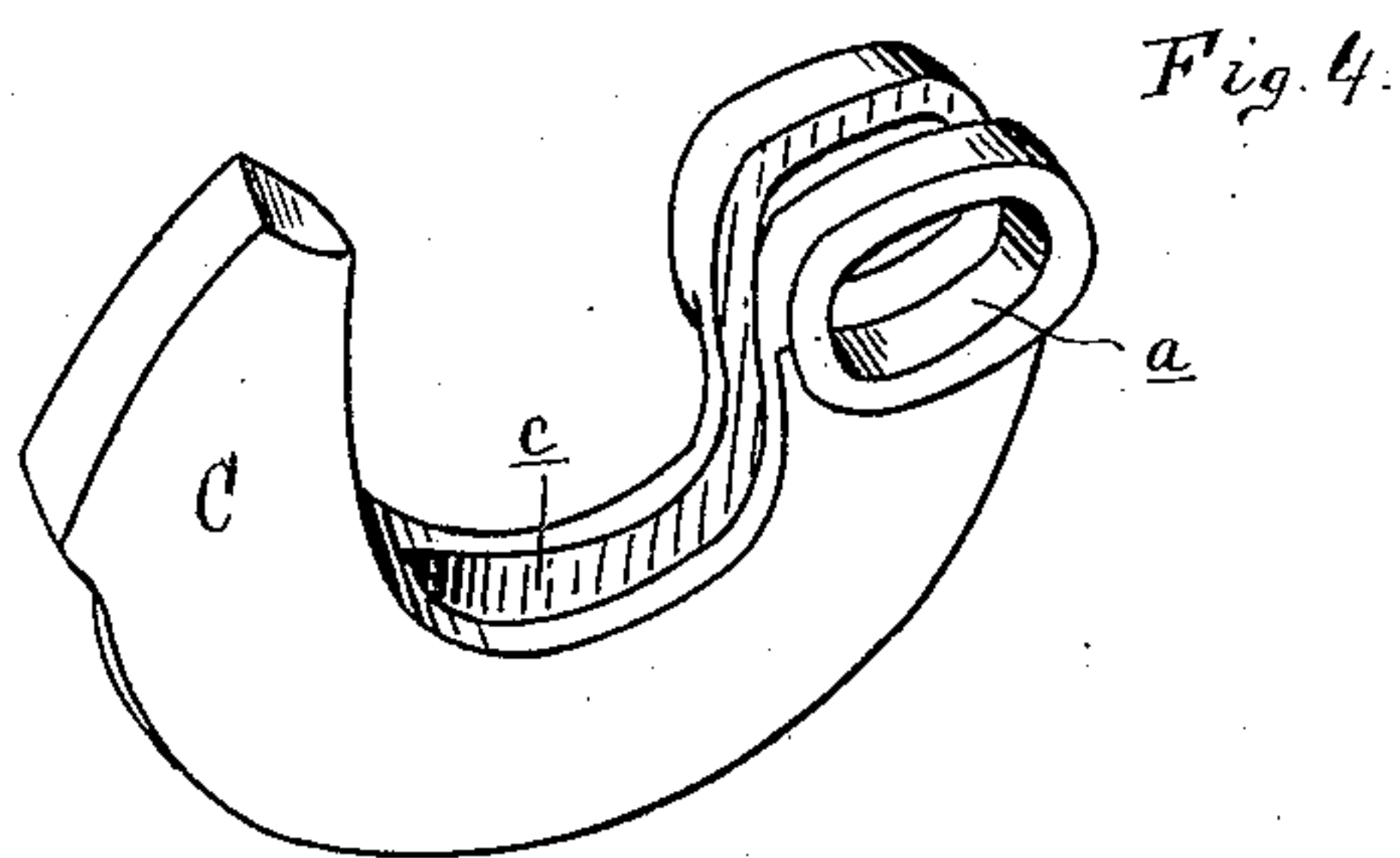
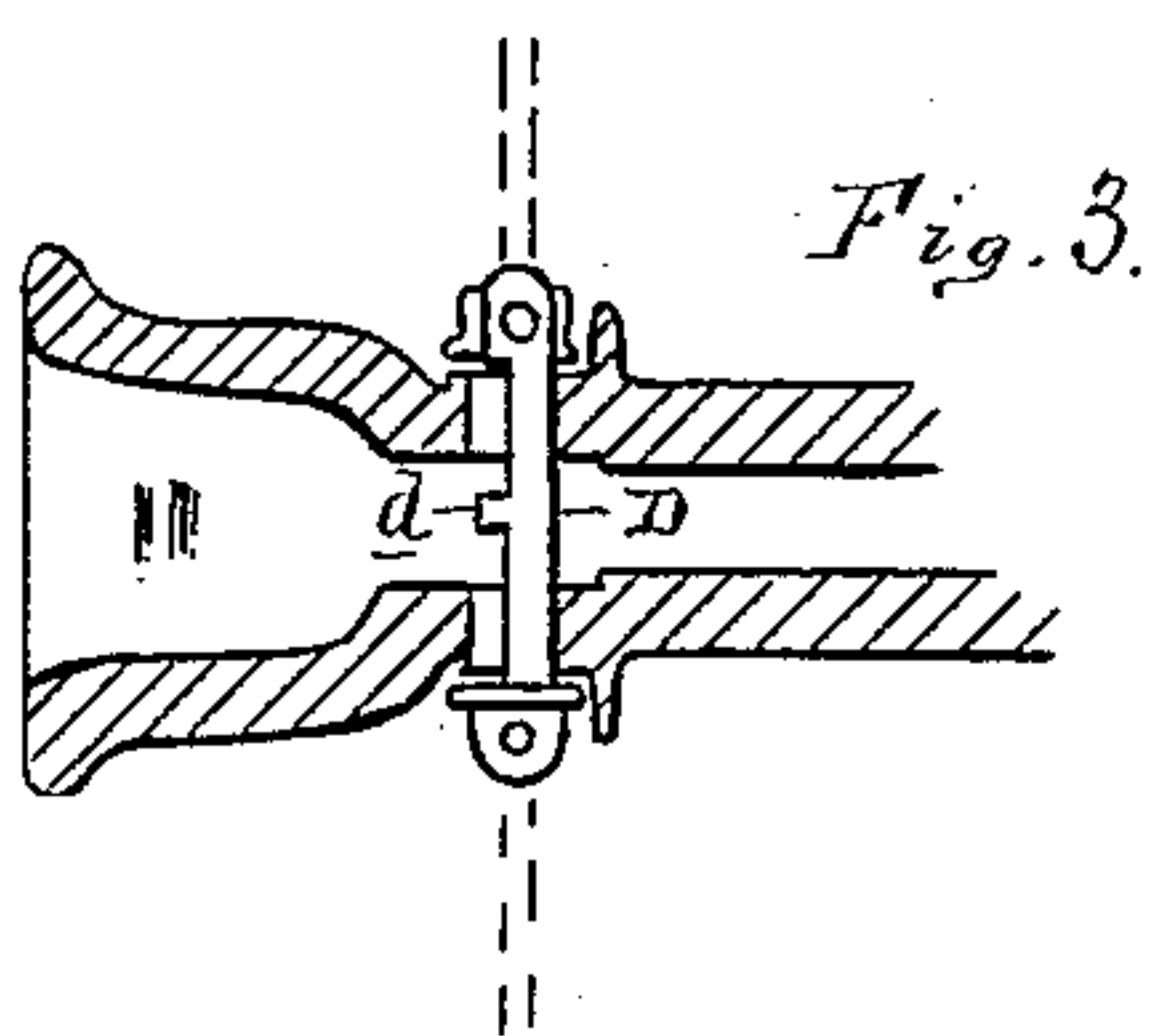
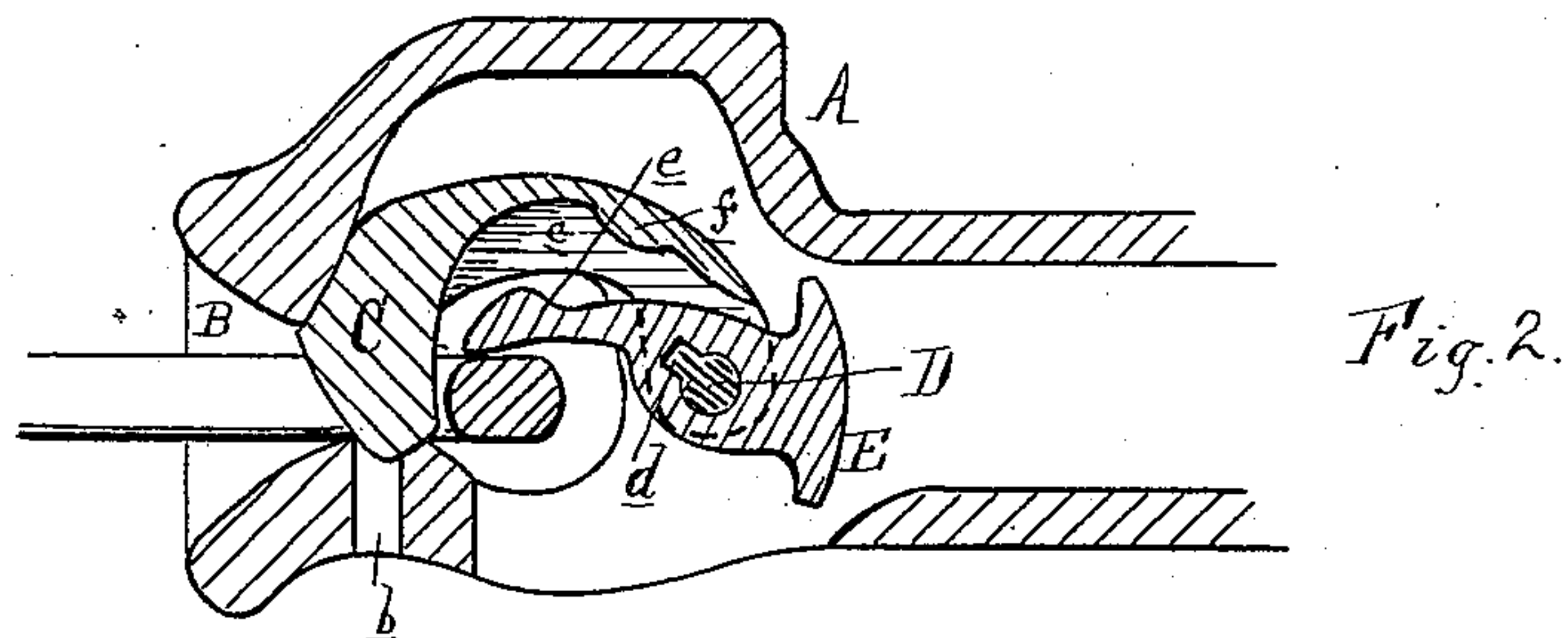
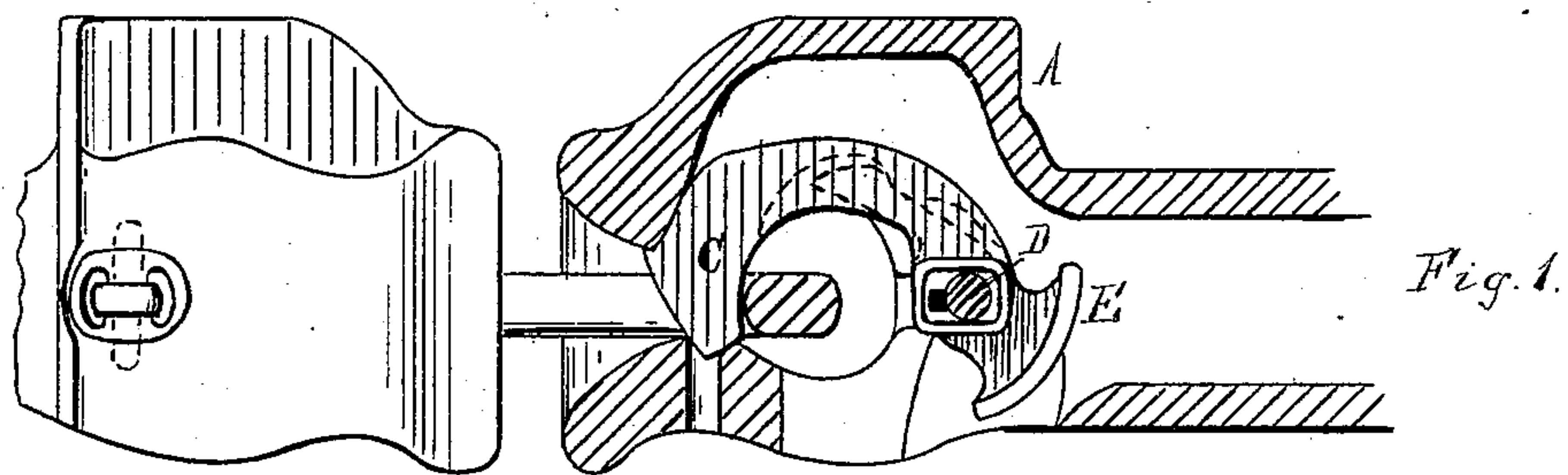


(No Model.)

J. D. KIELY.  
CAR COUPLING.

No. 308,414.

Patented Nov. 25, 1884.



Attest:  
Chas. Thurman  
Charles J. Hunt,

Inventor:  
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By his Att'y. *Wm. S. Sprague*



# UNITED STATES PATENT OFFICE.

JOHN D. KIELY, OF TORONTO, ONTARIO, CANADA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 308,414, dated November 25, 1884.

Application filed August 2, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN D. KIELY, of Toronto, in the county of York and province of Ontario, Canada, have invented new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

10 This invention relates to certain new and useful improvements in the construction of car-couplings; and the invention consists in the peculiar construction, arrangement, and combination of the parts, all as more fully hereinafter set forth and claimed.

15 Figure 1 is a central vertical longitudinal section. Fig. 2 is a similar view with a portion of the coupling-hook broken away. Fig. 3 is a horizontal section. Fig. 4 is a perspective of the coupling-hook detached.

20 In the accompanying drawings, which form a part of this specification, A represents a suitable draw-head, which is somewhat enlarged at the top, and is provided with the throat B, for the reception of the coupling-link. C is the coupling-hook, which is inserted in the head through a slot in the bottom of the draw-head, and is secured in its proper position by means of a rock-shaft or bolt, D, which passes through suitable openings in the side walls of the draw-bar and through the slots *a* in the inner end of the coupling-hook, these slots permitting the coupling-hook to have a sufficient movement or play upon the bolt D so that when coupled all strain of draft is relieved from the bolt. The outer end of the hook is inclined downward and to the rear, the lower point or end of the hook when in the coupled position resting at the inner end of an opening, *b*, in the draw-head, the upper inner wall of which is inclined to receive it, while the upper portion of this draw-hook is made to conform to the shape of the draw-head, as shown in Figs. 1 and 2, and in which position these two points lock the hook as against accidental displacement or uncoupling, as hereinafter described. This draw-hook, at its rear portion, is recessed, as at *c*, and receives the forward end of a counter-weighted tongue, E, through which the bolt D passes, a feather, *d*, upon the bolt engaging with the tongue. The outer end of the

tongue E is provided with a head, *e*, which, in the act of uncoupling, engages with the shoulder *f* on the coupling-hook within the recess *c*. At each end of the bolt D is secured the rod which leads to the sides of the car, so that such bolt may be rotated from either side of the track without the necessity of going between the cars. In practice this device is always ready to receive the link of an approaching car, as shown coupled in Figs. 1 and 2. The link, on entering the mouth of the draw-head, strikes against the inclined end of the hook and pushes such hook back and up the incline upon which the lower end of the hook rests, as described. When the link is passed in, the hook drops by its own gravity, engaging with the link, and is then by the link drawn forward until it comes in contact with the inner face of the draw-head at the mouth, as is clearly shown in the drawings. On turning the rock-shaft forward the tongue E may be turned down upon the inner end of the link, depressing the same so as to raise the outer end of the link so that it will engage with the draw-bar upon the approaching car. This link-raiser or tongue is so balanced that normally it remains in the slotted recess in the hook, and on turning the rock-shaft backward the head *e* engages with the shoulder *f* of the hook, which draws the hook backward, releasing it from its lock at the front end, and turning it upward sufficiently to admit of the link being withdrawn.

85 A practical use of this device has demonstrated the fact that it is utterly impossible to accidentally uncouple this hook by the jumping or vertical movement of the cars.

I am aware of Patents Nos. 289,049 and 272,704, and make no claim to the construction shown therein as forming part of my invention. I deem it important that the upper inner wall of the opening *b* be inclined downward toward the mouth of the draw-head, and that the lower end of the coupling-hook C rests on this inclined wall, while its upper portion conforms to the shape of the front wall of the recess in the draw-head, for by this construction when the hook is in the position shown in Fig. 2 it is locked against accidental displacement, owing to the impingement of the lower edge against the inclined wall of the opening *b* and of the upper por-



tion against the upper side of the draw-head in the opposite direction, in consequence of which the hook C must have both a backward and a rising motion simultaneously before it can be displaced, which, although it can be readily given when desired, is not likely to be given accidentally.

What I claim as my invention is—

1. In a car-coupling, the coupling-hook C, recessed at *c* and provided within said recess with a shoulder, *f*, in combination with the tongue E, weighted at its inner end and provided at its outer end with a head, *e*, substantially as and for the purpose specified.

2. In a car-coupling, the combination, with the draw-head provided with an opening, *b*, the upper inner wall of which is inclined toward the mouth of the draw-head, of the coupling-hook C, the lower end of which is con-

structed to rest on and be supported by said inclined inner wall, and the upper portion conforms to the shape of the draw-head, whereby said hook can be displaced only by a simultaneous backward and rising motion, substantially as and for the purpose described.

3. In a car-coupling, the coupling-hook C, recessed at *c* and bifurcated at one end, each branch of the bifurcation being provided with a slot, *a*, the tongue E, secured between said bifurcated ends and working in said recess, and the bolt D, passing through said slots and provided with a feather, *d*, engaging with said tongue, substantially as and for the purpose specified.

JOHN D. KIELY.

Witnesses:

F. M. KIELY,  
ROBERT GALLAGHER.