

(No Model.)

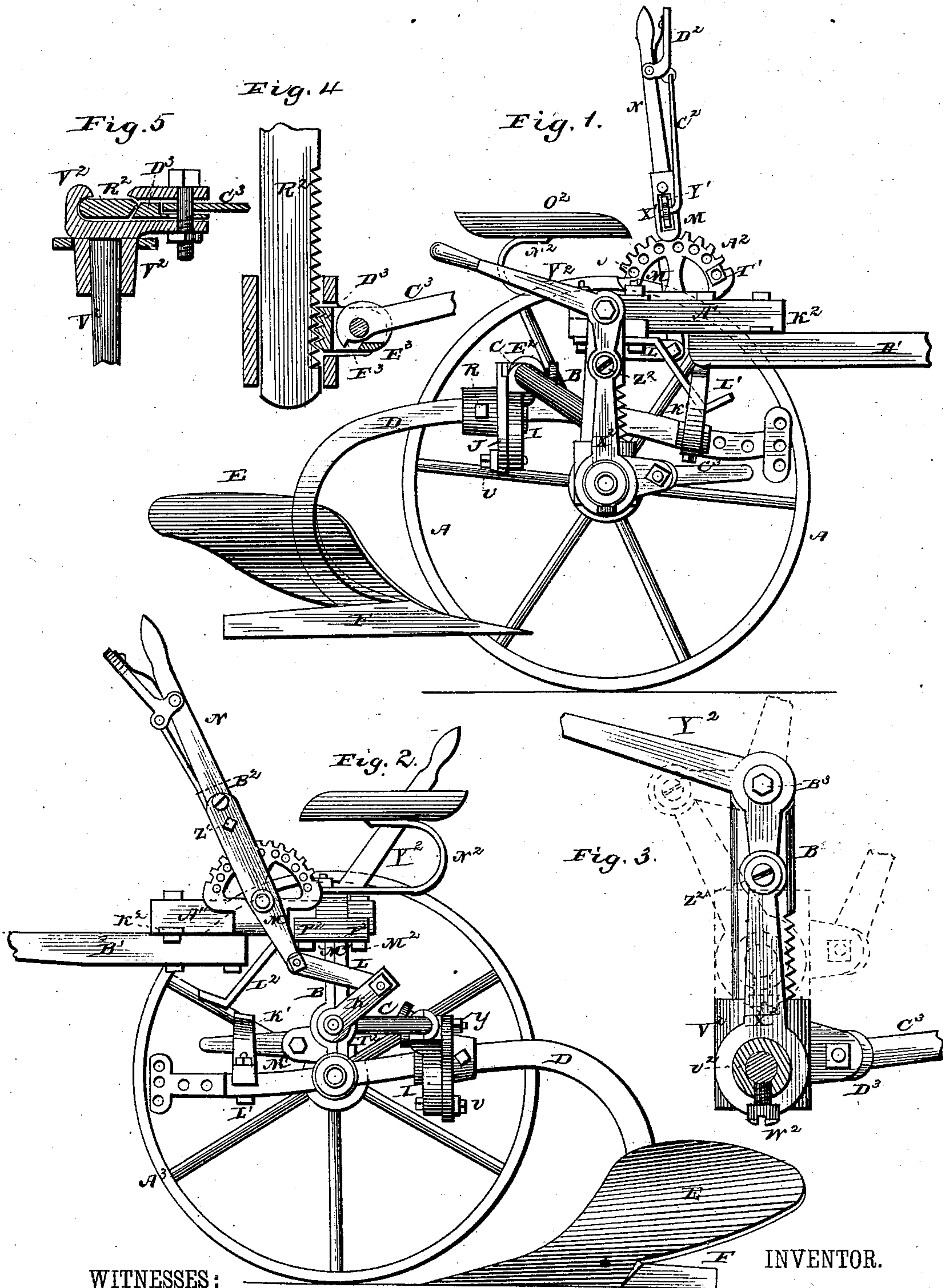
2 Sheets—Sheet 1.

F. B. HUNT.

SULKY PLOW.

No. 256,695.

Patented Apr. 18, 1882.



WITNESSES:

Wm. G. Dietrich
A. M. Long.

INVENTOR.

Franklin B. Hunt

(No Model.)

2 Sheets—Sheet 2.

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Fig. 6.

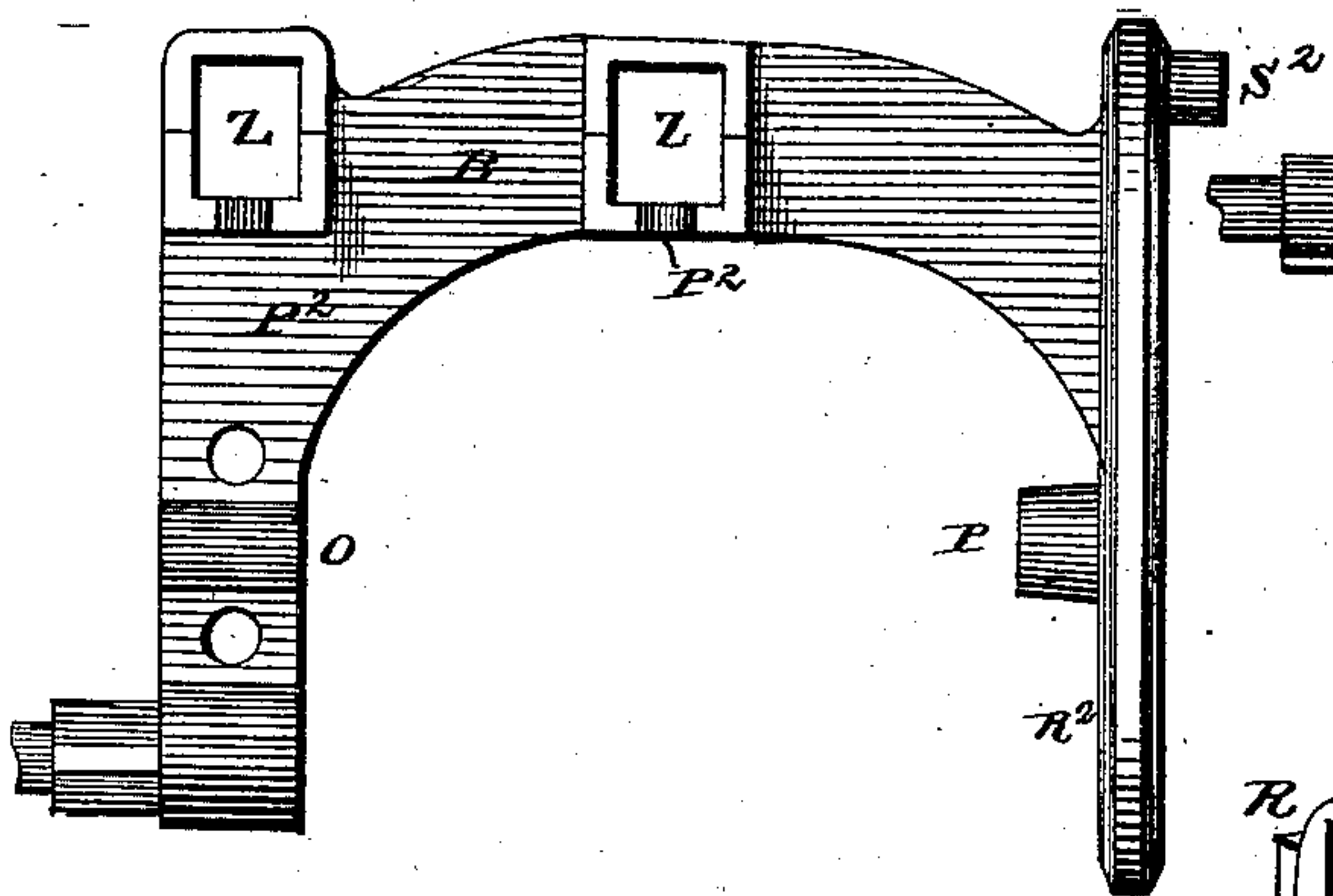


Fig. 7.

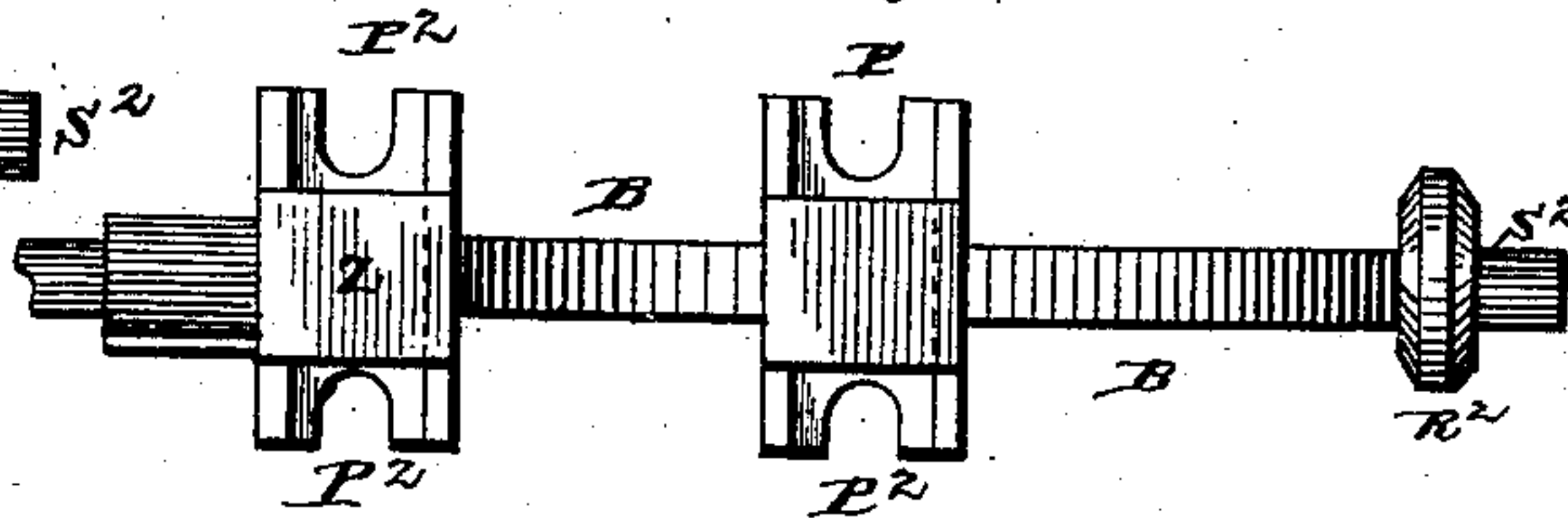


Fig. 8.

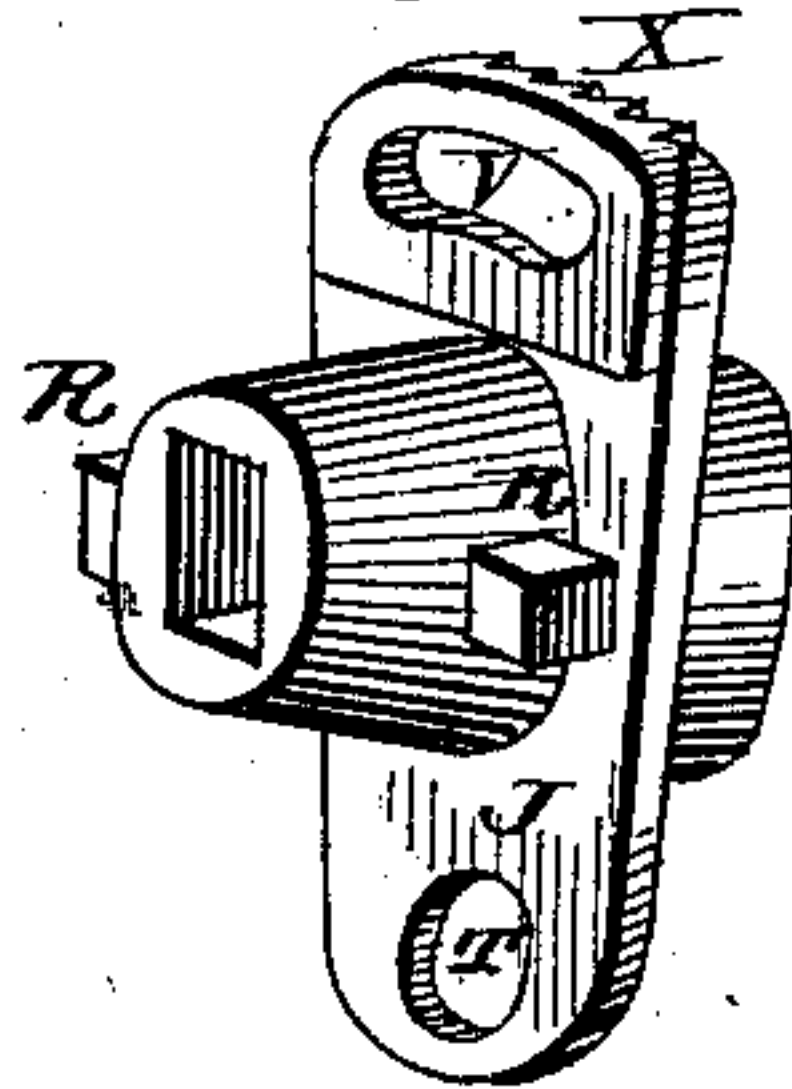


Fig. 9.

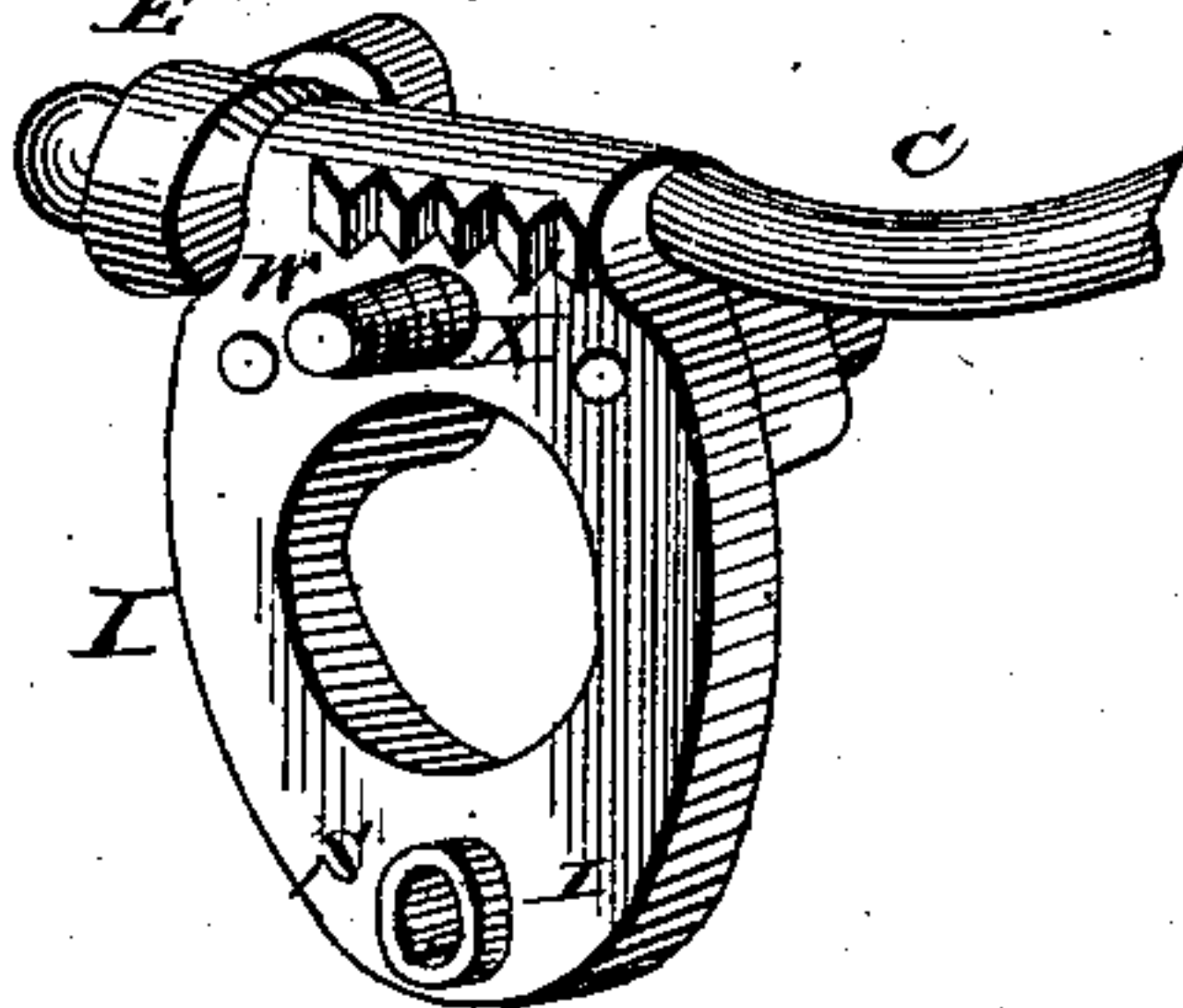


Fig. 10.

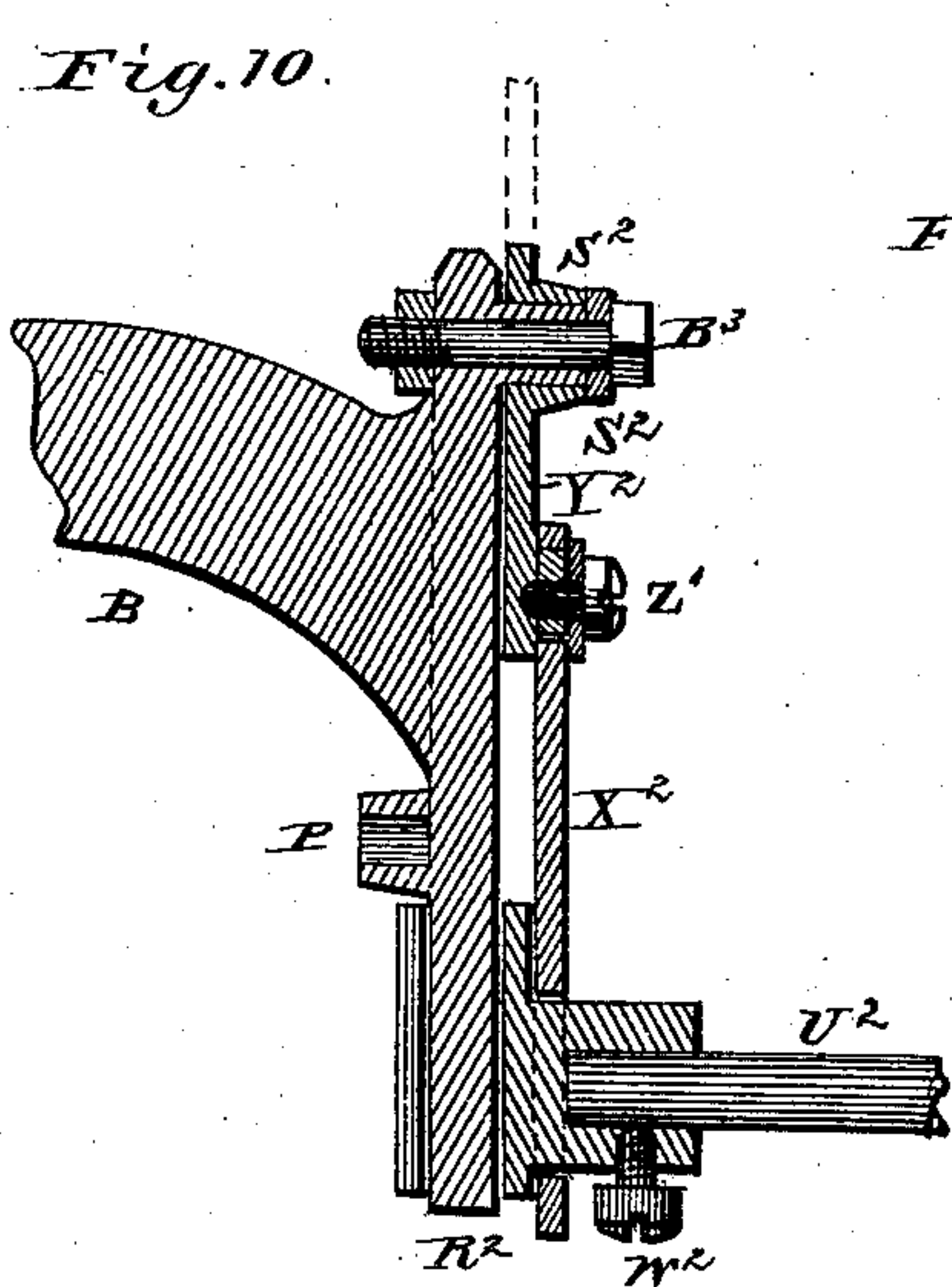


Fig. 11.

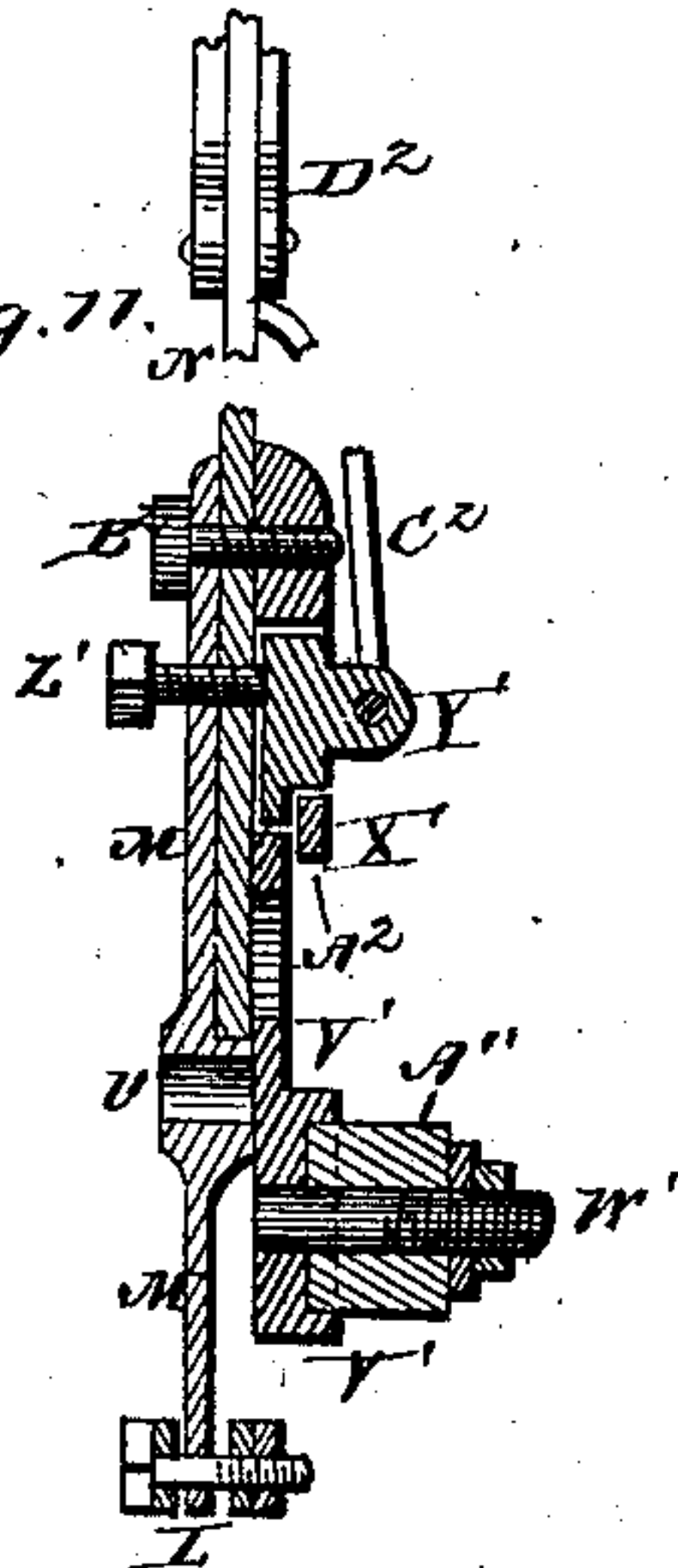


Fig. 12.

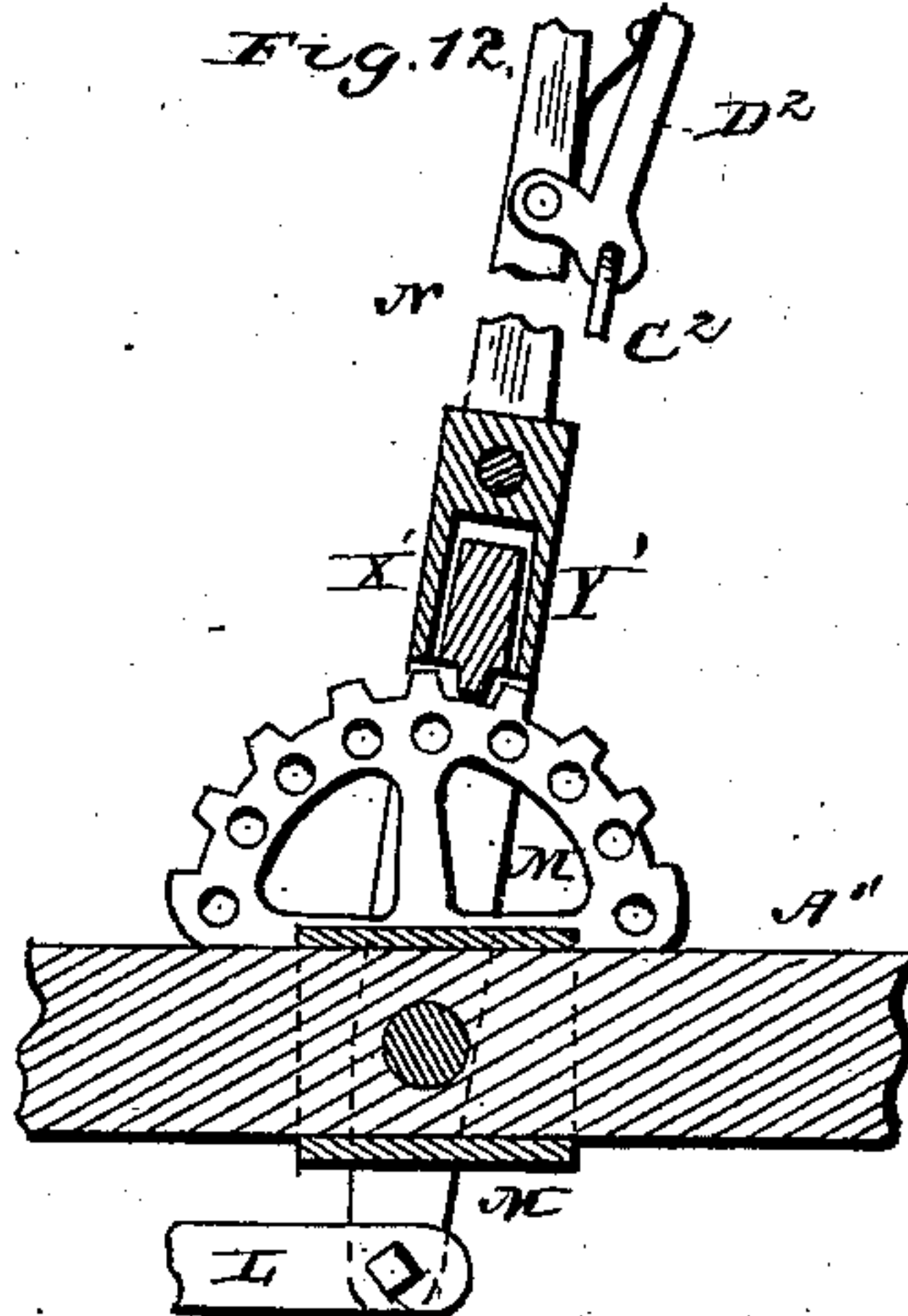


Fig. 13.

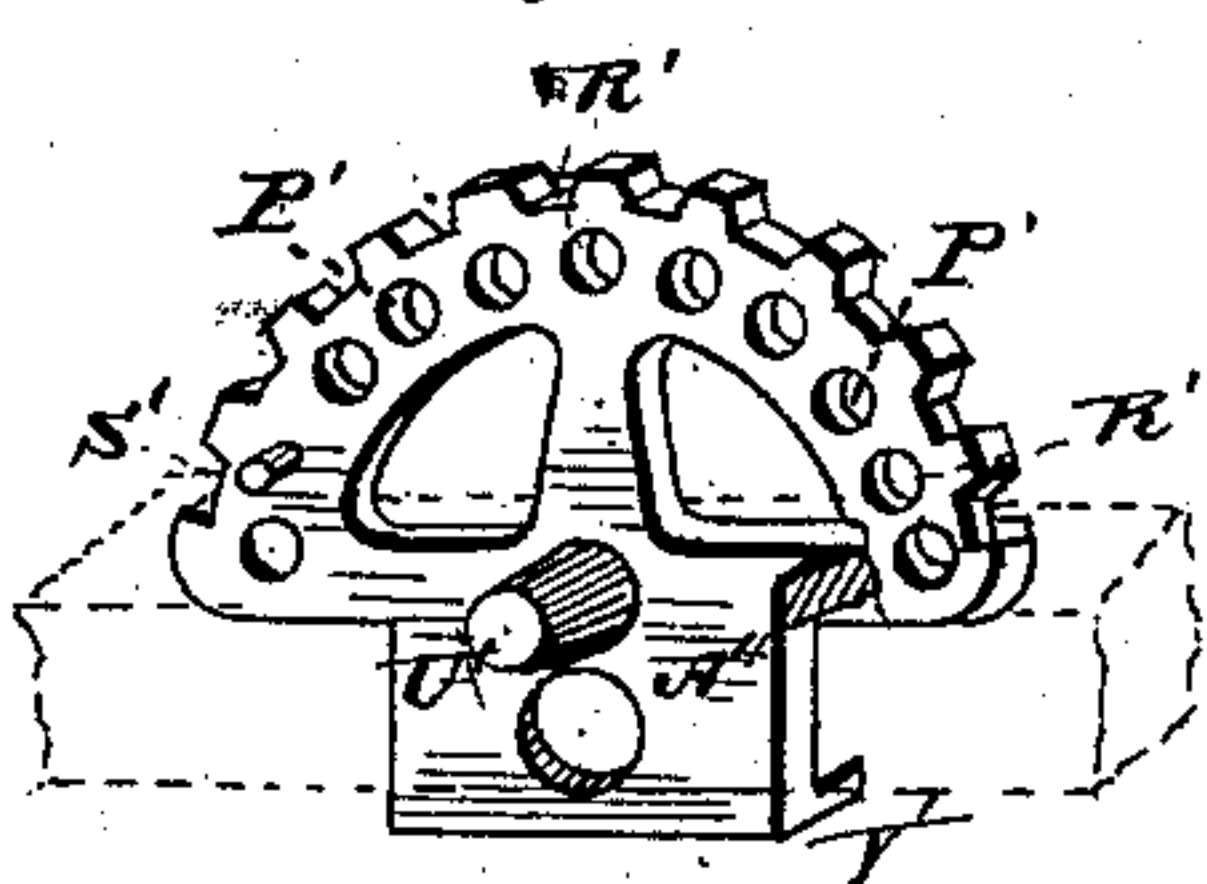


Fig. 14.

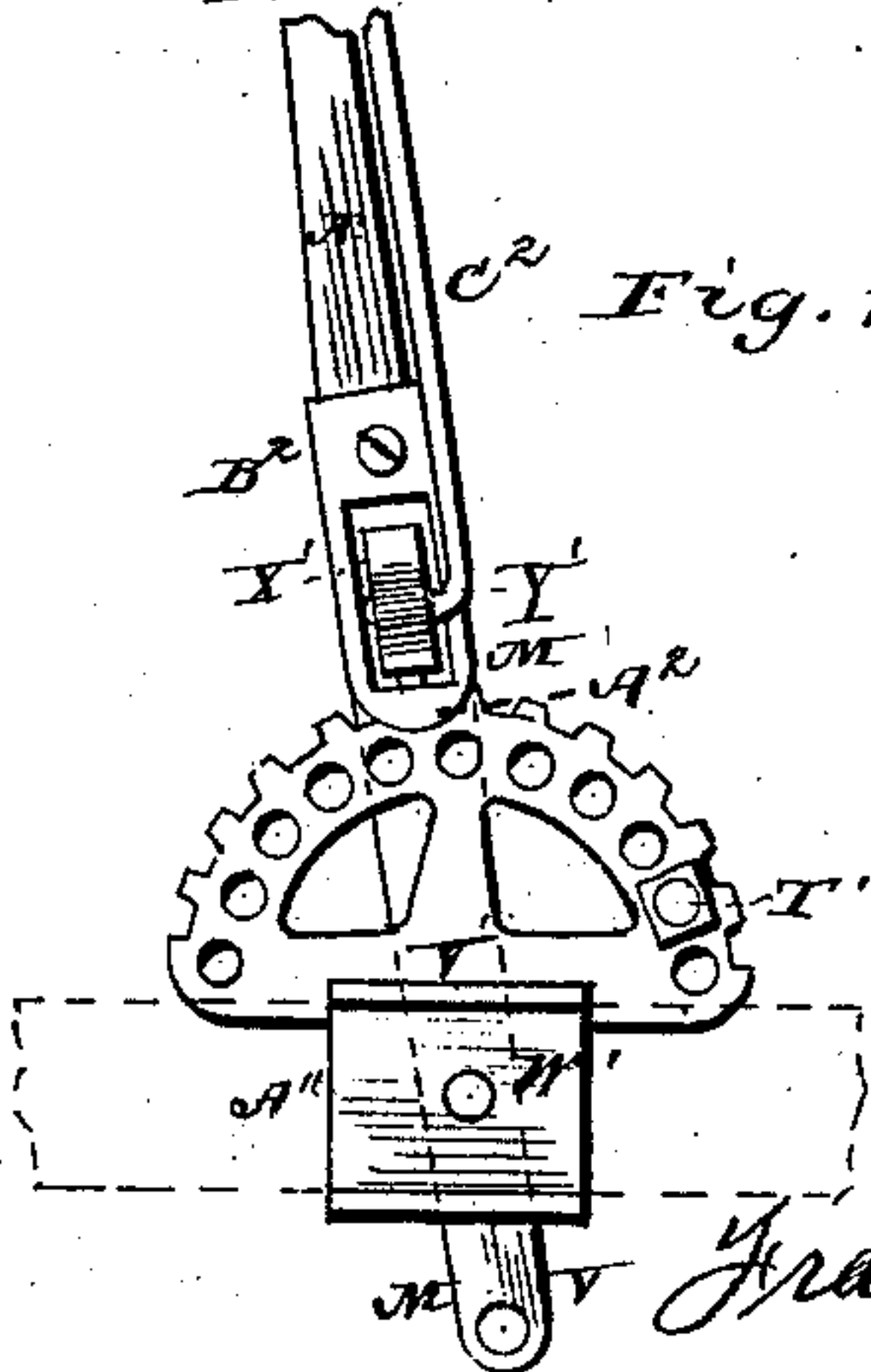
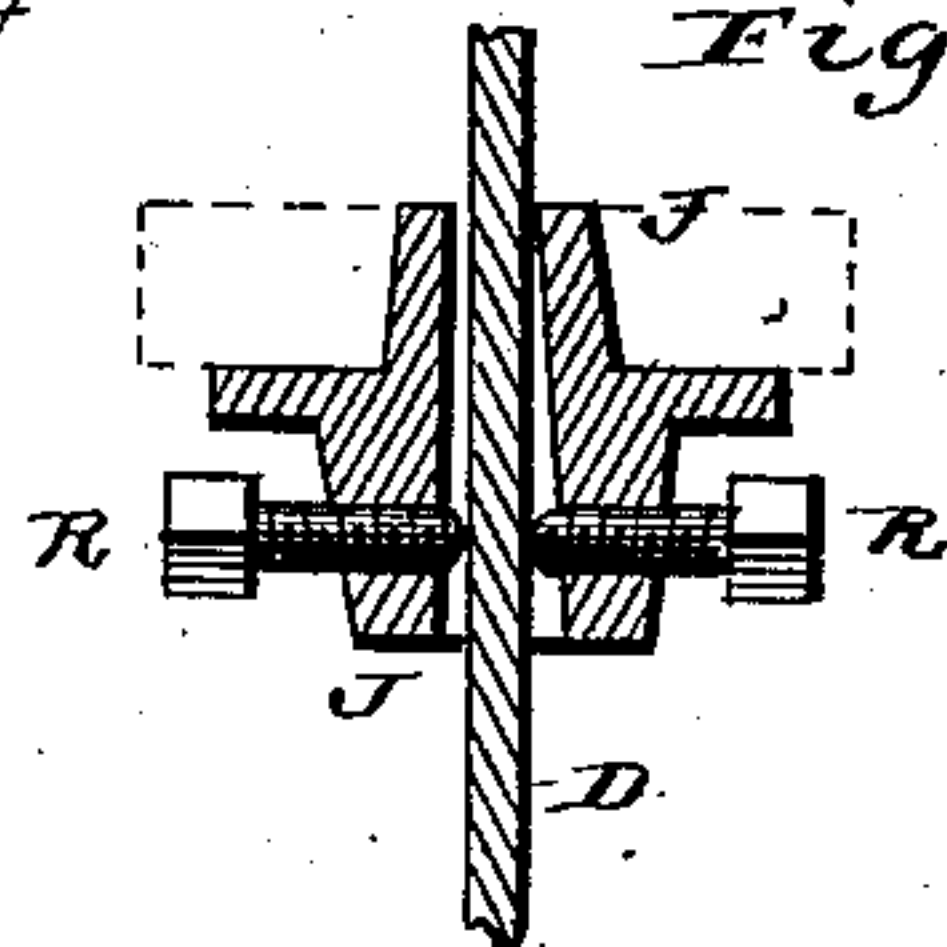


Fig. 15.



WITNESSES:

Wm. L. Dieterich
C. M. Long

INVENTOR.

Franklin B. Hunt

UNITED STATES PATENT OFFICE.

FRANKLIN B. HUNT, OF RICHMOND, INDIANA, ASSIGNOR TO L. L. LAWRENCE AND H. E. MOON, OF SAME PLACE.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 256,695, dated April 18, 1882.

Application filed March 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN B. HUNT, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Sulky-Plows; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-

10 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to a series of improved devices in a sulky-plow, which will be hereinafter fully described, and set forth in the specification and claims.

Figure 1 is a side elevation, the right wheel being removed. Fig. 2 is a side elevation of the left side, the left wheel being removed. Fig. 3 is view partly in section of the apparatus for raising and lowering the land-wheel. Figs. 4 and 5 are sections of the same. Fig. 6 is a plan of the seat-arch. Fig. 7 is a top view of the seat-arch. Fig. 8 is a perspective of the oscillator through which the plow-beam passes and receives oblique adjustment. Fig. 9 is a perspective of the hanger attached to the crank or bail and supporting the oscillator. Fig. 10 is a vertical section of the adjusting device for the land-wheel. Fig. 11 is a vertical longitudinal section of the apparatus for raising and lowering the plow. Fig. 12 is a view of the same apparatus as Fig. 11, but partly in section, and showing the attachment of the quadrant to its support. Fig. 13 is a perspective of the quadrant cast in a single piece with the pivot for the lifting-lever and other integral parts attached. Fig. 14 is an inside view of the quadrant attached to its support and with the lifting-lever attached. Fig. 15 is a longitudinal section of the oscillator.

45 A A³ are the wheels, B the seat-arch, and C the crank or bail to which the plow-beam is pivoted; D the plow-beam, E the mold-board, and F the landside, of the plow.

I is a hanger pivoted to the bail C, and having the oscillator J, through which the plow-beam passes, pivoted to it, as seen in Figs. 1 and 2. The crank or bail C is disconnected

from the axle, and has its bearings in the seat-arch at O P, Fig. 6, and is connected to the hand-lever N by means of the lifting-lever K, straps L, and bar M. When the plow is down to its work the bail lies in a horizontal position, as seen in Fig. 2, in consequence of being pivoted above the beam D, instead of below, as usual. So it will be readily seen that when the bail is raised but slightly above the horizontal by means of the hand-lever N and its connecting mechanism the draft at the end of the beam assists to raise the plow. The plow-beam D passes through a wedge-shaped hole in the oscillator J, as seen in Fig. 15, (the oscillator is plainly shown in Fig. 8,) the front portion of the oscillator fitting the beam closely, and flaring rearwardly, where it is provided with the set-screws R R for oblique adjustment and to hold the beam when adjusted. The lower end of the hanger I has a pivotal socketed bearing, S, upon which the hole T in the oscillator J rests, and is held in place by means of a bolt, U, Figs. 1 and 2. The upper end of the oscillator has the curved slot V, Fig. 8, which passes over the screw-bolt W, Fig. 9, and is held in place by nut Y, Fig. 2. The corrugations X X, Figs. 8 and 9, hold the oscillator firmly in place when adjusted.

Thus it will be seen that the oscillator, Fig. 8, serves the double purpose of adjusting the plow both obliquely and laterally, the oblique adjustment of the plow being effected by means of the set-screws R R at the rear part of the oscillator, and the lateral adjustment or swinging of the plow effected through the means of the slot V and the pivot S on the lower end of the hanger I, the corrugations X X on the oscillator and hanger holding all firmly when adjusted. In my construction there is no lateral adjustment at the clevis required, the whole being accomplished at the bail through the means of the wedge-shaped hole in the oscillator and the set-screws R R, as seen in Fig. 15. Neither do I require a jointed tongue to govern the "land" of the plow. The draft being in a straight line, the wheels do not incline to drag sidewise, as when the adjustment of the land is accomplished through the means of a jointed or adjustable tongue.

The seat-arch is provided with two socketed bearings, Z Z, for the tongue-timbers A' A". When the sulky is to be used with two draft-animals the tongue is bolted beneath the middle tongue-timber, A', and when three animals are to be used the tongue is bolted to the other timber, A". In Fig. 1, A' is seen, and in Fig. 2, A". By reference to Fig. 6 it will be seen that A' may be placed in the center socket, Z, and A" placed in the outer or left-hand socket, Z.

The quadrant A⁴, Fig. 13, is cast in a single piece, ready for use, and provided, in addition to the usual notches in the periphery, with a series of holes, P', in conjunction with the notches R'. A pin, S', is provided and held in place by means of a nut, T', as seen in Fig. 1. When the plow is to be locked in the ground the pawl Y' falls into the notches in the periphery of the quadrant, and requires attention to see that the pawl is placed in the same notch each time after raising the plow.

By means of the holes P' and pin S' the operator, after having determined the depth at which it is intended to plow, may place the pin S' in a hole accordingly, and throw the lever down until it strikes the pin and lets go the latch without any care as to which notch it will fall into.

The quadrant is provided with a lug or bearing, U', and cleats V' V', as seen in Fig. 13. The cleats V' V' embrace the tongue timber or bar A", and the lug U' forms the pivot for the lifting-lever, the whole being held firmly in place by means of a single bolt, W'. The clamp X' connects the levers M N by means of the bolt B² passing through the whole. This clamp X' carries the pawl Y', which falls into the notches in the quadrant, as seen in Figs. 12 and 14. The pawl is connected to the latch D² by means of the rod C². The spring on the latch throws the pawl down into the notches in the periphery of the quadrant.

By reference to Fig. 11 it will be seen that the bolt B² passes through the levers M N and through clamp X'. The lip A² of clamp X' falls down on the inside of the quadrant and prevents the lever from slipping off of the stud U' of the quadrant. The pawl Y' slides in a recess in clamp X'. Thus it will be seen that a single bolt, B², holds levers M N, clamp X', and through said clamp the pawl Y', and also holds the lever on the stud U' by means of the lip A² falling down on the inside of the quadrant. A single bolt, W', holds the quadrant firmly in place, as seen in Figs. 11 and 12, by means of the cleats V' V' claspings the timber A". Thus the two bolts B² and W' hold in place the entire lifting mechanism.

The clamps E² are attached to the bail on either side of the hanger I, for the purpose of parallel lateral adjustment of the plow to adapt it to two or three draft-animals or other circumstances.

The foot-rest L² extends back beneath the center tongue-bearing, and the bolts M² pass

upward through the rear end of the foot-rest to hold it in place, and through the slots P² of the bearings Z, through the tongue-timber A', and up through the seat-spring N², which spring supports the seat O².

The seat-arch is cast in a single piece with the various bearings, cast as integral parts thereof, as shown in Figs. 6 and 7, with the vertical part R², upon which the land-wheel mechanism slides up and down to adjust the sulky to the depth of furrow required, and with the slots P² for the bolts which hold the tongue-timbers. As the pattern parts in the middle, these slots P² may be cast and avoid the necessity of drilling holes for the bolts. Thus the seat-arch is cast ready for use without any drilling or fitting whatever. The corrugations to support the land-wheel in position when adjusted, are shown in Figs. 3 and 4.

The hollow bearings P and S² for the bail and the lifting-lever for the land-wheel are shown in section at Fig. 10. The bearing O, Fig. 6, is provided with a cap, T², as seen in Fig. 2. The land-wheel A³ is placed upon the spindle U², Figs. 3 and 5, the spindle being attached to the slide V², which slide moves up and down on the part R² of the seat-arch. The set-screw W² performs the double office of holding the spindle U² in place and also the lifting-bar X², which lifting-bar is connected to the crooked lever Y² by means of a socket-joint, as best seen in the section, Fig. 10, where it will be seen that there is no strain on the bolt, except to hold the parts together. The lever Y² is pivoted on the hollow bearing S² of the seat-arch, and held upon the bearing by means of the bolt B³. By means of the lever Y² and the lifting-bar X² the slide V², carrying the spindle U², is raised and lowered, and held in position by means of corrugations, as shown in Fig. 4, where the corrugations are held in contact by means of the cam-lever C³, which cam operates upon the corrugated block D³ to press it in contact with the part R² of the seat arch, as seen in Figs. 4 and 5. The part R² of the seat-arch containing the corrugations is sloped or beveled, as seen in Fig. 5, and the corrugated block D³ is sloped to match, the sloping of these parts being for the purpose of clamping the slide V² more rigidly to the seat-arch to prevent the land-wheel from wriggling. By this construction the land-wheel is held as firmly to the seat-arch as the furrow-wheel.

When it is necessary to raise or lower the slide V² and axle the cam-lever C³ is thrown up, and a lug, F³, attached to the cam, strikes a lug, E³, attached to the block D³, and withdraws the teeth of the block D³ from the teeth of the part R² of the seat-arch, and allows the slide V² to play freely up and down on the part R² of the seat-arch, and when the slide V² is adjusted the cam-lever C³ is pressed downward and the whole firmly clamped together, the whole mechanism being cast ready to go together without fitting.

I do not desire to claim in this patent (which is a division of my original application filed July 8, 1881) any invention other than that which is specifically set forth in the claims, reserving the right to claim all other patentable subject-matter in other divisions.

What I desire to secure in this patent is—

1. The oscillator J, provided with a wedge-shaped hole for the oblique adjustment of the plow-beam, in combination with the set-screws R R, by which the beam is adjusted obliquely and held in place when adjusted, substantially as set forth.

2. The oscillator J, provided with a wedge-shaped hole and set-screws for the oblique adjustment of the beam, and the hole T and slot V for the lateral adjustment of the plow, substantially as set forth.

3. The hanger I, pivoted to the crank or bail C, and provided with the bearing S, bolt W, and corrugations X, in combination with the oscillator J, provided with the hole T, slot V, and corrugations X, for the purpose specified.

4. The oscillator J, provided with a wedge-shaped hole and set-screws for the oblique adjustment of the plow-beam, and the hole T, slot V, and corrugations X for the lateral adjustment of the beam, in combination with the hanger I, pivoted to the bail C, and provided with integral bearing S, and corrugations X, the corrugations being held in place, when adjusted, by means of the bolt W, substantially as set forth.

5. The oscillator J, provided with a wedge-shaped hole and set-screws for the oblique adjustment of the plow-beam, and the hole T and slot V for the lateral adjustment, in combination with the hanger I, provided with the pivot S for the hole T, and bolt W, substantially as set forth.

6. The seat-arch B, cast in a single piece and provided with the bearings O P, slots P², socketed bearings Z Z, and hollow bearing S², substantially as set forth.

7. The seat-arch, cast in a single piece and provided with the bearings for the bail C, socketed bearings Z Z, bearing S² for the lever Y², and the vertical bearing R² for the slide V², to which the land-wheel axle is attached, substantially as set forth.

8. The seat-arch, cast in a single piece and provided with the vertical part R², said vertical part being sloped or beveled and corrugated, for the purpose specified.

9. The seat-arch B, cast in a single piece and provided with socketed bearings Z Z, cast as integral parts of the arch, said bearings being provided with slots P², substantially as set forth.

10. The seat-arch B, cast in a single piece and provided with socketed bearings Z Z, said bearings having the slots P², bearings O P for the bail, hollow integral bearing S² for the lever, and the vertical part R² for the slide V², substantially as set forth.

11. The seat-arch, cast in a single piece and provided with the integral bearing S², in combination with the slide V², carrying the cam-lever C³ and the block D³, and connected with the bearing S² by means of lifting-bar X² and lever Y², the whole provided to be cast ready for use without fitting, substantially as set forth.

12. In combination with the integral bearing S² of the seat-arch, slide V², cam-lever C³, and block D³, the lever Y² and lifting-bar X², pivoted together by means of a socket-joint and held together by means of the bolt Z², substantially as set forth.

13. The seat-arch provided with the bearing S², in combination with slide V², the lifting-bar X², and lever Y², pivoted to the seat-arch by means of said bearing S², and the bolt B³ for securing said lever in place, substantially as set forth.

14. In combination with the sloping and corrugated part R² of the seat-arch and the slide V², carrying the land-wheel spindle, the sloping corrugated block D³, lifting-bar X², and lever Y², for raising and lowering the wheel A³, substantially as set forth.

15. In combination with the slide V², cam-lever C³, having a lug, F³, and the corrugated block D³, provided with lug E³, whereby the cam-lever is adapted to lock and unlock the slide, substantially as set forth.

16. The corrugated part R² of the seat-arch and the corrugated part D³, made sloping or beveled, as seen in Fig. 5, in combination with the cam-lever, by means of which the slide V² is clamped firmly to the seat-arch, substantially as set forth.

17. In combination with the seat-arch, the slide V², placed adjustably on the part R², and held in position, when adjusted, by means of the sloping or beveled corrugated block D³, substantially as set forth.

18. In combination with the sloping corrugated part R² of the seat-arch, slide V², and sloping corrugated block D³, the lifting-bar X² and the lever Y², for raising and lowering the wheel A³.

FRANKLIN B. HUNT.

Witnesses:

WM. H. BATES,
THEO. MUGEN.