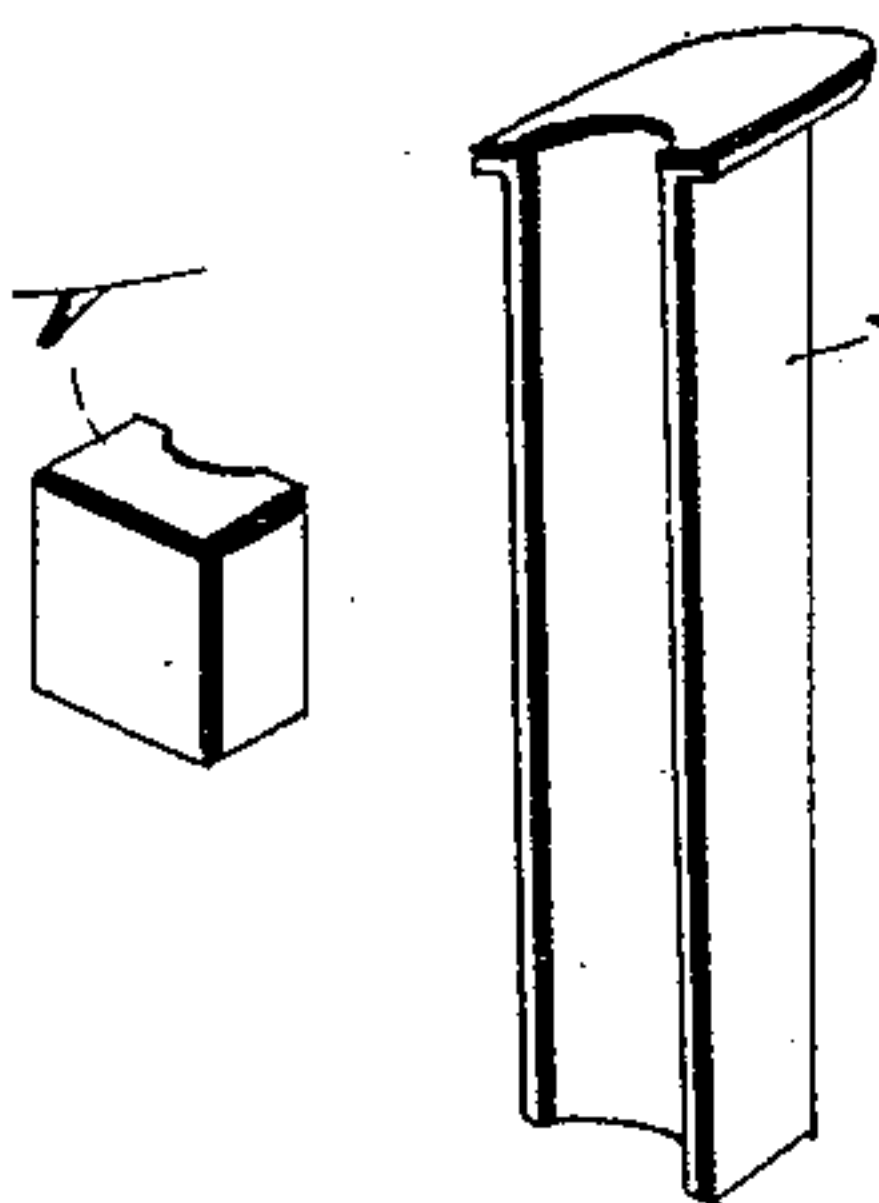


Fig. 6.

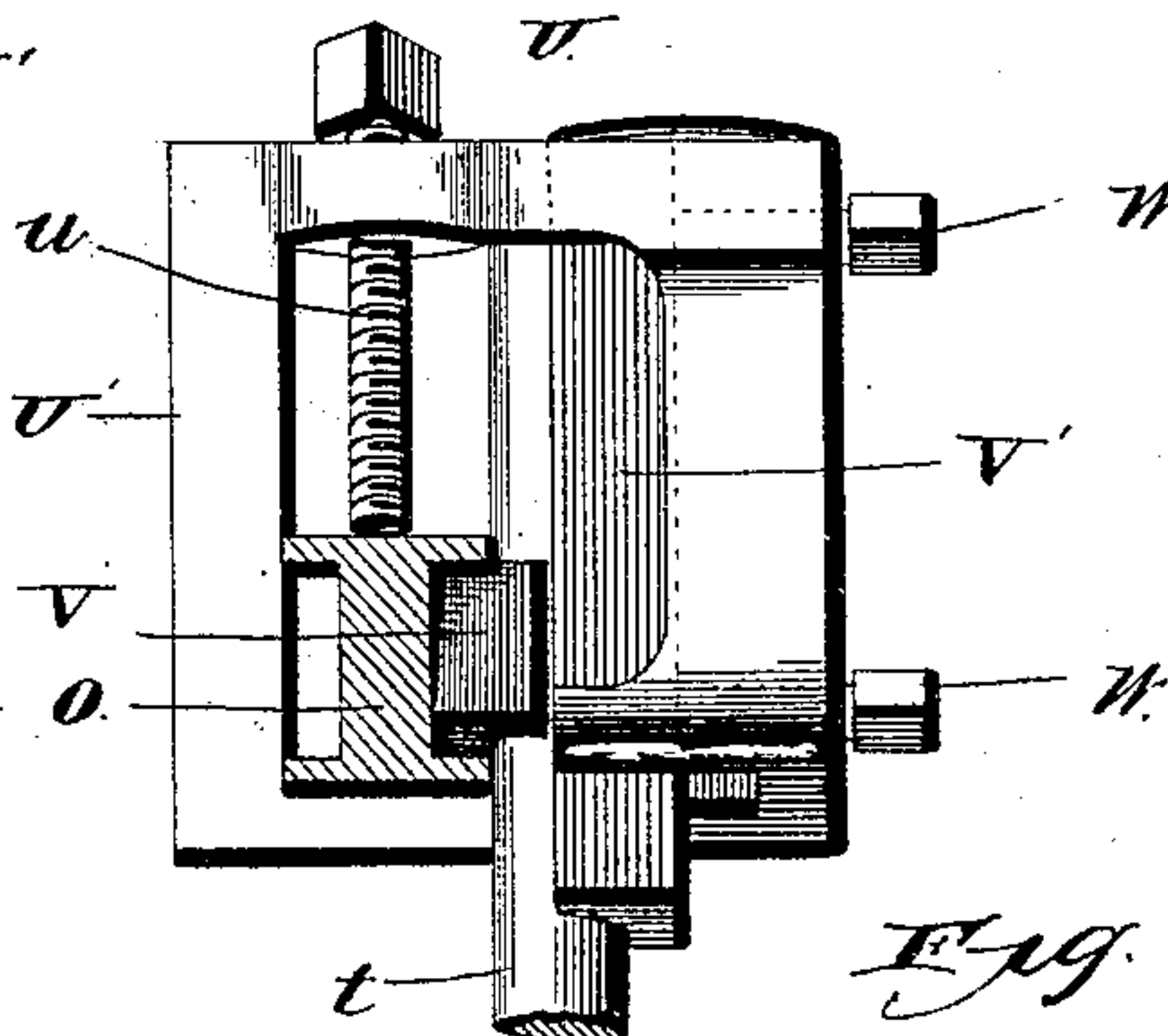


Fig. 5.

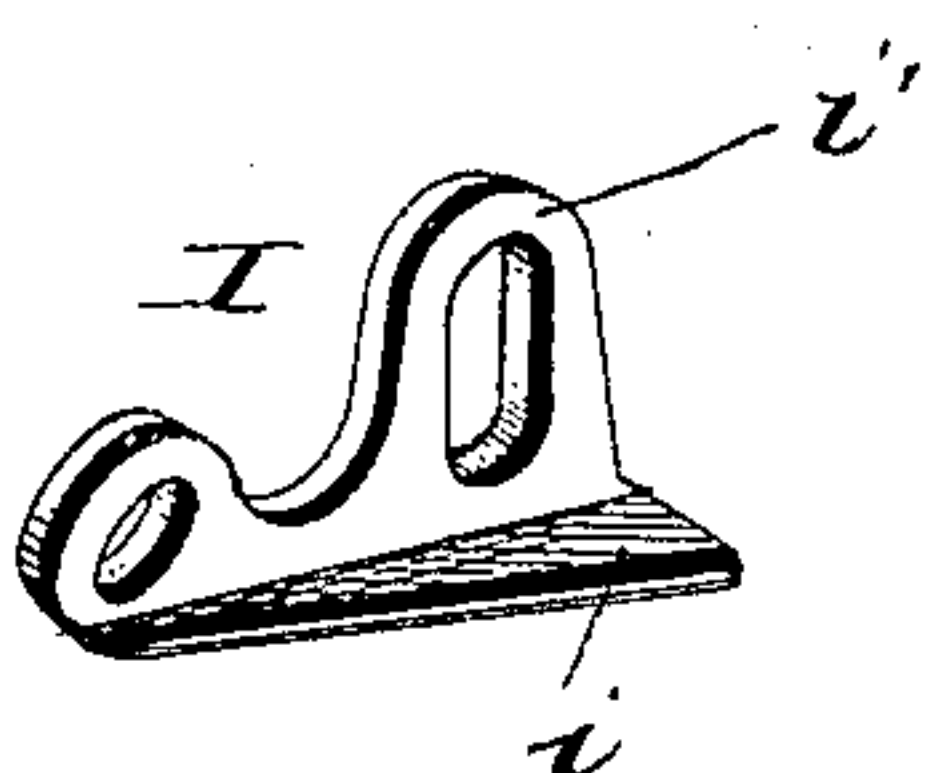


Fig. 9.

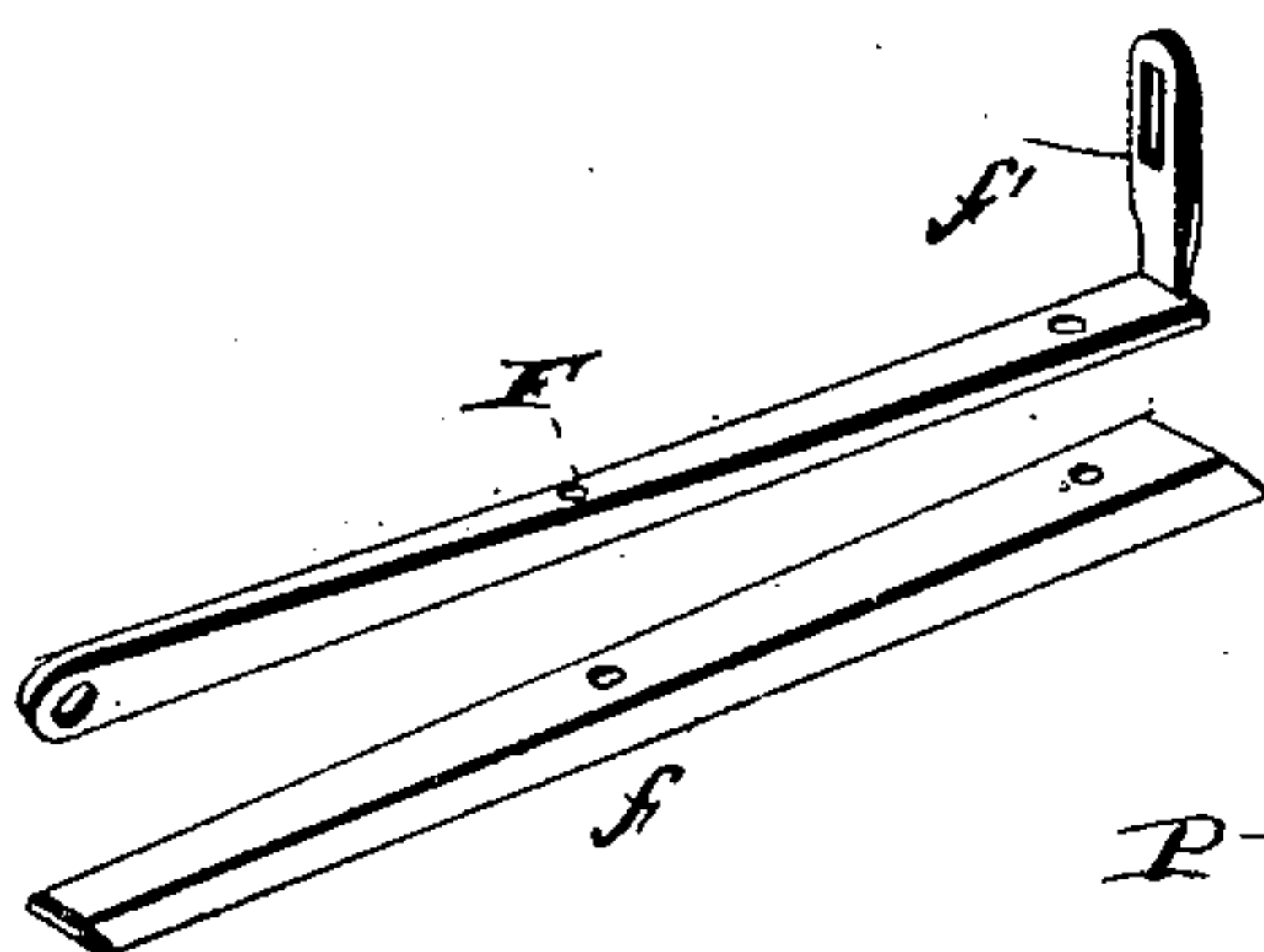


Fig. 7.

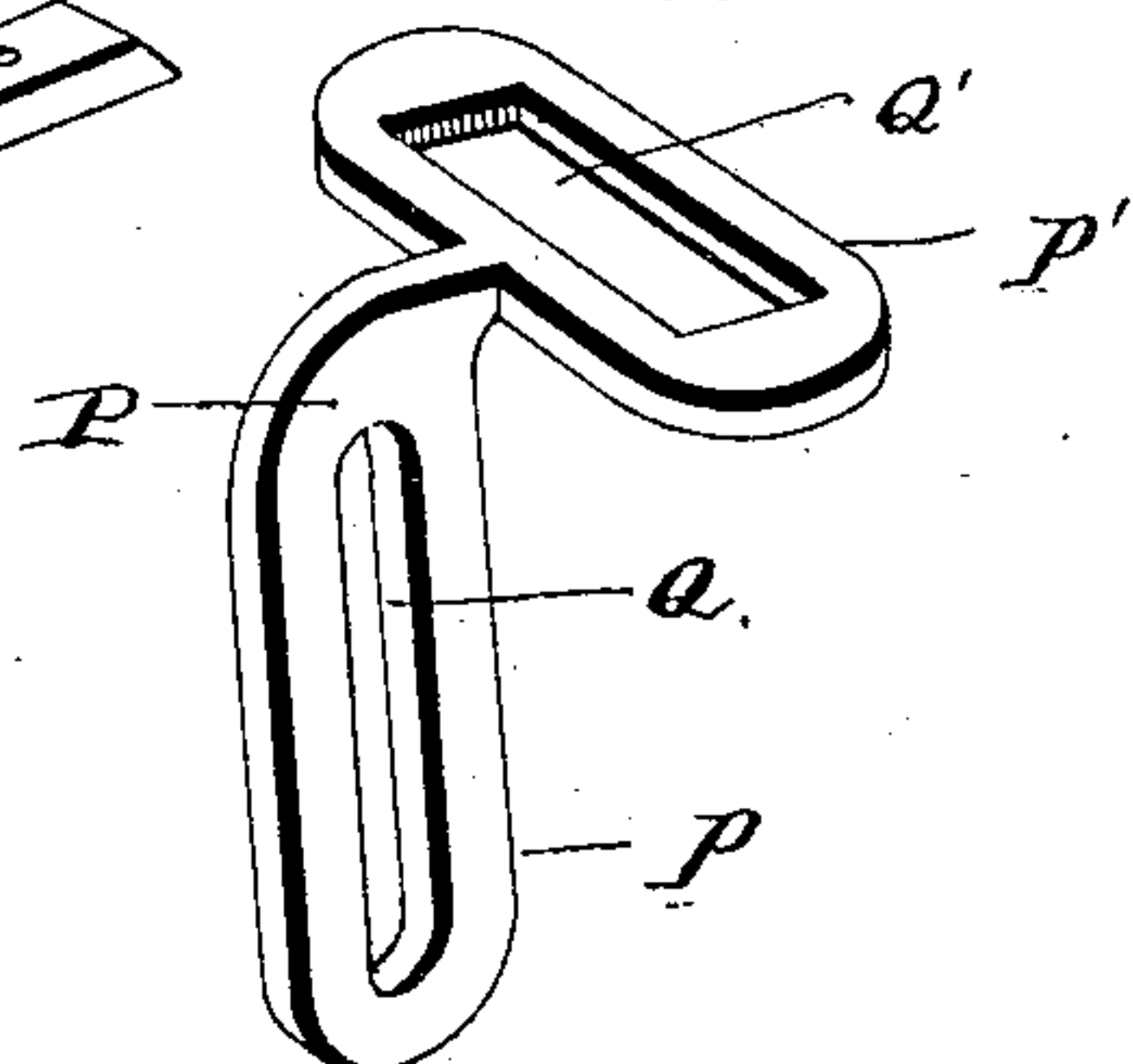
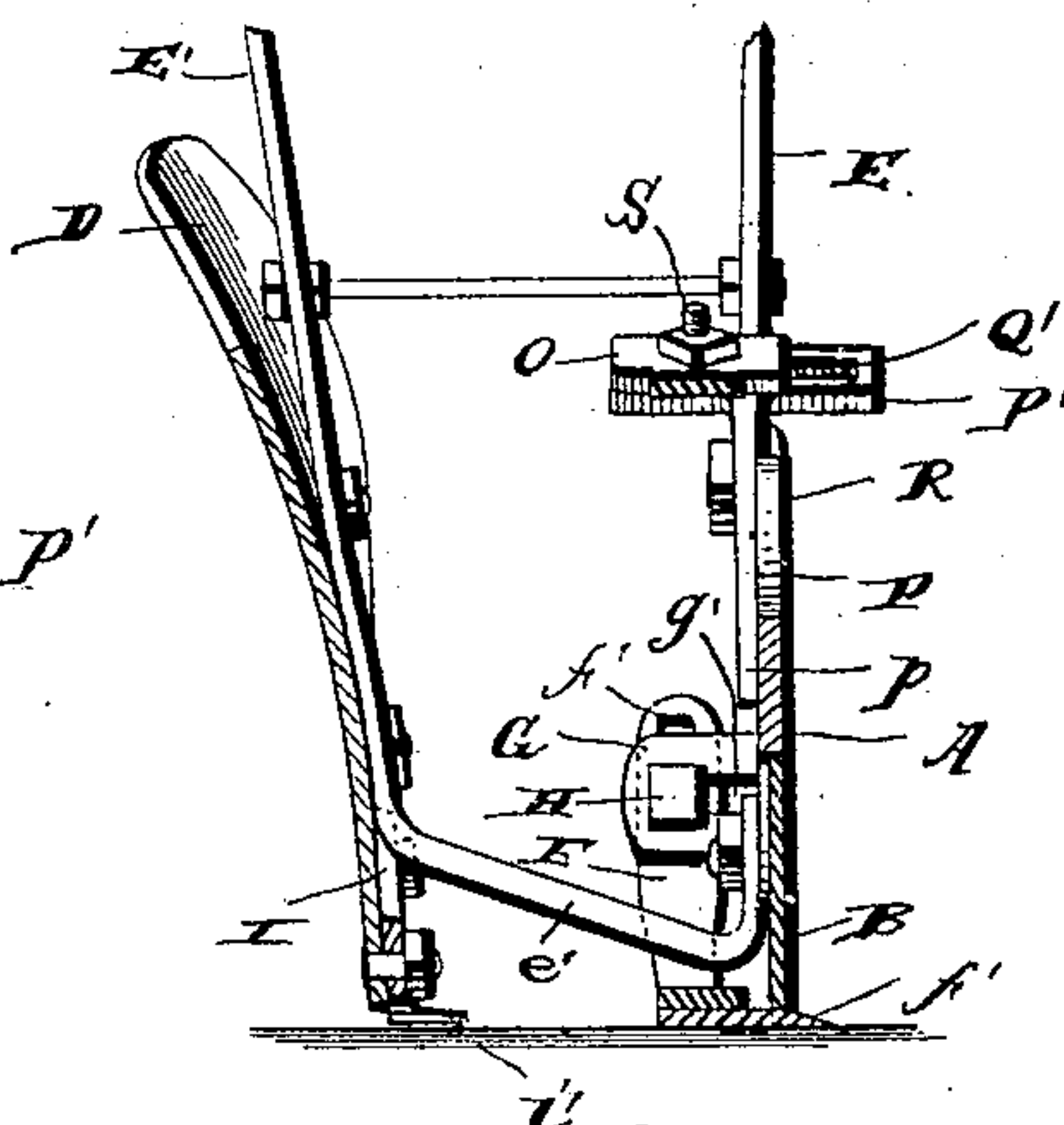


Fig. 10.



Witnesses,

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UNITED STATES PATENT OFFICE.

ADOLF FREDRICK BJÖRKSTRÖM, OF KANSAS CITY, MISSOURI.

PLOW.

SPECIFICATION forming part of Letters Patent No. 397,891, dated February 19, 1889.

Application filed October 18, 1888. Serial No. 288,458. (No model.)

To all whom it may concern:

Be it known that I, ADOLF FREDRICK BJÖRKSTRÖM, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented new and useful Improvements in Plows, of which the following is a specification.

My invention relates to improvements in plows; and it consists in a certain novel construction and combination of devices, fully described in connection with the accompanying drawings, and specifically pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a plow embodying my improvements. Fig. 2 is a side view of the same, partly in section. Fig. 3 is a longitudinal sectional view of the rear end of the plow-beam to illustrate its connection with the frame. Fig. 4 is a detail view of the guide-plate. Fig. 5 is a similar view of the wear-plate for the mold-board. Fig. 6 is a front view, partly in section, of the holder for the colter. Fig. 7 is a similar view of the angle-plate. Fig. 8 is a detail view of the block and wedge used in the adjustment of the colter, arranged in the proper relative positions. Fig. 9 is a similar view of the guide-plate and knife-plate attached. Fig. 10 is a transverse sectional view on the line $x x$ of Fig. 2, looking rearward.

Referring by letter to the drawings, A designates the frame of the plow, having a front upwardly-extending arm or extension, a , and a rear arm or extension, a' .

B designates the landside, secured to one side of the said frame.

C designates the point or share, secured to the front end of the frame, and D designates the mold-board, which is secured at its front end to the frame in the ordinary or any preferred manner.

The handles E E' are secured at their front ends, respectively, to the rear arm or extension, a' , and to the inner side of the mold-board, and are maintained at the proper distance apart by the interposed braces C C C'. The handle E' is provided at its lower end with an extension, e' , which is carried across from the mold-board and is bolted at its free end to the frame of the plow adjacent to the landside.

The guide-plate F is tapered slightly toward its front end, where it is pivoted to the frame of the plow, and the plate is provided at its rear end with a vertical arm, F', having a vertical slot, f' , which registers with a transverse slot, g , in a suitable ear, G, on the frame of the plow. An adjusting-bolt, H, engages the intersecting slots, and thereby enables the rear end of the guide-plate to be vertically and laterally adjusted. A supplementary knife-plate, f , is secured to the under side of the guide-plate, which may be removed and replaced when worn. The guide-plate is arranged close to the inner side of the landside, and the knife-plate projects outward under the lower edge of the landside, and by cutting in the earth beyond the landside prevents the heel of the plow from running out of the furrow. This guide-plate is designed to be vertically adjusted at its rear end to cause more or less inclination of the point or share, so that a furrow of any desired depth may be cut without altering the height of the draft on the beam; also, this guide-plate is adapted to be adjusted outward at its rear end, so that its sharpened edge extends beyond the landside, thereby guiding or directing the motion of the share and protecting the landside from wear which would otherwise fall thereon.

An adjustable wear-plate, I, is affixed to the rear end of the mold-board at its lower edge, and it consists of a small tapered plate pivoted at its front and smaller end to the inner side of the mold-board, and provided at its rear end with a slotted ear, i' , which operates on an adjusting-bolt, K, on the mold-board. The object of this wear-plate is to receive the wear which usually comes upon the heel of the mold-board, and also enable the lower edge of the mold-board to slide readily over the ground. By vertically adjusting the rear end of this heel-plate the wear thereon may be compensated for, and when worn out it may be readily replaced, as will be seen.

The front arm, a , of the plow-frame is provided with a flat upper end, on which bears the turning-plate L, having a transverse rounded rib, M, on its upper side, and this plate is pivoted at its center on a bolt, N,

which passes through the upper end of the arm *a*.

The plow-beam *O* is pivoted at a suitable distance from its rear end on the bolt *N*, and is provided on its under side with a transverse rounded groove, *o*, which bears on the rib *M*. The openings *L'* and *O'* in the turning-plate and the plow-beam, through which the adjusting-bolt passes, are enlarged slightly, as shown clearly in the drawings, to permit the beam a suitable vertical rocking movement on the rib *M*. The plate *L* rotates on the bolt, and thereby allows the front end of the beam to be laterally adjusted to cause a broad or narrow furrow to be cut.

P represents an angle-plate, having a vertical portion, *p*, and a horizontal portion, *p'*, which are provided, respectively, with a vertical slot, *Q*, and a transverse slot, *Q'*, and the said vertical slot fits on an adjusting-bolt, *R*, on the frame *A*, and is adapted to be adjusted vertically thereon. The rear end of the plow-beam is provided with an aperture, *s*, which aligns with the transverse slot *Q'*, and the adjusting-bolt *S* engages the same. By means of this adjusting device it will be readily seen that any desired vertical or lateral adjustment of the plow-beam may be attained.

The colter *T*, which may be of any ordinary or preferred shape, is provided with a round shank, *t*, is held in place on the plow-beam by the holder *U*, which consists of the frame *U'*, embracing the plow-beam and locked thereon at any desired inclination by the set-screw *u*, the grooved block *V* bearing against one side of the shank of the colter, and the grooved wedge *V'* bearing against the opposite side of the shank of the colter and firmly pressed against the same by the set-screws *W W*. A colter arranged in this improved holder may be arranged at any desired inclination to the plow-beam, and its blade may be turned at any desired angle thereto.

Having thus described the invention, I claim—

1. In a plow, the combination, with the landside, of the adjustable guide-plate pivoted at its front side to the landside and adjustably secured thereto at its rear end, and provided with a laterally-projecting knife-plate extend-

ing under the landside, substantially as specified.

2. In a plow, the combination, with the landside, of the adjustable guide-plate pivoted at its front end to the inner side of the landside, and provided with a laterally-projecting knife-plate, which extends under the landside, the said guide-plate being further provided at its rear end with a vertically-slotted arm which is arranged adjacent to a horizontally-slotted stationary arm on the plow, and the adjusting-bolt engaging the said horizontal and vertical slots, whereby the rear end of the guide-plate may be vertically and horizontally adjusted, substantially as specified.

3. In a plow, the combination, with the stationary landside, of the adjustable guide-plate pivoted thereto, and provided with a supplemental removable knife-plate, *f*, secured to its lower edge and projecting under the lower edge of the landside, substantially as specified.

4. In a plow, the combination, with the mold-board, of a wear-plate, *I*, pivoted at its front end to the mold-board, and provided at its rear end with a vertically-slotted ear, *G*, engaged by a suitable adjusting-bolt, substantially as specified.

5. The combination, with a plow, of the colter-holder *U*, arranged on the beam thereof, and comprising the frame *U'*, the grooved block *V*, and the grooved wedge *V'*, and the colter provided with a rounded shank fitting between the block and the wedge and held in place thereby, substantially as specified.

6. The colter-holder comprising the frame *U'*, embracing the beam of a plow, and provided with a set-screw, *u*, the grooved block *V* and the grooved wedge *V'*, arranged in the frame with their grooved sides opposed to each other, and the set-screws *W W*, bearing against the outer side of the said wedge, in combination with the colter provided with a rounded shank fitting between the block and the wedge, substantially as specified.

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

ADOLF FREDRICK BJÖRKSTRÖM.

Witnesses:

ADOLPH NELSON,
JOHAN RENEY.