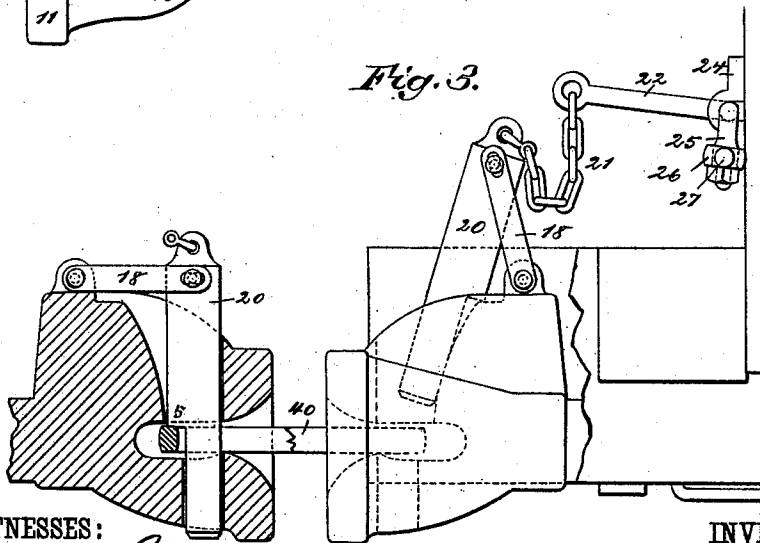
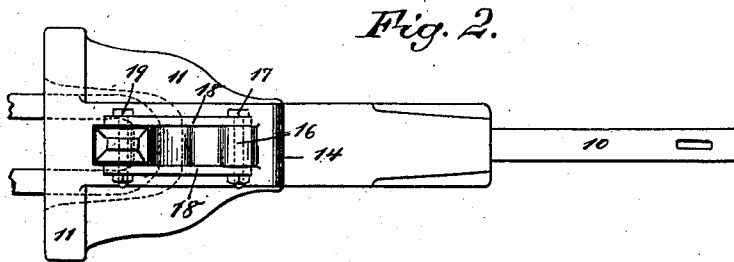
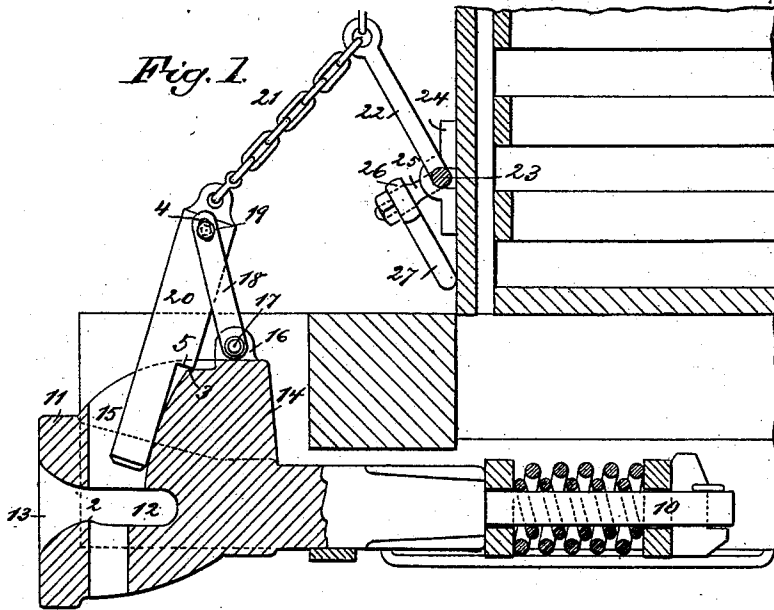


D. G. STONE.

CAR COUPLING.

No. 356,969.

Patented Feb. 1, 1887.



WITNESSES:  
*Wm. Beyer*  
*C. Sedgwick*

INVENTOR:  
*D. G. Stone*  
 BY *Munn & Co.*  
 ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

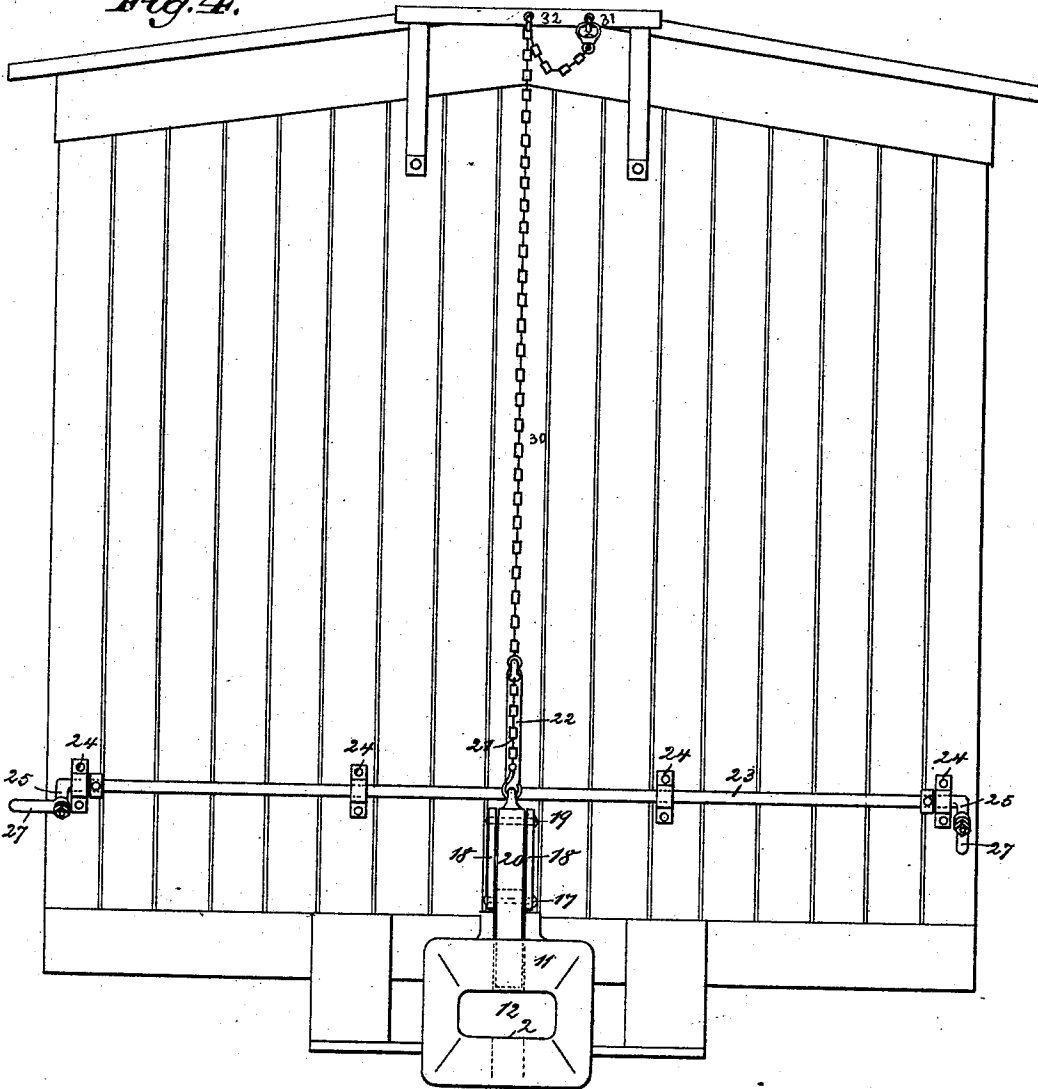
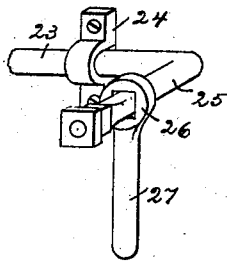


Fig. 5.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

DUDLEY G. STONE, OF NEGAUNEE, MICHIGAN.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 356,969, dated February 1, 1887.

Application filed November 13, 1886. Serial No. 218,810. (No model.)

*To all whom it may concern:*

Be it known that I, DUDLEY G. STONE, of Negaunee, in the county of Marquette and State of Michigan, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

This invention relates to car-couplers, the object of the invention being to provide a simple, cheap, and durable coupler wherein the parts may be manipulated from either side or from the top of the car for the purpose of uncoupling the cars, and wherein the coupling of the cars may be brought about automatically, and wherein, when desired, the coupling-pins may be locked or held in their withdrawn position above the link-recesses of the draw-heads, as will be hereinafter more fully explained, and specifically pointed out in the claims.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 central longitudinal sectional view of a draw-head and its connections, the parts being constructed and connected in accordance with the terms of my invention and represented as they appear when attached to a car, the coupling-pin being shown in the position it occupies when raised above the link-recess of the draw-head. Fig. 2 is a plan view of the draw-head, the coupling-pin being represented as it appears when within the link-recess and in engagement with the link. Fig. 3 is a view of two draw-heads, representing the parts as they appear when adjusted for automatic coupling, the draw-head upon the left being represented in central longitudinal section, while the draw-head upon the right is shown in full lines, the coupling-pin upon the right being represented as it appears when raised to a position to couple automatically with the link carried by the draw-head illustrated in section. Fig. 4 is an end view of a freight or box car provided with my improved form of coupler, the manipulating-handle upon the right being shown as turned down to lock the coupling-pin in its raised position, while the manipulating-handle upon the left is shown as it appears when turned

out so as to extend in a line parallel with the main cross-bar or rock-shaft, through the medium of which the coupling-pin is raised; and Fig. 5 is a perspective view representing in detail the construction and arrangement of one of the lever-arms and manipulating-handles of the main cross-bar or rock-shaft.

In the drawings, 10 represents a draw-bar that is connected to or provided with a draw-head, 11, which draw-head is formed with a link-recess, 12, which, as usual, has a flaring mouth, 13. In the lower side of the recess 12, and just at the point of juncture of the recess proper and its flaring mouth, there is an upwardly-extending ridge or prominence, 2, the general lower defining-wall of the recess 12 being considerably lower than the top of the ridge 2.

Upon the upper face of the draw-head there is formed an upwardly-extending boss, 14, through which there passes a vertical recess, 15, the rear defining-wall of said recess being carried back in a gradual curve from the link-recess to a horizontal shoulder, 3, that is formed upon the upper face of the boss 14, just in advance of an upwardly-extending lug, 16, which lug 16 is centrally apertured to receive the shank of a bolt, 17, that serves as the support for two connecting-links, 18, which links serve to partially support and guide the coupling-pin 20, connection between the coupling-pin and the links being established by means of a bolt, 19, which passes through the pin and through elongated slots 4, that are formed in the links 18.

The coupling-pin 20 is formed with a shoulder, 5, and is connected by means of a short chain, 21, to an arm, 22, which arm is made integral with or rigidly connected to a rock-shaft or cross-bar, 23, which said rock-shaft is mounted in brackets 24, that are connected to the end of the car-body.

Each end of the shaft is bent outward at right angle to the general length of the shaft to form lever-arms 25, the ends of which arms are square, in order that they may be engaged by the sockets 26 of manipulating-handles 27, the arrangement being such that the handles 27 may be thrown into and out of engagement with the squared portions of the arms 25, and

when not in engagement with the said squared portions the arms may be turned to a vertical or a horizontal plane.

In order that the coupling-pin may be raised to uncouple the cars by a brakeman standing on top of the cars, I provide a chain, 30, one end of which is secured to the arm, 22, the other end being connected to a hook, 32, that is fixed to the end of the car, and preferably to the end of the running-board, as shown in Fig. 4. A second hook, 32, is provided and located as shown, and when it is desired to hold the pin 20 in its raised position the proper link of the chain 30 is brought into engagement with the hook 32.

Such being the general construction of the coupler, the operation is as follows: When cars provided with my improved form of coupler are to be coupled, a coupling-link, 40, is placed within the recess of one of the draw-heads and arranged so that the shoulder 5 of the coupling-pin 20 will rest upon the inner end of said link, thus causing the link to extend outward at an upwardly-inclined angle, the weight of the link being supported by the ridge 2. The coupling-pin of the draw-head of the adjacent car is moved to a position so that its shoulder 5 will rest upon the horizontal shoulder 3 of the draw-head, the arm 22 at this time being lowered, as shown upon the right in Fig. 3. Then, as the cars approach, the link 40 will enter the link-recess of the draw-head upon the right, and as the cars come together the shock or jar will dislodge the pin from its seat upon the shoulder 3, and the pin will fall downward and into engagement with the link 40, thus coupling the cars. To uncouple the cars, the rock-shaft or cross-bar 23 is turned so that the arm 22 will be raised, the pin thereby being withdrawn from engagement with the link, and if, after the pin has been raised, it is desired that it should be locked against being accidentally returned to the link-recess, one of the manipulating-handles 27 is moved so as to extend downward from its lever-arm 25, this arrangement being clearly shown in Fig. 1, the rock-shaft being thereby held against any movement which would carry the arm 22 downward. If it is desired to uphold the pin after the cars have

been uncoupled from the top of the car, the chain 30 is brought into engagement with the hook 32, as shown in Fig. 4, thus preventing any downward movement of the pin 20.

From the construction described it will be seen that the coupling and uncoupling of the cars may be brought about from either side or from the top of the car, a proper manipulation of the parts being provided for by means of attachments which render it unnecessary for the trainmen to enter the space between the approaching ends of the cars.

It will also be seen that cars provided with my improved form of coupling may be coupled with cars having the ordinary form of pin-and-link coupling, or with any other form of coupling that is arranged for use in connection with a pin and link.

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

1. In a car-coupling, the combination, with the draw-head having an upwardly-extending boss provided with a horizontal shoulder upon its upper face, and with a vertical recess, the rear wall of which recess is carried back in a gradual curve from the link-recess to said horizontal shoulder, of the coupling-pin provided with a shoulder upon its rear side and connected by a link or links at its upper end to a lug upon the upper face of the boss of the draw-head, substantially as and for the purpose set forth.

2. In a car-coupling, the combination, with the draw-head having an upwardly-extending boss provided with a vertical recess, the rear wall of which recess stands just back of the link-recess, of the coupling-pin connected at its upper end to said boss by a link or links, and a rock-shaft connected by suitable means to the upper end of the coupling-pin, and having applied thereto a manipulating-handle adapted to rest against the car, and thus retain one of its arms in an elevated position, substantially as and for the purpose set forth.

DUDLEY G. STONE.

Witnesses:

WM. N. MORSE,  
AUSTIN B. MORSE,