

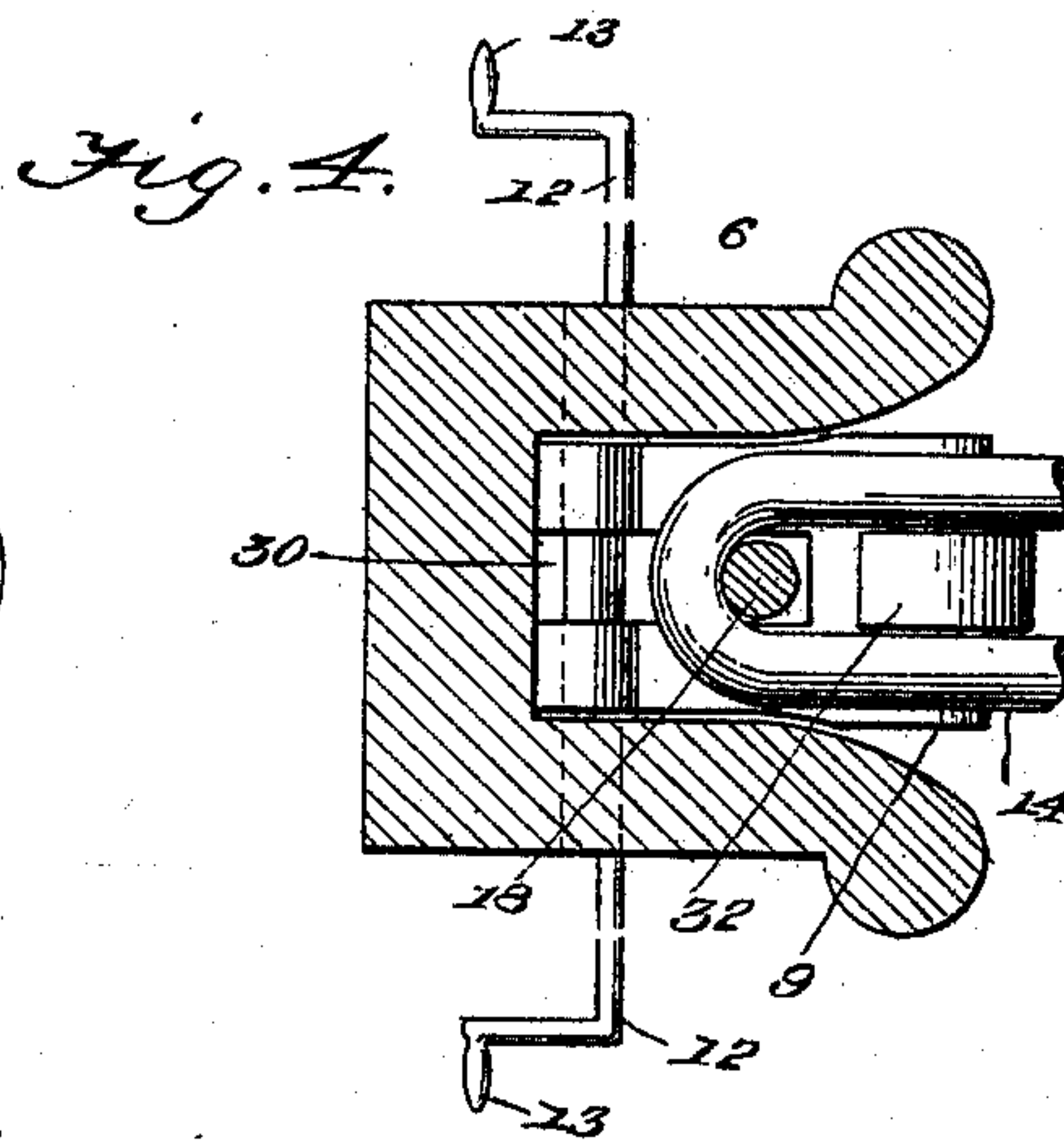
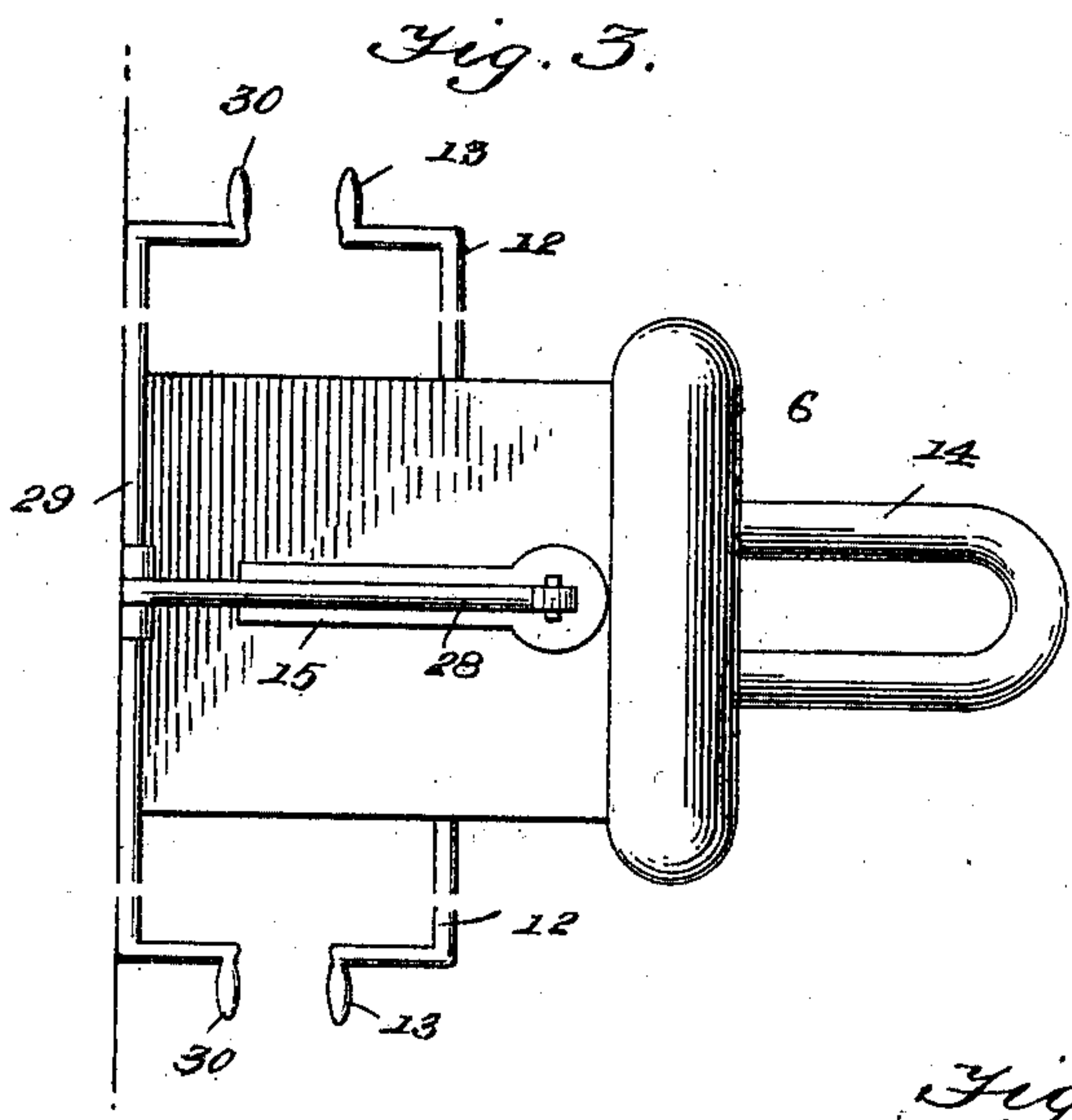
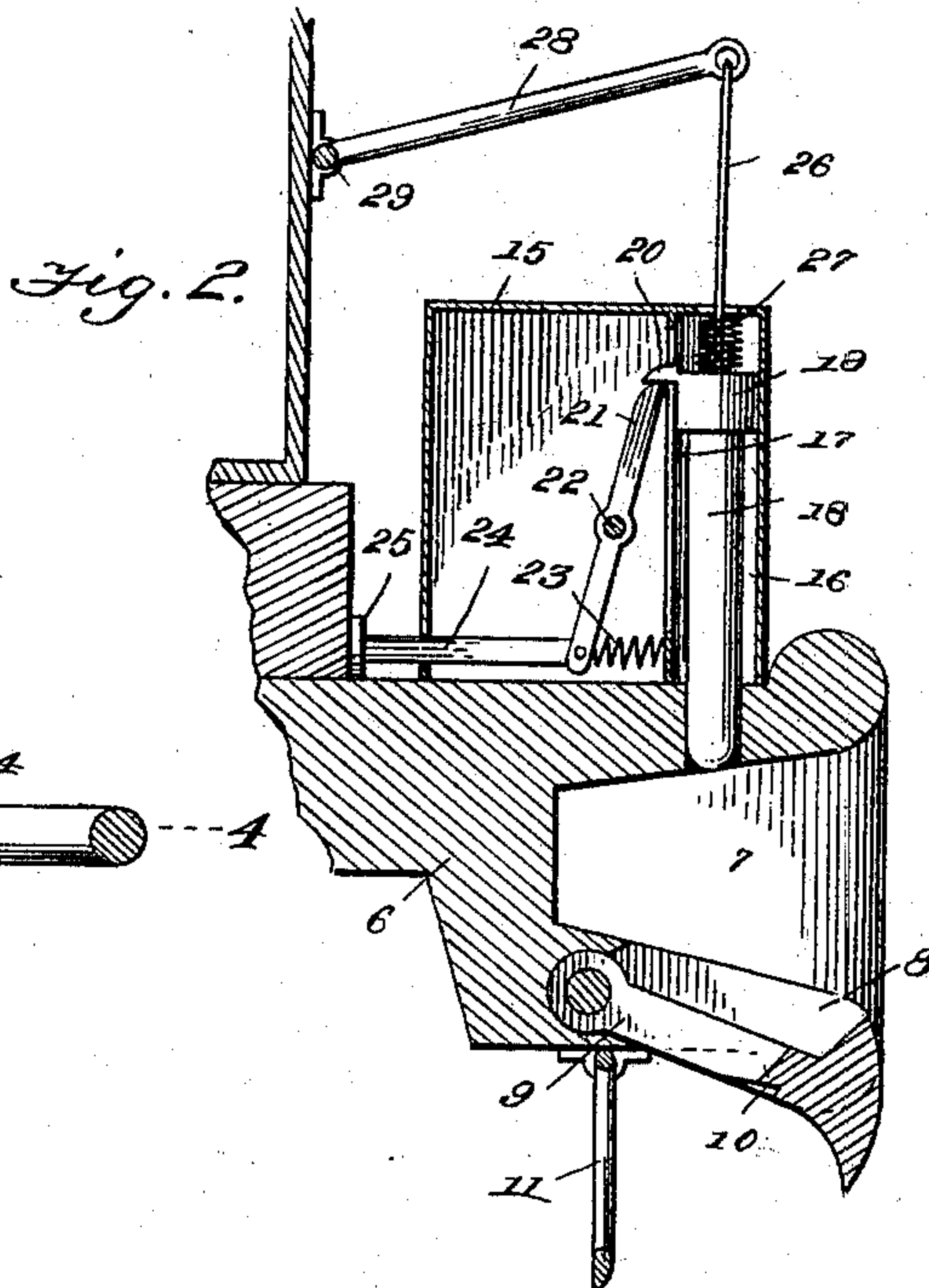
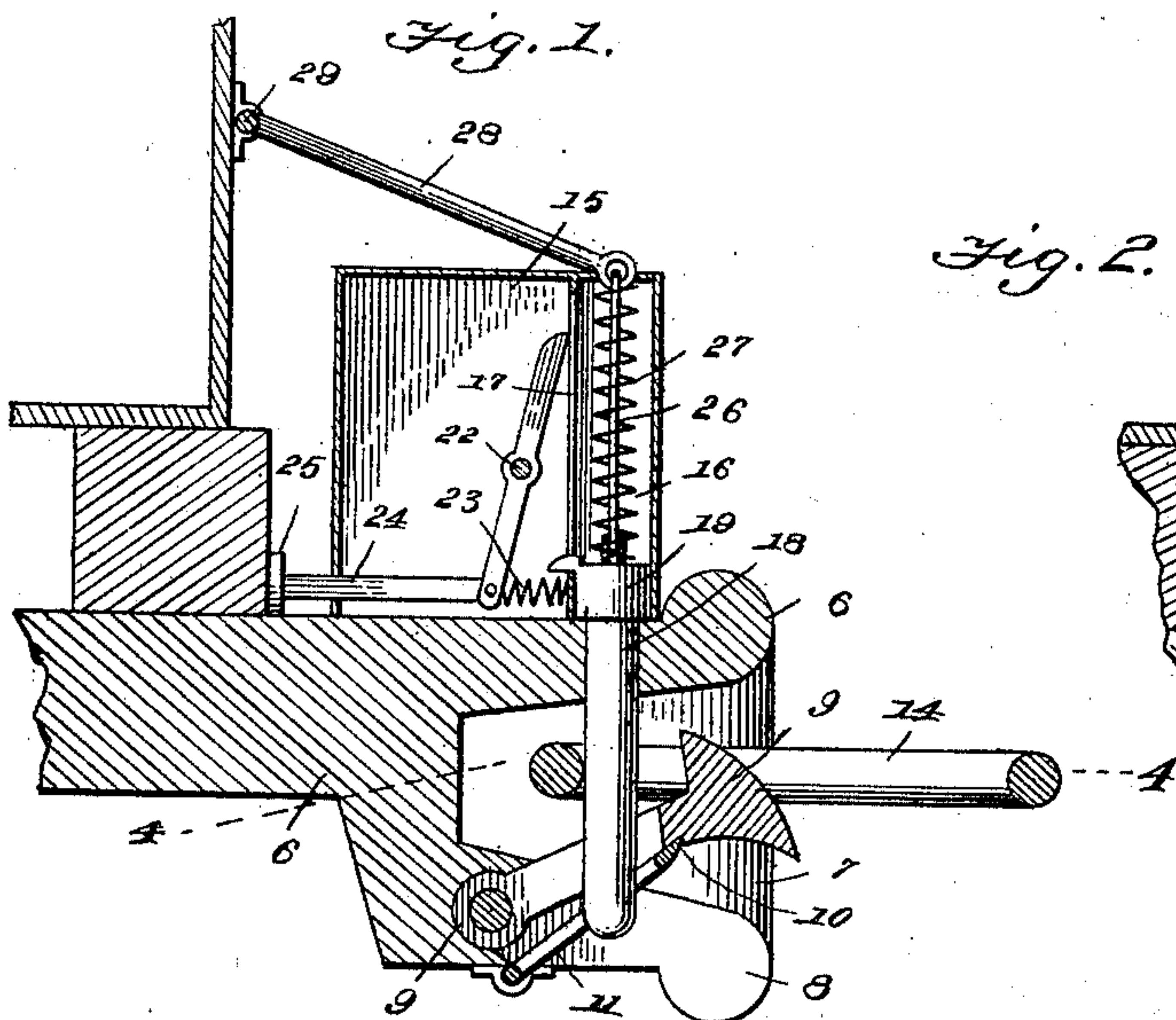
No. 646,961.

Patented Apr. 10, 1900.

C. A. DEGROFF.
CAR COUPLING.

(Application filed June 29, 1898.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

CHAUNCEY A. DEGROFF, OF JOHNSON'S CREEK, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 646,961, dated April 10, 1900.

Application filed June 29, 1899. Serial No. 722,353. (No model.)

To all whom it may concern:

Be it known that I, CHAUNCEY A. DEGROFF, a citizen of the United States, residing at Johnson's Creek, in the county of Niagara and State of New York, have invented a new and useful Car-Coupling, of which the following is a specification.

My invention relates to car-couplings, and more especially to that class of car-couplings using an ordinary coupling-link and capable of conjoint operation with ordinary pin-and-link couplings.

The object of the invention is to provide a car-coupling of this class of improved construction whereby the coupling will be automatically made whether the approaching car be equipped with the ordinary pin-and-link or with my own or some other improved coupling in which a link is used.

With this object in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described and afterward specifically pointed out in the appended claims.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part hereof, in which—

Figure 1 is a longitudinal vertical sectional view of a coupling constructed in accordance with my invention, the parts being shown in coupled position on the broken line 1 1 of Fig. 3. Fig. 2 is a similar sectional view with the parts in uncoupled or ready-for-coupling position. Fig. 3 is a top plan view with the parts in the position shown in Fig. 1. Fig. 4 is a horizontal sectional view on the broken line 4 4 of Fig. 1. Fig. 5 is a detail perspective view of the link support or holder.

Like numerals of reference mark the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings by numerals, 6 indicates the draw-head, which is provided with a forwardly-flared recess 7 in its outer face, extended at 8 through its bottom wall. The outer edges of the walls of the recess 7 are rounded, and in the lower recess 8 is pivotally mounted a link-holder 9, having its

outer end rounded to correspond with the walls of the lower recess when the holder is down, as in Fig. 2. In the lower face of the holder 9 is a notch 10, in which engages a bail-shaped pawl 11, pivoted to the under face of the draw-head and extending laterally at 12 12, where it is provided with operating-handles 13 13, the pawl being so engaged when the holder is up, supporting a link 14, as in Fig. 1, and hanging loose when the link is down, as in Fig. 2.

15 indicates a box or casing mounted on top of the draw-head and provided with a vertical chamber or slideway 16, having a vertical slot 17 in its inner wall.

18 indicates a coupling-pin projecting through an opening in the top of the draw-head and provided with a head 19, fitted to slide in the slideway 16, a tooth 20 on the head projecting through slot 17 in position to cooperate with a pawl 21, pivoted at 22 in the casing 15 and actuated toward the tooth by a spring 23. At the lower end of the pawl is connected a bar 24, which passes through the rear wall of the casing and bears at its end against a buffer-plate 25 on the end of the car.

Upon the upper end of the head 19 is connected a rod 26, around which is coiled a spring 27 with a bearing under the top of the casing and a normal tendency to force the pin downward. A link 28, secured to a rod 29, pivoted to the end of the car and having handles 30, is connected to the upper end of rod 26.

The link-holder 9 is slotted longitudinally, as at 31, and provided in front of and in line with the slot with a tooth 32 of the same width as the slot, both being slightly narrower than the space inside the link, which is of course of a proper width to receive the coupling-pin.

When the coupling-pin is raised, as in Fig. 2, and the link-holder down, the pawl 21 will engage under tooth 20 of head 19 and hold the coupling-pin up against the pressure of spring 27. An approaching car with link held up, as in Fig. 1, will pass the link into the recess in the draw-head, and the draw-heads striking together will cause bar 24 to strike buffer-plate 25, which by pressing the lower end of pawl 21 outward will disengage its upper end from tooth 20, releasing head 19 and permitting the pin, assisted by spring

27, to quickly drop through the link into the position shown in Fig. 1.

To release the link, the pin is raised by turning rod 29 by means of handles 30 until the pawl 21 springs under tooth 20 of head 19, as in Fig. 1.

The action of the coupling is automatic and there is no necessity for the trainmen or yardmen to get between the cars to either couple or uncouple cars.

I have shown the handles at the sides of the cars; but it will be readily understood that by simple connections they may be operated from the top, if desired.

While I have illustrated and described what I consider to be the best means now known to me for carrying out my invention, I do not wish to be understood as restricting myself to the exact forms and constructions shown, as many slight changes therein or variations therefrom might suggest themselves to the ordinary mechanic, all of which would be clearly included within the limit and scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a car-coupler, the combination with a draw-head, a slot or recess formed in the bottom of its jaw, of a link-holder pivoted in said slot or recess and slotted longitudinally, a tooth projecting upwardly from the link-holder in line with the slot, a notch formed

in the under side of the link-holder, and a pawl pivoted on the under side of the draw-head and operating-handle extending sideways from said pawl.

2. In a car-coupler the combination with the draw-head, a casing thereon, a slideway in the casing having a vertical slot in its wall, a coupling-pin secured within the slideway, a tooth projecting laterally from the head of the pin through the vertical slot, a spring-actuated pawl pivoted in the casing in position to engage said tooth and a bar pivoted to the lower end of the pawl and projecting through the rear wall of the casing, of a chambered draw-head, a link-holder pivoted in the head slotted longitudinally and provided with a tooth in front of and in line with the slot, and a tooth in its lower face, and a bail-shaped pawl pivoted on the under side of the draw-head and engaging said notch, all as described.

3. In a car-coupling, the combination with a chambered draw-head, of a link-holder pivoted in the head, slotted longitudinally and provided with a tooth in front of, and in line with the slot, and with a notch in its lower face, and a bail-shaped pawl pivoted on the under side of the draw-head and engaging in said notch, substantially as described.

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Witnesses:

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