

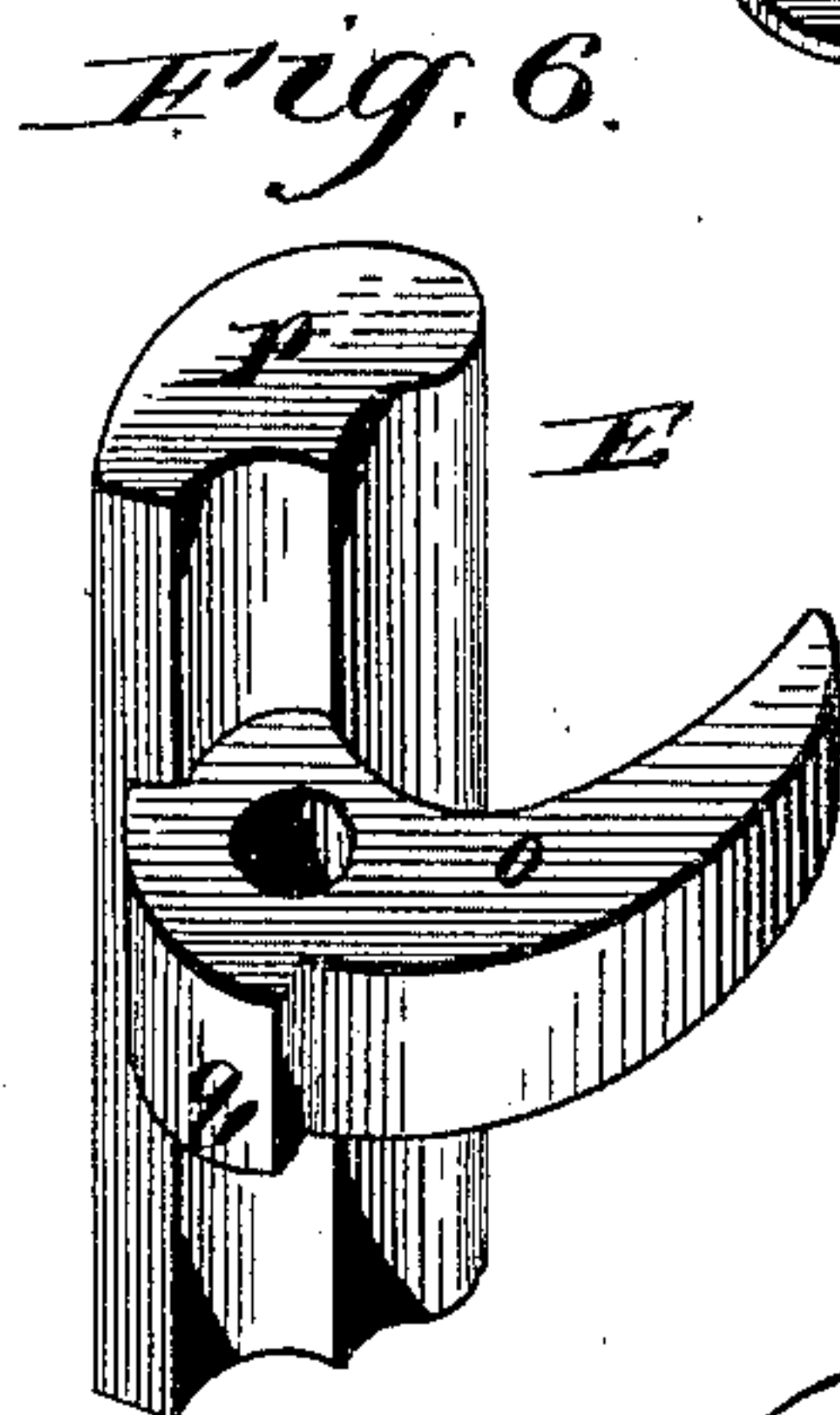
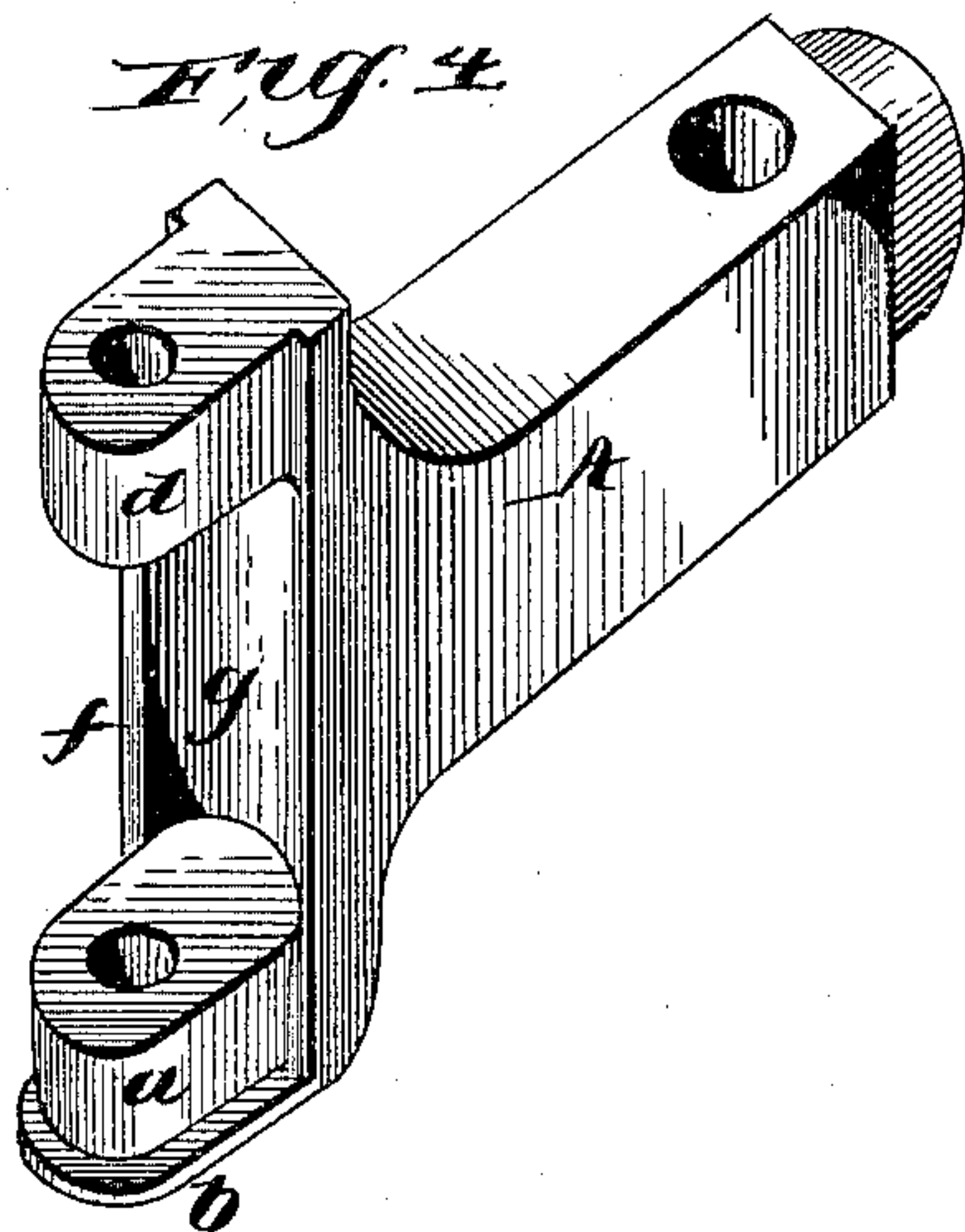
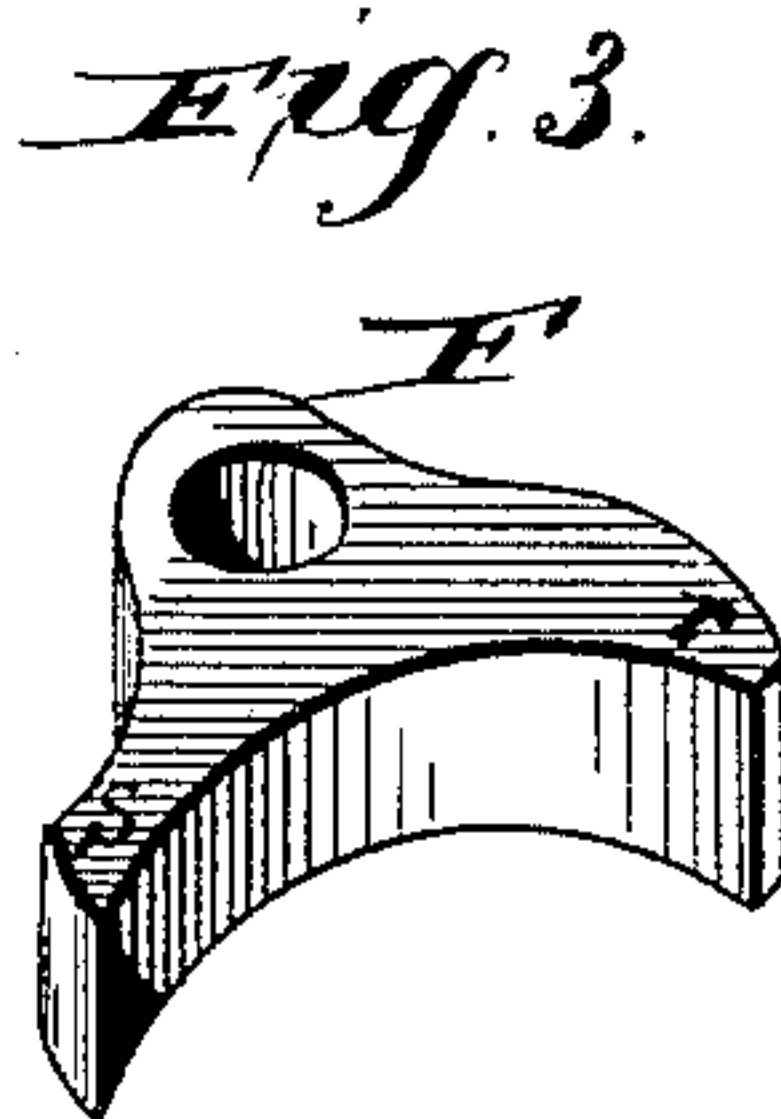
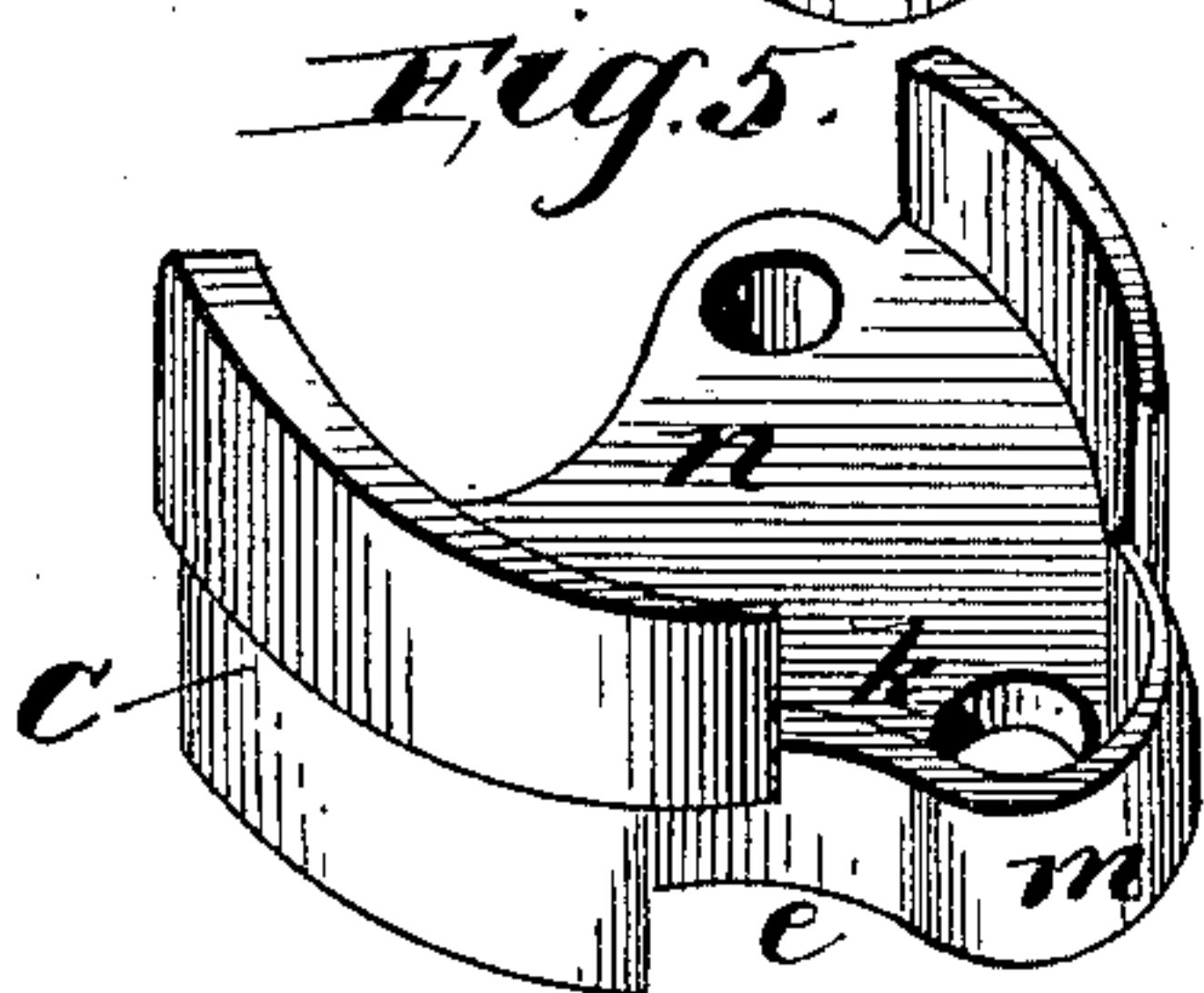
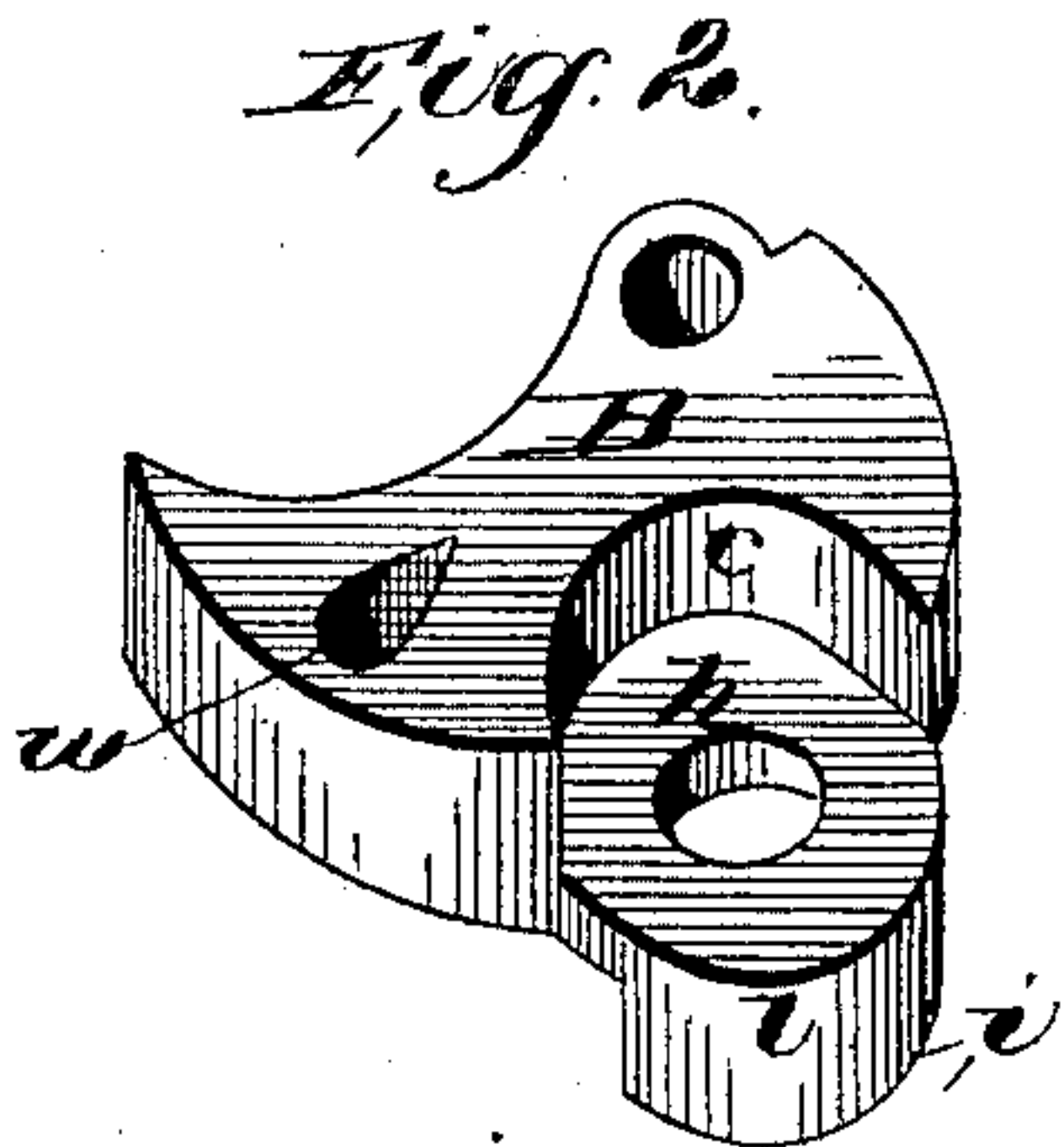
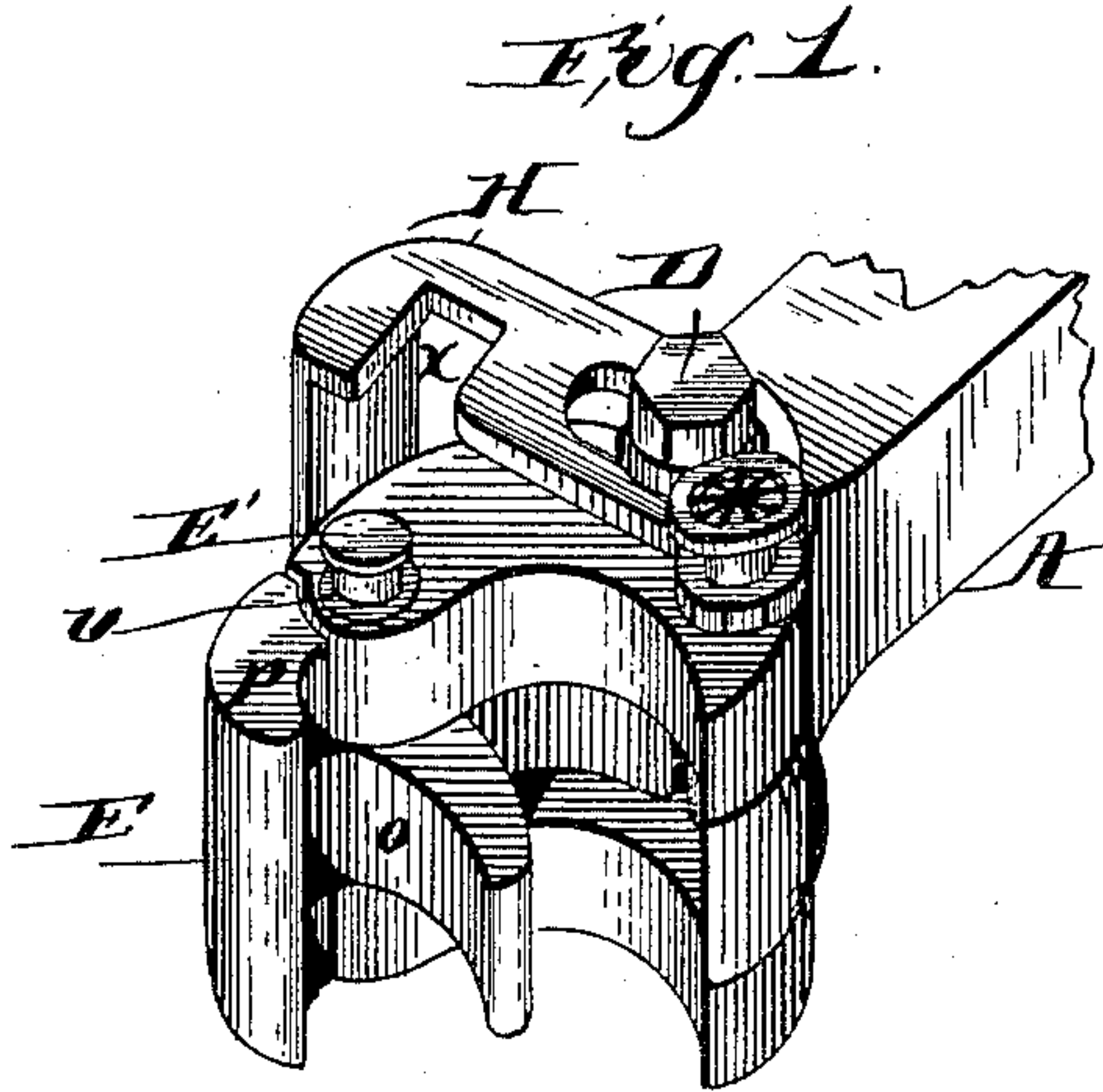
(No Model.)

2 Sheets—Sheet 1.

J. COUP.  
CAR COUPLING.

No. 401,775.

Patented Apr. 23, 1889.



Witnesses.

*Ans. O. Scott*  
*M. H. Humphrey.*

Inventor.

*John Coup*  
By his Attorneys  
*Johnston, Reinohl & Dyre*

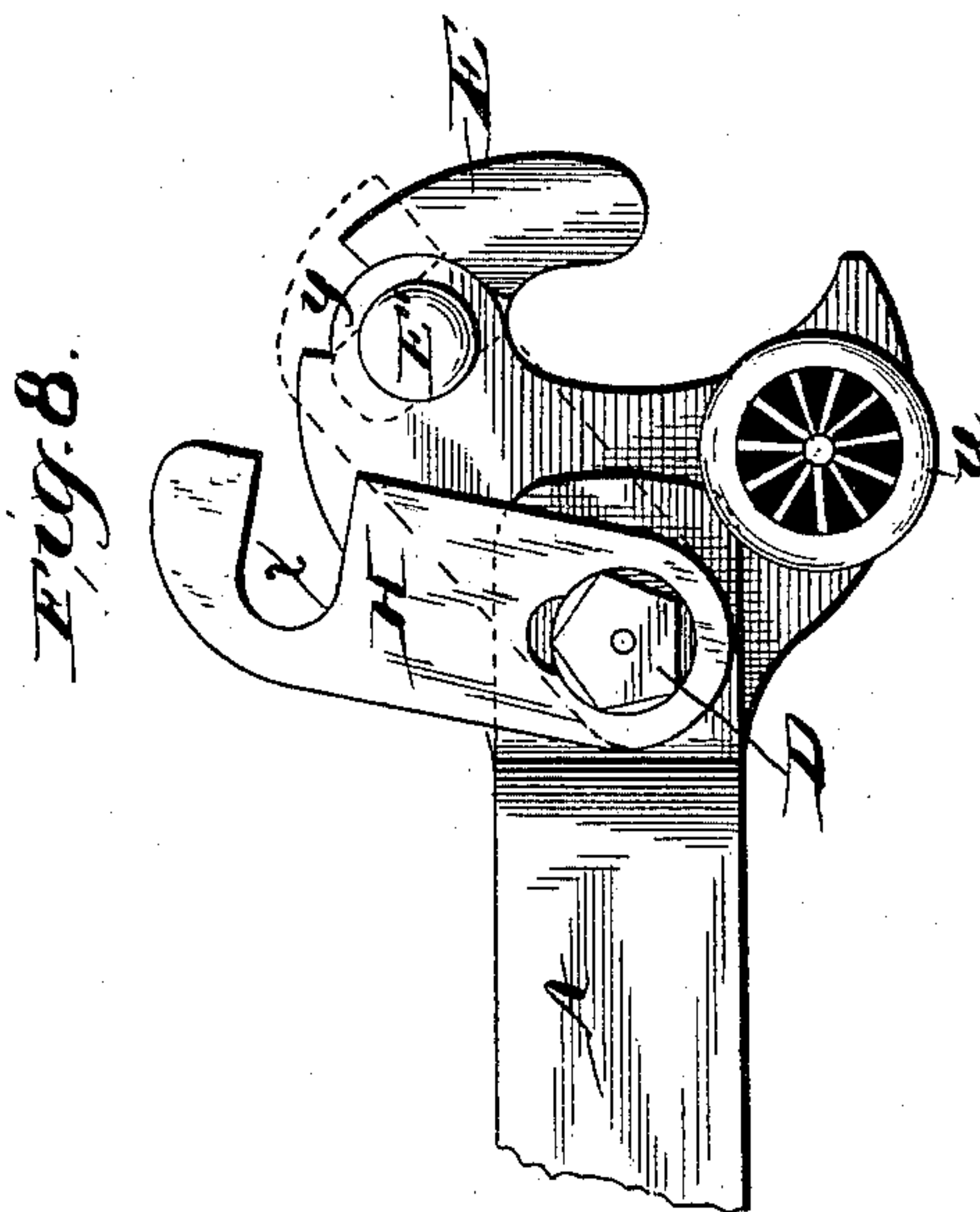
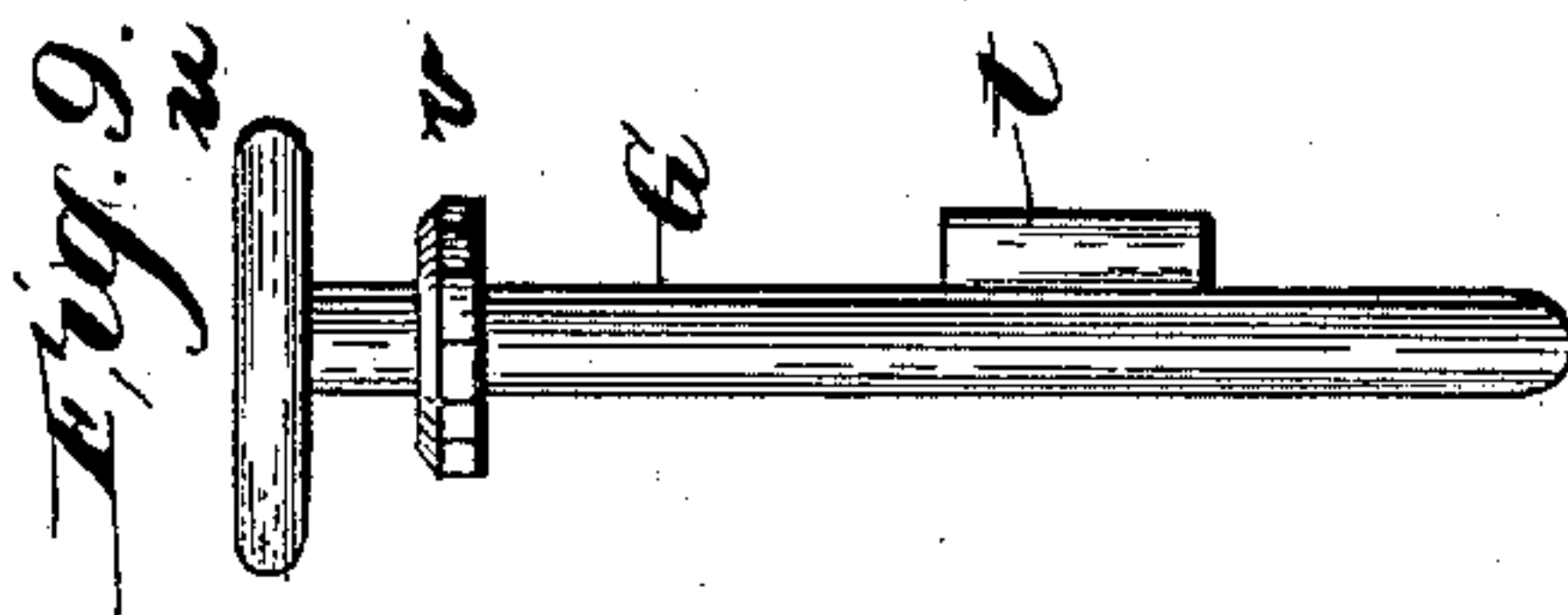
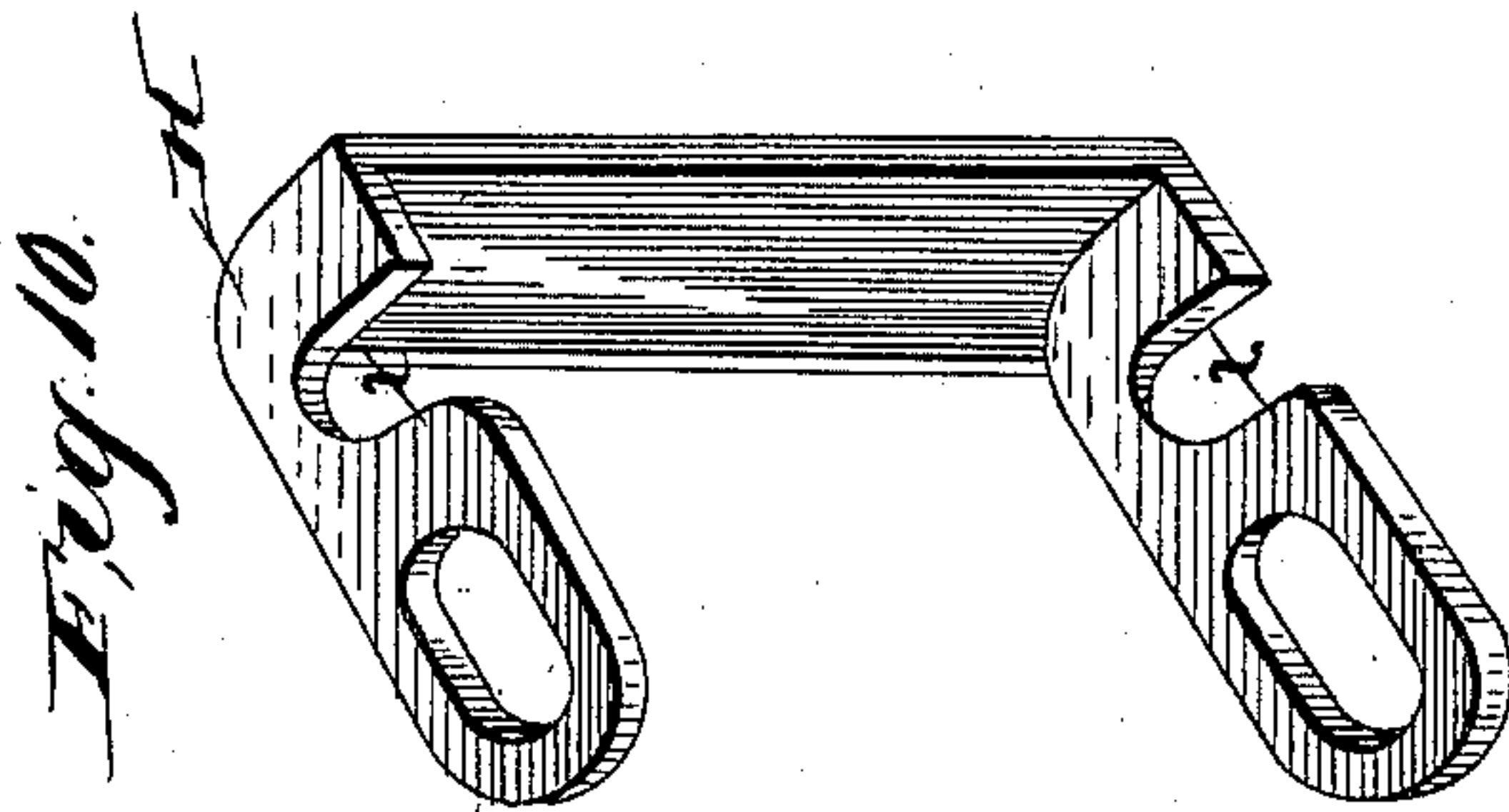
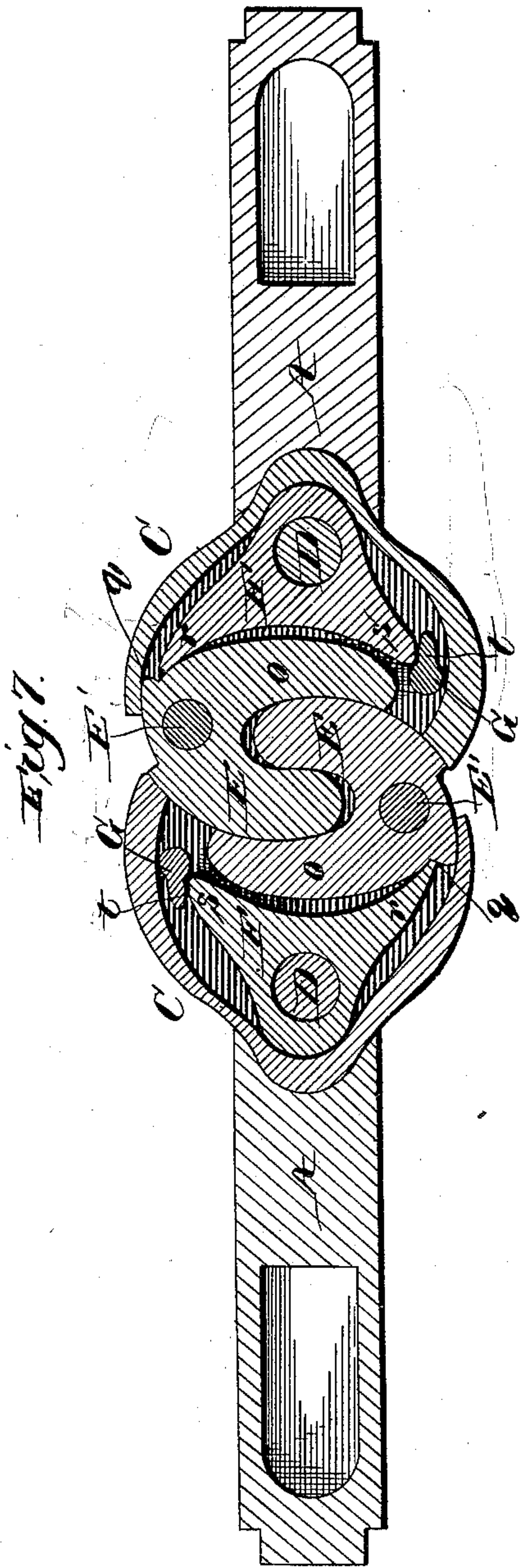
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2 Sheets—Sheet 2.

J. COUP.  
CAR COUPLING.

No. 401,775.

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Witnesses

Wm. B. Scott.  
M. H. Purphrey.

Inventor.

John Coup  
By his Attorneys  
Johnston, Reinold & Dyre



# UNITED STATES PATENT OFFICE.

JOHN COUP, OF NEW HAVEN, CONNECTICUT.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 401,775, dated April 23, 1889.

Application filed August 14, 1888. Serial No. 282,711. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN COUP, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Car-Couplings; and I do hereby 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 appertains to make and use the same.

My invention relates to car-couplings, and has especial reference to couplers of the Janney type, known as "twin-jaw" or "rotary vertical-hook" couplers.

The invention will be hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is a perspective of my improved coupler with the draw-bar partly broken away. Fig. 2 is a similar view of the upper section of the draw-head detached. Fig. 3 is a similar view of a latch for locking the hook; Fig. 4, a similar view of part of the draw-bar inverted; Fig. 5, a similar view of the lower section of the draw-head; Fig. 6, a similar view of the hook. Fig. 7 is a horizontal section of two couplers, showing the hooks locked. Fig. 8 is a plan view of one coupler; Fig. 9, a pin or bolt for releasing the hook; and Fig. 10 is a perspective of a guard to protect the joint of the hook from snow and ice.

Reference being had to the drawings and the letters marked thereon, A indicates a draw-bar, which is provided at its front end with an upper rounded jaw or projection, *a*, having a flange or extension, *b*, which protects the joint formed by said projection and the wall *c* in the rear end of the upper section, B, of the draw-head, and a rounded jaw or projection, *d*, which engages with a recess, *e*, having a circular wall in the lower section, C, of the draw-head, and between said sections is a space, *f*, having its rear wall, *g*, curved to allow the draw-head to swing freely laterally in the draw-bar outside of the graining of the car to accommodate the motion of a car in swinging around a curve in the road. The upper section, B, of the draw-head is provided with a recess, *h*, also having a circular wall to receive the projection *a* on the upper side of

the draw-bar, and a vertical extension, *i*, on the lower side of its rear end, which engages with the recess *k* in the upper side of the rear end of the lower section, C, of the draw-head. The rear ends of the two sections B and C are extended, as shown at *l m*, and, in conjunction with the recess or space *f*, the jaws *a c*, and the pin D, form a joint for the draw-head to swing upon.

While the sections B C are shown in separate pieces to facilitate drop-forging, it is obvious that the draw-head may be made in one piece by casting the two parts in one.

The lower section, C, is provided with a recess, *n*, to receive the inner arm, *o*, of the hook E and the latch F, through which the pin D passes, and when the two sections are placed in position on the draw-bar the lower side of the upper section forms the upper wall of said recess *n*. The hook E swings upon a bolt, *E'*, in one of the lateral extensions of the head, and is made thick on its front arm, *p*, to resist the shock due to coupling two cars, and this front arm is of a height equal to the entire height of the draw-head, as shown in Fig. 1, and the inner arm, *o*, is provided with a projection or shoulder, *q*, which engages with the arm *r* of the latch F for locking the hook when two cars have been brought together. The couplers are shown in locked position in Fig. 7. The opposite arm, *s*, of the latch F is operated upon by the projection *t* on the bolt or pin G, which pushes said arm forward and disengages the arm *r* from the shoulder *q* on the arm *o* of the hook and releases the coupler. The pin G passes through the head of the draw-bar, and is provided at its upper end with a wheel, *u*, for operating it, and a collar, *v*, for supporting its weight, and locked in the draw-head by the projection *t*, being turned at an angle to the slot *w* in the upper section, B, of the head when the parts are in operative position, as shown in Fig. 7.

In this class of couplers much annoyance and inconvenience are produced by snow and ice forming in the joints of the movable parts. To protect the joint of the swinging hook, I have provided a guard, H, which is supported by the pin D, is notched at *x* to clear bolt *E'*, and swings around and covers the cavity *y* when the coupling is in a locked position.



The operation of the device is obvious and needs no further description in detail.

Having thus fully described my invention, what I claim is—

5 1. In a car-coupler of the Janney type, a draw-head pivotally secured to the draw-bar outside of the framing of the car, and a swinging hook secured to one of the lateral extensions of the head, in combination with a locking  
10 ing device, substantially as described.

2. In a car-coupler of the Janney type, a draw-bar having upper and lower projecting jaws at its front end, a draw-head having seats or recesses to receive said jaws, and a  
15 pin for securing said parts, in combination with a swinging hook secured to one of the lateral extensions of the head, and a locking device, substantially as described.

3. In a vertical-hook coupler, the combination of a draw-bar, a head made in two detached sections and pivotally secured to the  
20 bar, a hook having a shoulder on its rear arm, a latch having two arms, and a pin provided with a projection for tripping said latch, substantially as described.

4. In a car-coupler having a swinging hook, a snow or ice guard constructed to cover the joint of the hook, substantially as described.

5. In a car-coupler having a swinging hook, a swinging snow or ice guard supported by a  
30 pin in the draw-head and constructed to cover the joint of the hook when the hook is in locked position, substantially as described.

6. In a vertical-hook coupler, a draw-bar, a draw-head secured thereto by a bolt and forming a laterally-swinging joint, a rotary hook,  
35 and a latch for locking the hook, in combination with a snow-guard for the joint between the hook and the draw-head, substantially as described.

7. In a vertical-hook coupler, the combination of a draw-bar having upper and lower jaws or extensions on its front end, a draw-head made in two separate sections, each having a rounded extension on its rear end, the  
40 upper section having a vertical projection on said extension and the lower section having a recess corresponding therewith, a rotary hook, and a latch, substantially as described.

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

JOHN COUP.

Witnesses:

CURTIS S. BUSHNELL,  
AMANDA B. COUP.