

(No Model.)

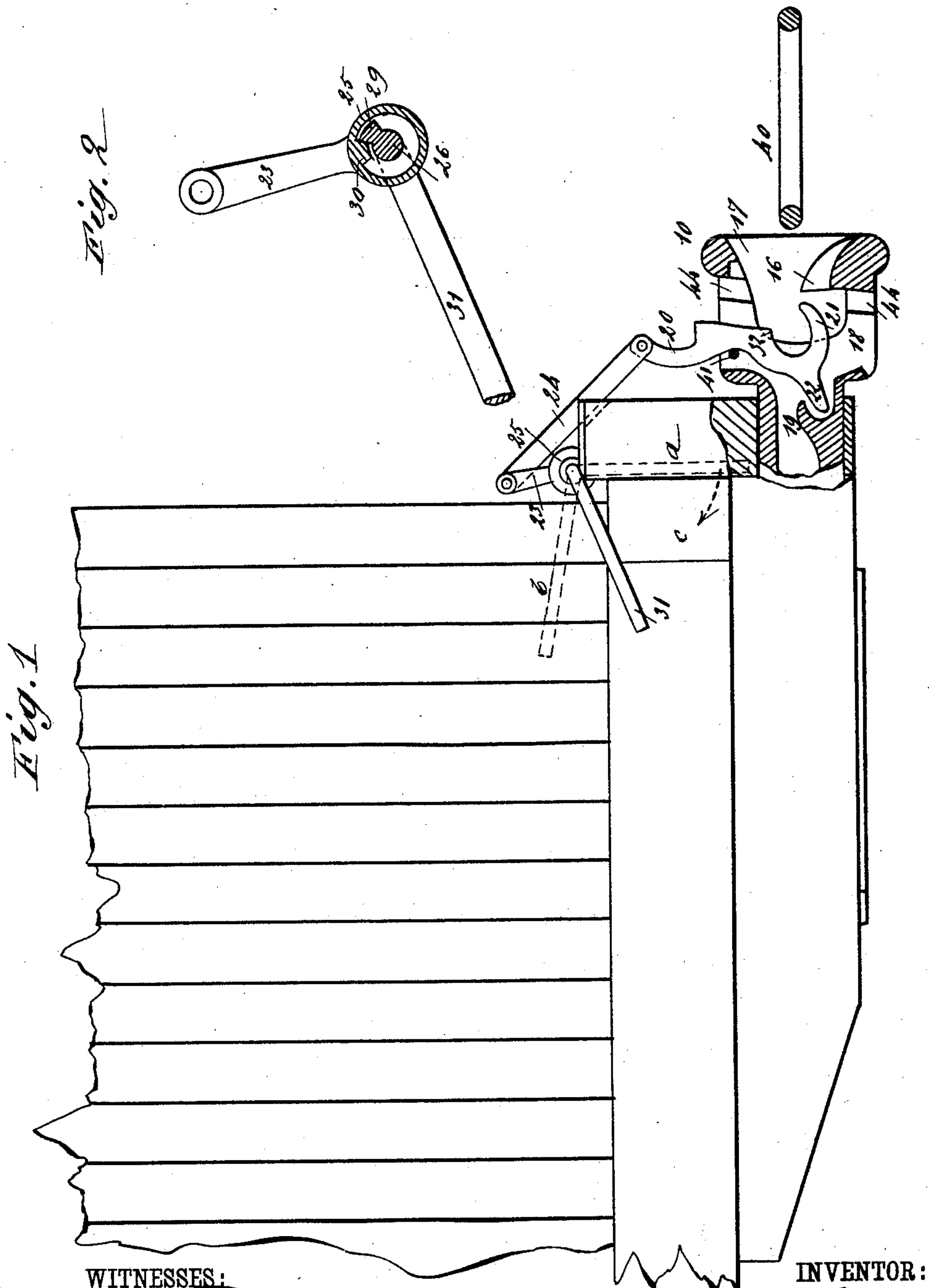
E. LALIME.

2 Sheets—Sheet 1.

CAR COUPLING.

No. 362,221.

Patented May 3, 1887.



WITNESSES:

C. Neveu
C. Sedgwick

INVENTOR:

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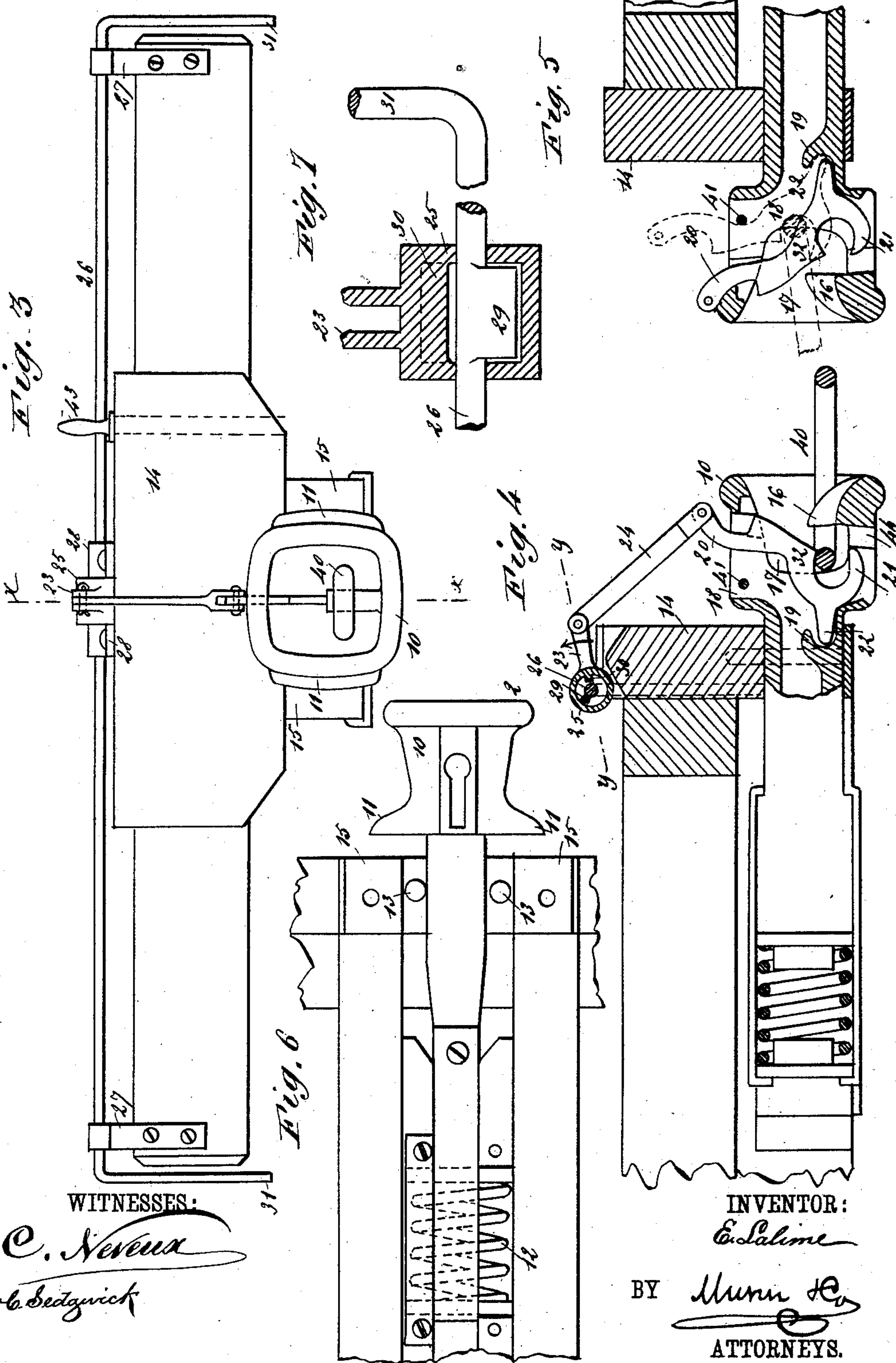
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UNITED STATES PATENT OFFICE.

EUSEBE LALIME, OF MALONE, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 362,221, dated May 3, 1887.

Application filed November 15, 1886. Serial No. 218,932. (No model.)

To all whom it may concern:

Be it known that I, EUSEBE LALIME, of Malone, in the county of Franklin and State of New York, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

This invention relates to a novel form of safety automatic car-coupler, wherein the parts are so arranged that the uncoupling may be brought about from either side of the car, and wherein the parts may be set so that they will couple automatically with the link of an approaching car, or may be set so that they will not couple with such link; and the invention further consists of an arrangement whereby the link may be adjusted and held at a proper angle to enter the draw-head of an approaching car; and the invention still further consists in a novel arrangement of the draw-head, whereby the draw-bar spring is relieved from any undue compressive strain, all as will be hereinafter more fully described, and specifically pointed out in the claims.

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

Figure 1 is a side view of a portion of a car provided with my improved form of coupler, the draw-head being shown in central longitudinal section, and the parts being represented as they appear when thrown to uncouple the car. Fig. 2 is a detailed view of the cross-bar and the lever carrying sleeve, the view being taken upon an enlarged scale, and representing the sleeve, its lever, and the cross-bar as the parts appear when thrown to a position to prevent the automatic coupling of the cars. Fig. 3 is an end view of a portion of a car provided with my improved form of automatic safety-coupler. Fig. 4 is a central longitudinal sectional view, the view being taken on line *xx* of Fig. 3, the parts being shown as they appear when the operating-hook is to be employed as a link-adjuster. Fig. 5 is a view of a draw-head, wherein the parts are shown as arranged so that they will couple automatically with the link shown in Fig. 2. Fig. 6 is an inverted plan view of the draw-head; and Fig. 7 is an enlarged sectional detailed view, the view being taken on line *yy* of Fig. 4.

In constructing such a coupler as the one forming the subject-matter of this application, and illustrated in the drawings above referred to, I provide a draw-head, 10, that is formed with outwardly-extending side ears, 11, the draw-bar of said draw-head being connected with the car body and with its spring 12 in the usual manner. The forward end of the draw-bar rides between two posts, 13, that extend downward from the head-block 14, while the side ears, 11, extend outward in front of the buffer-blocks 15.

The draw-head 10 is formed with a hooked prong, 16, which extends upward and toward the rear from the bottom of the link opening or recess 17, the outer or forward face of this prong being convex, while the inner face is concave or simply inclined to the rear. Back of the link-recess 17 there is a vertical recess, 18, which extends entirely through the draw-head, a forwardly-extending horn, 19, being arranged at the rear of said vertical recess.

Within the recess 18 there is mounted a swinging hook, 20, said hook being formed with a forwardly-extending point, 21, and a rearwardly-extending spur, 22, which said spur is arranged to abut against the forward concave face of the horn 19. The hook 20 is connected to a lever-arm, 23, by means of a link, 24, said lever-arm being carried by a sleeve, 25, that is loosely mounted upon a cross-bar, 26, said cross-bar being in turn mounted in brackets 27 and 28, that are secured to the end of the car. The bar 26 is formed with a bit, 29, while the sleeve 25 is formed with an inwardly-extending flange or feather, 30. Upon each end of the bar 26 there is formed a lever arm or handle, 31, the arms 31 and the bit 29 being arranged to extend from the bar at about the angles in which they are shown in Fig. 2. The swinging hook 20 is formed with a shoulder, 32, above its hooked point 21.

Such being the general construction of my improved form of coupler, the operation is as follows: A coupling-link, as 40, may be inserted within the recess of the draw-head, riding up over the forward convex face of the hook or prong 16, and this link will drop behind the hook above the point 21 of the hook 20, the parts at this time being about in the

position in which they are shown in Fig. 4, and when so adjusted the link 40 may be brought to couple automatically with a draw-head wherein the parts are adjusted as represented in Fig. 5; for as the link 40 enters a draw-head, as represented in Fig. 5, the forward end of the link will strike against the hook 20 just above the shoulder 32, and will force the hook to the position in which it is shown in dotted lines in said Fig. 5, the end of the link riding up over the convex face of the prong 16, and dropping down behind said prong. After the cars have been so coupled they may be uncoupled by turning the lever-arms 31 so as to carry the lever 23 in the direction of the arrow shown in connection therewith in Fig. 4, the arms 31 at this time being carried from the position in which they are shown in dotted lines at *a* to about the position in which they are shown in dotted lines at *b*, the hook 20 being thereby raised so that the link 40 is carried above the point of the hook 16, thus permitting a withdrawal of the link from the draw-head, and if at this time the lever-arms 31 are returned to the position in which they are shown in dotted lines at *a* in Fig. 1 the hook 20 will return to about the position in which it is shown in full lines in Fig. 5—that is, to a position to couple automatically with the link of any approaching car.

The position of each link may be regulated by turning either of the lever-arms 31 in the direction of the arrow shown at *c* in Fig. 1; for by so turning the lever-arms 31 the hook 20 will be carried downward and the projecting end of the coupling-link will be thereby raised; or, if necessary to depress the projecting end of the coupling-link, the lever-arm 31 may be turned in the opposite direction, so as to slightly raise the inner end of the link.

When it is desired to lock the parts against automatic coupling, the levers 31 are thrown to the position shown in full lines in Fig. 1, which position is also shown in Fig. 2, the bit 29 at this time bearing against the forward face of the feather 30, thus holding the hook 20 in an elevated position.

In order that the hook 20 may not become accidentally removed from the draw-head, I pass a pin, 41, through the draw-head behind the hook; but when it is necessary to remove the hook 20 this pin may be withdrawn.

Should the hook 16 or any part of the operating mechanism break, the coupling may be brought about by means of an ordinary coupling-pin, such a pin being shown at 43, being carried in a proper recess formed in the head-block, the draw-head 10 being formed with a pin-recess, 44.

As cars provided with my improved form of coupling come together, any undue strain upon the draw-bar spring is obviated by the peculiar formation of the draw-head, which draw-head, as before stated, is provided with ears or shoulders 11, which said shoulders abut against the buffer-blocks, and thus relieve the draw-bar spring from any undue strain.

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

1. The combination, with a draw-head formed with an upwardly-extending hooked prong, of a swinging hook, a sleeve formed with a lever-arm and an inwardly-projecting feather, a link connecting the hook with the lever-arm of the sleeve, a cross-bar formed with a bit that is arranged within the sleeve, and lever-arms connected to the cross-bar, substantially as described.

2. The combination, with a draw-head formed with an upwardly and rearwardly extending hook or prong and a forwardly-extending prong, 19, of a hook formed with a point, 21, a spur, 22, and a shoulder, 32, a sleeve having a lever, 23, and an inwardly-extending feather, 30, a link connecting the hook 20 with the lever 23, a bar, 26, provided with lever-arms 31, and a bit, 29, substantially as described.

EUSEBE LALIME.

Witnesses:

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W. JACKSON FALLOWS.