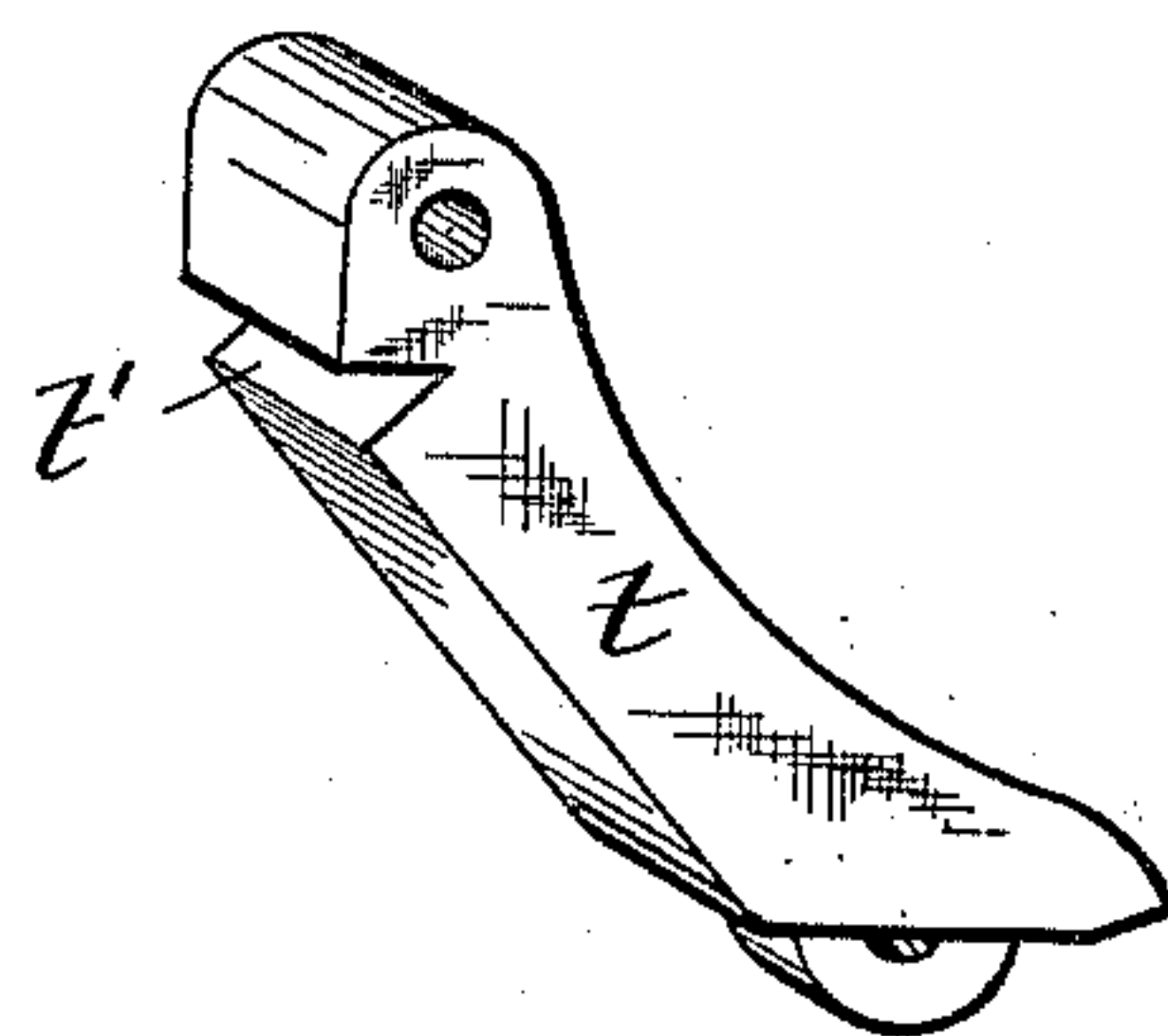
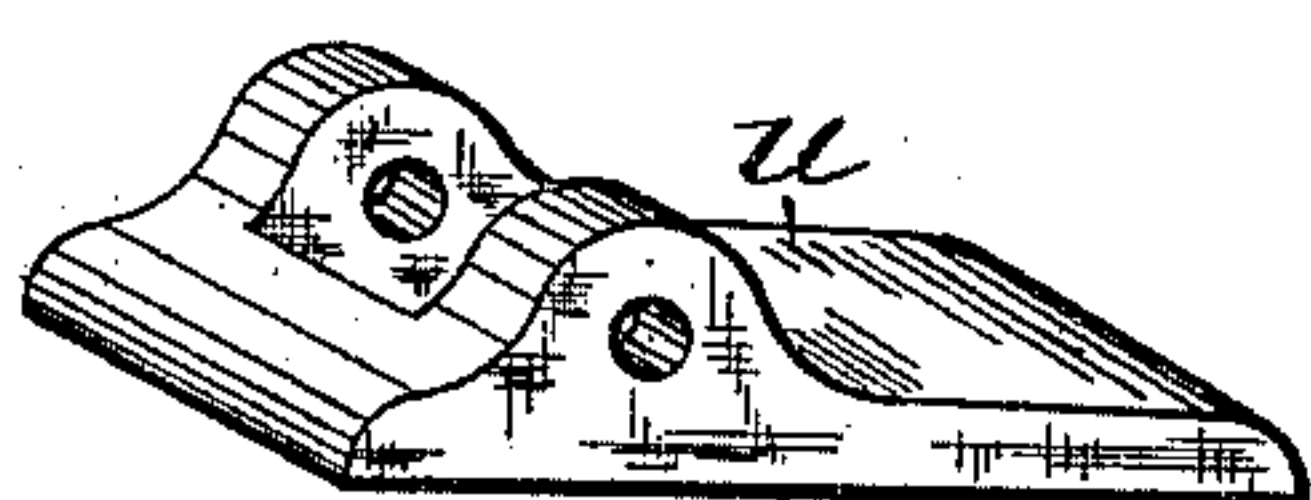
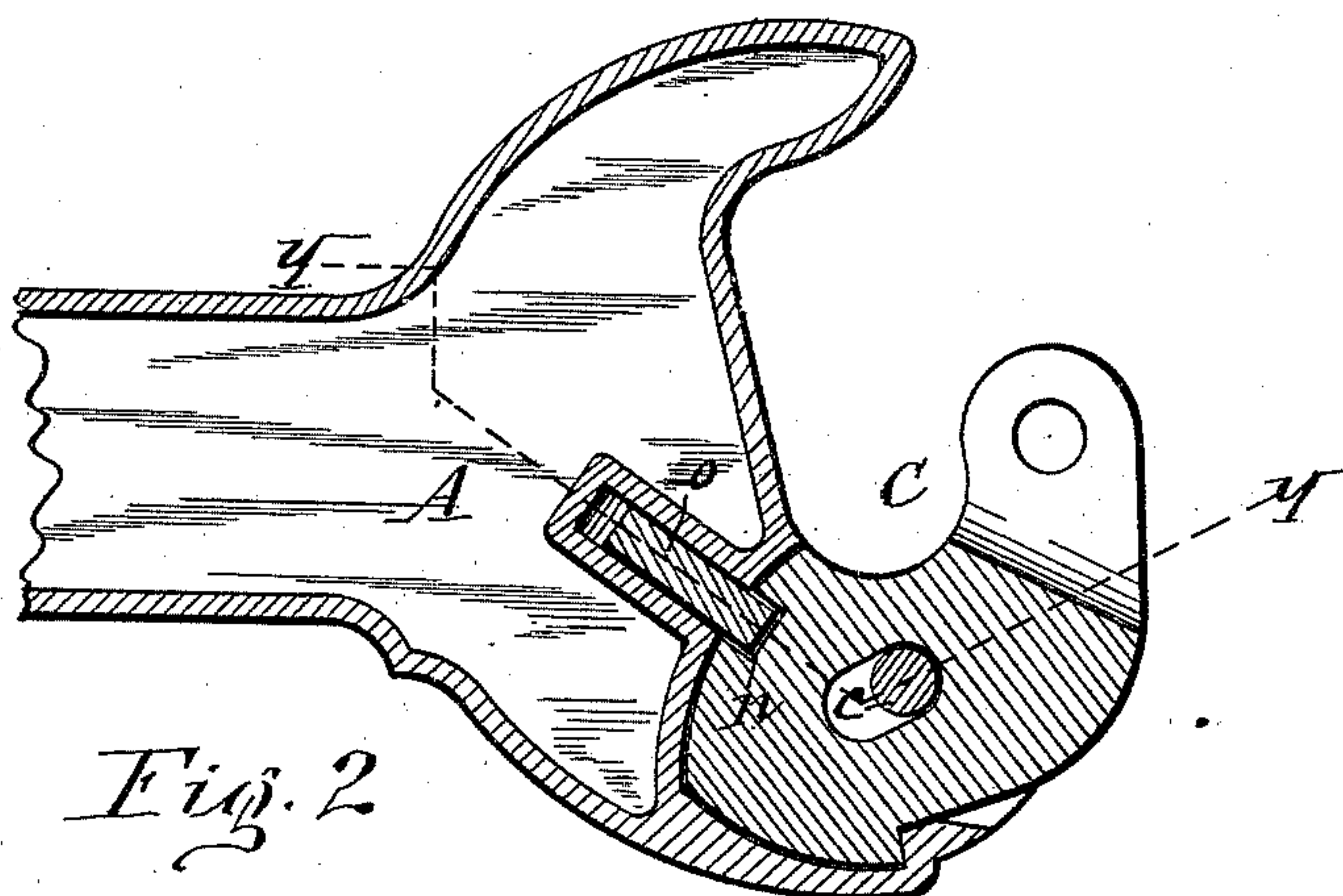
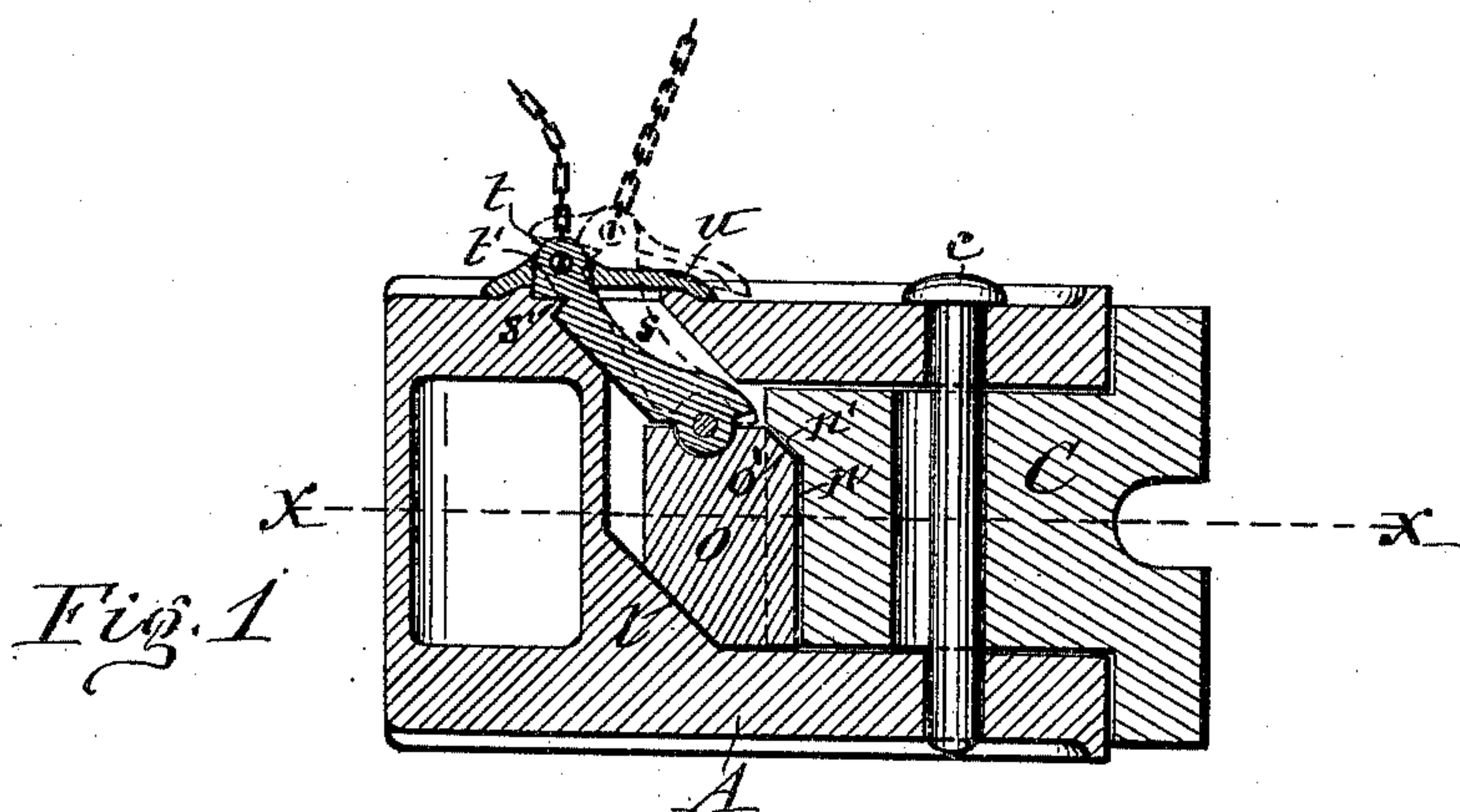


(No Model.)

C. O. BARNES & L. BARNES, Sr.  
CAR COUPLING.

No. 445,768.

Patented Feb. 3, 1891.



} *Fig. 3*

WITNESSES:

Mark W. Dewey  
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INVENTORS:

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Lucien Barnes Sr.  
By *Drill, Laess & Drill*  
their ATTORNEYS.



# UNITED STATES PATENT OFFICE.

CHARLES O. BARNES AND LUCIEN BARNES, SR., OF SYRACUSE, NEW YORK.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 445,768, dated February 3, 1891.

Application filed October 31, 1890. Serial No. 369,957. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES O. BARNES and LUCIEN BARNES, Sr., of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Car-Couplings, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates, chiefly, to the class of car-couplings usually designated "twin-jaw couplers," in which the coupling member consists of a swinging hook or knuckle pivoted to the draw-head, and a key in the draw-head engages and locks the said knuckle in its coupled position.

The object of our present invention is to guard against the accidental disengagement of the key from the knuckle incident to the jolting and rocking of the car when moving rapidly over an uneven track; and to that end the invention consists, essentially, in the combination, with the primary knuckle lock or key, of a supplemental safety-lock retaining the primary lock in its locking position, all as hereinafter more fully described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a vertical longitudinal section of a car-coupling embodying our improvement, taken on line *y y*. Fig. 2 is a horizontal transverse section on line *x x*, Fig. 1; and Fig. 3 is an enlarged detached perspective view of the latch and of the cap which covers the slot in which the latch is seated.

Similar letters of reference indicate corresponding parts.

Our present invention is adapted to be applied to most any car-coupler in which the coupling hook or knuckle is pivoted to the draw-head, and a key is arranged movably vertically in the draw-head and adapted to lock the knuckle in its coupled position.

For exemplification of our invention we have illustrated in the annexed drawings a car-coupling of the form shown and described in our prior patent, No. 437,962, dated October 7, 1890.

A represents the draw-head; C, the knuckle or coupling member, which is pivoted to the draw-head by the pin *c*, and is provided in its rear face with the notch *n*, and *o* denotes

the key, the lower part of the rear face of which is sloped to fit to an inclined way *l*, by which it is guided to and from the knuckle, said key being adapted to enter the notch *n*, and thereby lock the knuckle C in its coupled position, as shown in Fig. 2 of the drawings.

Heretofore we have formed the draw-head with a second and similar inclined way above the way *l*, and consequently the front portion of the key, which enters the notch *n*, was considerably reduced in height and the engagement of the same with the notch of the knuckle was reduced correspondingly. To obviate this defect, we now dispense with the upper inclined way in the draw-head, and in lieu thereof we form said way in the knuckle by terminating the notch *n*, with the inclined abutment *n'* near the top of the knuckle, and elongate the engaging face of the key *o* correspondingly, and terminate the same with the rearwardly-beveled top portion *o'*, as illustrated in Fig. 1 of the drawings.

To prevent more effectually the key *o* from being accidentally thrown out of engagement with the notch of the knuckle by jars and joltings of the car when in motion, we employ a supplemental safety-lock, preferably of the form of a suitable latch *t*, which is connected to the key *o* and adapted to retain the same in its locking position. Said latch we preferably hinge to the top of the aforesaid key and extend it movably longitudinally through a slot *s*, which extends through the top portion of the draw-head in a rearwardly-inclined direction, and is terminated with an inward-facing shoulder *s'* on the rear face of the slot. The rear face of the upper end of the latch is formed with a corresponding shoulder *t'*, which engages the shoulder *s'*, when the key *o* is seated in the notch *n* of the knuckle, and said engagement of the two shoulders *s'* and *t'* serves to retain the key in the notch *n*. To exclude dust and water from the slot *s* and subjacent key-seat, we place over the upper end of the slot *s* a removable cap *u*, and connect the upper end of the latch to said cap, preferably by forming the cap with perforated ears *u' u'*, between which the perforated upper end of the latch is inserted and retained by a pin passing through said ears and end portion of the latch. By drawing upward a chain or cable attached to the upper end of



the latch the same is first lifted out of engagement with the shoulder  $s'$ , as represented by dotted lines in Fig. 1 of the drawings, and then drawn up in the slot  $s$ , and thereby caused  
 5 to draw the key  $o$  out of the notch  $n$  of the knuckle, which latter is thus released and allowed to swing into an uncoupling position when required.

Having described our invention, what we  
 10 claim as new, and desire to secure by Letters Patent, is—

1. In a twin-jaw coupler, the combination, with the primary knuckle-lock, of a supplemental safety-lock retaining the primary lock  
 15 in its locking position, as set forth.

2. The combination, with the draw-head, coupling-knuckle pivoted to said draw-head, and the key connected movably vertically to the draw-head and adapted to lock the knuckle  
 20 in its coupled position, of a latch connected to said key and extending movably longitudinally through the top portion of the draw-head and provided with a locking-shoulder engaging with a shoulder on the draw-head,  
 25 as set forth.

3. In combination with the draw-head formed with the inclined way  $l$ , knuckle  $C$ , pivoted to the draw-head and provided with the notch  $n$ , and the key  $o$ , sliding on said way  
 30 and engaging the notch of the knuckle, the slot  $s$ , extending through the top portion of

the draw-head and inclined rearwardly and terminating with the shoulder  $s'$ , and the latch  $t$ , connected to the key  $o$  and extending  
 35 through the slot  $s$  and formed with the shoulder  $t'$ , engaging the shoulder  $s'$ , substantially as described and shown.

4. In combination with the draw-head provided with the inclined way  $l$ , the knuckle  $C$ , having the notch  $n$ , terminating with the inclined abutment  $n'$  near the top of the knuckle,  
 40 and the key  $o$ , having its engaging face elongated correspondingly and terminated with the rearwardly-beveled top portion  $o'$ , substantially as shown and described. 45

5. In combination with the draw-head provided with the slot  $s$ , knuckle  $C$ , pivoted to the draw-head, and key  $o$ , adapted to lock said knuckle, the cap  $u$ , covering the upper  
 50 end of the slot  $s$  and seated removably on the draw-head, and the latch  $t$ , connected at its lower end to the key and at its upper end to the aforesaid cap, substantially as described and shown.

In testimony whereof we have hereunto  
 55 signed our names this 17th day of October, 1890.

CHARLES O. BARNES. [L. S.]  
 LUCIEN BARNES, SR. [L. S.]

Witnesses:

MARK W. DEWEY,  
 H. M. SEAMANS.