(No Model.)

V. BRETT.

CAR COUPLING.

No. 516,429. Patented Mar. 13, 1894.

Fig 1

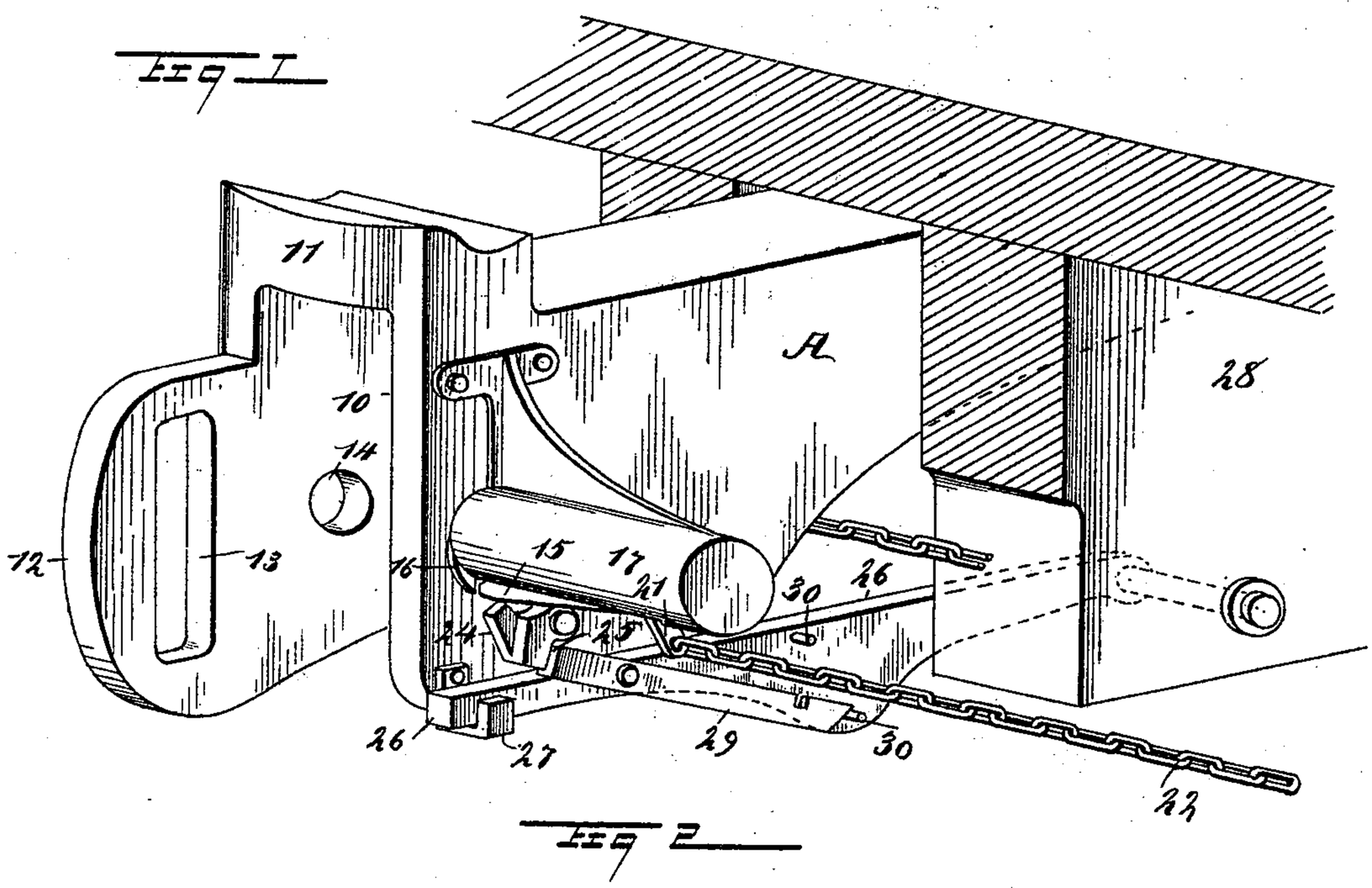

Fig 2

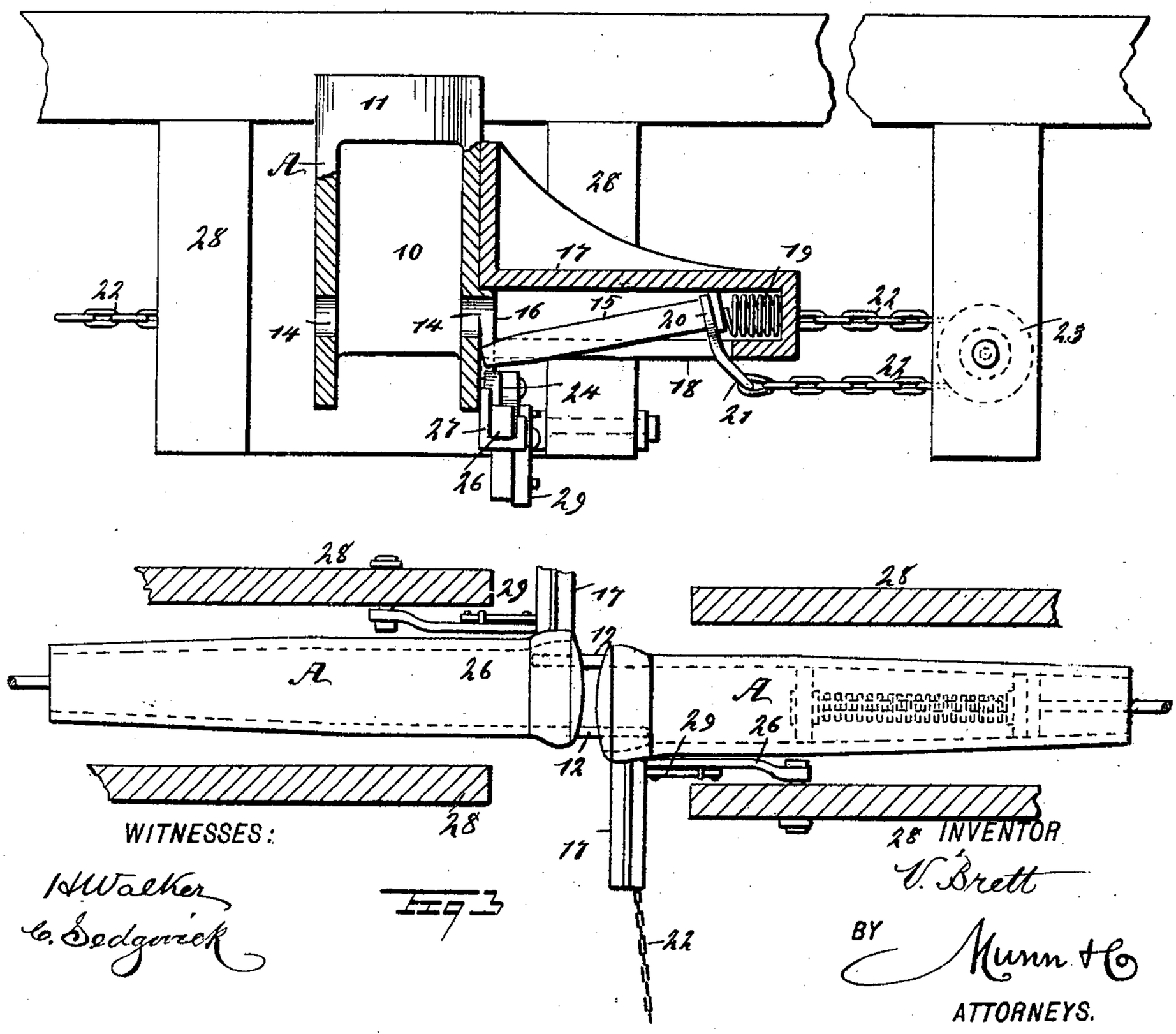

Fig 3

WITNESSES:

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VICTOR BRETT, OF BANGOR, MAINE, ASSIGNOR TO HIMSELF AND HENRY A. APPLETON, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 516,429, dated March 13, 1894.

Application filed July 3, 1893. Serial No. 479,468. (No model.)

To all whom it may concern:

Be it known that I, VICTOR BRETT, of Bangor, in the county of Penobscot and State of Maine, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

My invention relates to an improvement in car couplers, and it has for its object to provide a coupler which will be exceedingly simple, durable and economic in its construction, said coupler being what is known as the double link and pin type; and one of the objects of the invention is to improve upon the construction of the car coupler shown in the patent granted to myself, dated December 16, 1890, and numbered 442,853.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improved coupling, showing the pin in an uncoupled position. Fig. 2 is a vertical section, disclosing the coupling pin and illustrating the position it occupies when in an uncoupled position; and Fig. 3 is a plan view of two opposing couplers.

In carrying out the invention the drawhead A, is provided with a link chamber 10, and the said link chamber is open at the bottom as well as at the front, and the upper front surface 11 of the drawhead is so shaped as to form a buffing surface. One side of the drawhead is projected forwardly beyond the opposite side some distance and the said projecting portion of the drawhead is designated as 12, and is provided with a vertical slot 13, as is best shown in Fig. 1, the slotted extension constituting virtually a vertical link integral with the drawhead. The side portions of the drawhead are provided with horizontally aligning openings 14, and these openings lead directly into the link chamber 10; and a coupling pin 15, is adapted to pass through the openings, crossing the chamber and entering the opening 13 of a stationary link 12 of an opposing drawhead, since when drawheads of this type are in a coupling position the fixed link of one drawhead enters the link chamber of the opposite drawhead, as shown in Fig. 3. If the fixed link is for example upon the right-hand side of the drawhead, the pin opening 14 in its left-hand side is provided with an exterior collar 16, which collar is open at the bottom, and a cylinder 17, is made to surround this collar, the said cylinder being secured in any suitable or approved manner to the outer face of the drawhead. The cylinder is provided with a longitudinal slot 18 in its under surface, and the said slot communicates with the opening in the lower portion of the collar 16, as is best shown in Fig. 2. The cylinder 17, contains the coupling pin 15, and the pin is free to drop at its pointed end down through the slot 18 in the cylinder, being guided in its downward movement by the opening in the collar 16. The coupling pin is provided with a head which is constantly pressed by a spring 19, contained within the cylinder, having bearing at one end against the outer end of the cylinder, and at its opposite end against the head of the coupling pin. The coupling pin is provided with a collar 20, loosely fitted thereon at its head portion; and the said collar is provided with a shank 21, which extends downward through the opening 18 in the cylinder; and the shank of the collar 20, has connected with its outer end one extremity of a chain 22, or the equivalent thereof, and this chain is ordinarily carried over a guide pulley 23, located at one side of the drawhead, as shown in Fig. 2, and is extended therefrom beneath the rear portion of the drawhead, to and beyond the opposite side of the drawhead, at which point it is fastened to any convenient support. The pin 15, is drawn out of the drawhead openings 14 and into the cylinder 17 by manipulating the chain 22, which may be accomplished from either side of the car. It will be understood that the head of the pin and its collar 20, will prevent the pin from leaving the cylinder at its head portion. A lift lever 24, is pivoted upon the drawhead beneath the slotted portion of the cylinder, and the said lift lever is provided at its rear with a shoulder 25, and its upper surface is shaped

to receive and support the inner or pointed end of the coupling pin 15; and the lift lever is so shaped that when it is elevated it will in a measure enter the cylinder through the slot 18, and place the pin in such a position that it may be forced by the spring 19 through the openings 14 in the drawhead.

The drawhead A, is spring-supported beneath the car in any suitable or approved manner; that is to say, when a coupling is to be effected and two drawheads are brought together, both of the drawheads will slide or move beneath the car in a rearward direction a predetermined distance.

A bar 26, is stationarily held beneath the cylinder, being supported at its outer end by a strap 27, attached to the drawhead the strap having contact with the bar. The inner end of this bar is firmly secured to one of the timbers 28, attached to the car body and between which the drawhead has its sliding movement. The bar 26, has pivotally connected with it a trip lever 29, the lever being pivoted at one side of its center, and the shorter end of the lever is adapted to extend upward beyond the bar 26 and engage with the shoulder 25 of the lift lever, the trip lever being held in this position by the gravitation of its lower or longer end. The movement of the trip lever is limited either in its upward or downward movement through the medium of pins 30, which are located preferably upon the bar 26, and between which the rear extremity of the trip lever has movement, as is likewise best shown in Fig. 1.

In the operation of the coupling, when it is in an uncoupled position, the coupling pin 15 is drawn outward until its inner or free end will drop through the opening in the cylinder, and fall down upon the lift lever, as shown in Fig. 2 and to an engagement with the outer face of the drawhead. When a coupling is to be effected, the two drawheads will meet and their fixed links will enter the link chambers of opposing drawheads, and the two drawheads will slide backward beneath the car; and as the two bars 26, are fixed to the car at their rear ends and therefore can not move rearward with the drawheads, the lift levers will be forced upward by contact with the trip levers 29, since they will be forced against said levers, and the pins 15, will therefore be forced upward also until their free ends are opposite the apertures 14 in the drawheads, whereupon the springs 19 will act to force the pins through said apertures and through the fixed links of the drawheads, thereby producing a durable coupling and effecting the coupling in an automatic manner.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a car coupler, a drawhead having pin openings, a casing located over one of the pin openings, a spring controlled coupling held in such casing, arranged to drop out of alignment with such opening when drawn back to its uncoupled position, and held so by its spring pressure, and a lifting device for raising such pin in line with the opening all substantially as and for the purpose described.

2. In a car coupler, a drawhead provided with pin openings therein, a casing located over one of the openings and provided with an opening in one part of its surface, a spring-controlled coupling pin located within the casing, a portion of the coupling pin being adapted to drop through an opening in the casing, and a lift lever whereby the pin may be raised in alignment with the openings in the drawhead, substantially as and for the purpose specified.

3. In a car coupling, a drawhead provided with pin openings therein, a casing located over one of the openings and provided with a slot in a portion of its surface, a spring-controlled pin having sliding movement in the casing and adapted to drop at its free end through the casing slot, a trip lever capable of elevating the pin and operated during the process of coupling, and means, substantially as shown and described, for drawing the pin from the pin openings of the drawhead, substantially as and for the purpose set forth.

4. In a car coupling, the combination, with a drawhead having pin openings therein, a casing covering one of the pin openings and provided with a slot in its lower surface, and a spring-controlled coupling pin capable of sliding movement in the casing and of dropping at its free end through the slot therein, of a lift lever located beneath and adapted for engagement with the free end of the pin, a trip lever engaging with the lift lever, and a means for operating the trip lever by a contact between opposing drawheads, substantially as shown and described.

5. In a car coupler, the combination, with a drawhead having a fixed vertical link, and pin apertures horizontally located therein, a casing covering one of the apertures and provided with a slot in its under surface, and a spring-controlled coupling pin located within the casing, the pin being adapted to drop downward at its free end through the casing slot, of a lift lever fulcrumed upon the drawhead and adapted to engage with the free end of the pin, the drawhead being capable of rearward movement, a trip rod attached to a fixed support and having guided support upon the drawhead, a lift lever fulcrumed upon the trip bar, and adapted for engagement with the lift lever, and means, substantially as shown and described, for drawing the pin against the tension of its spring, as and for the purpose specified.

VICTOR BRETT.

Witnesses:
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HENRY L. MITCHELL.