

(No Model.)

2 Sheets—Sheet 1.

P. GALLIEN.
CAR COUPLING.

No. 560,158.

Patented May 12, 1896.

Fig. 1.

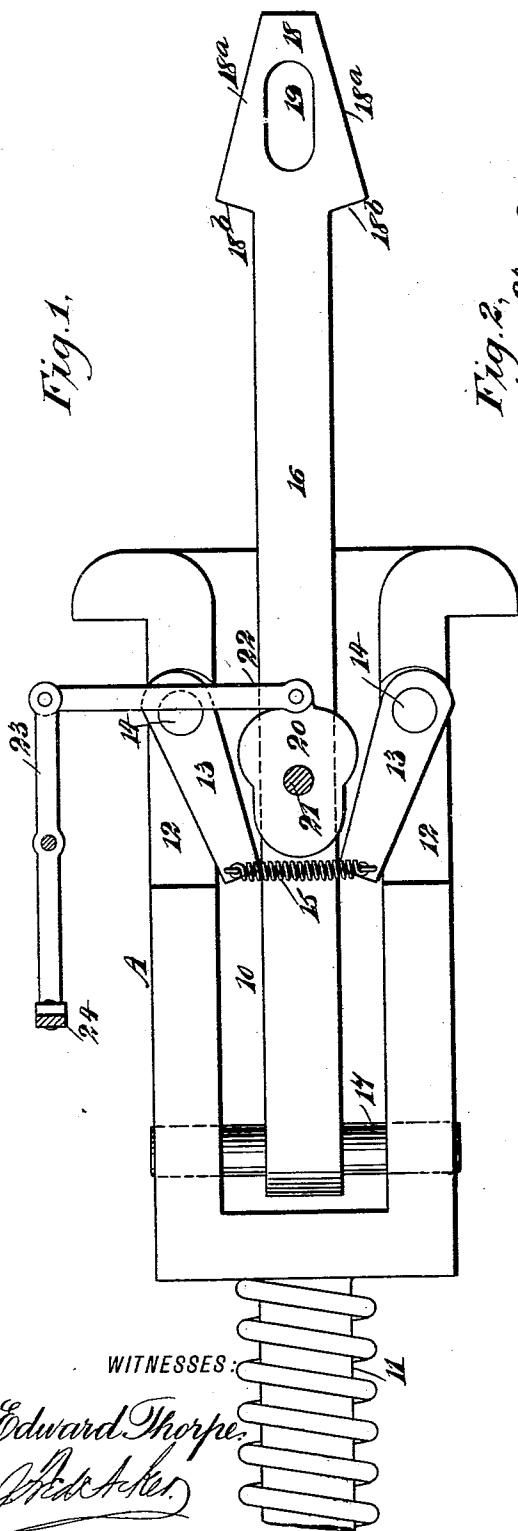
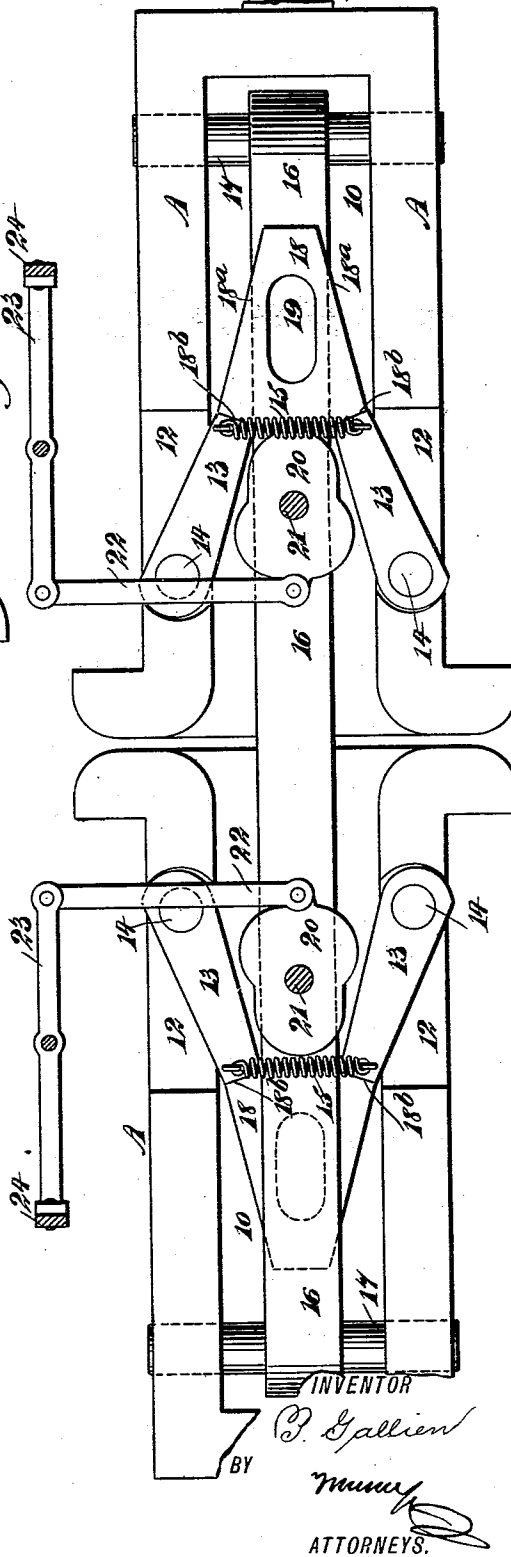


Fig. 2.



WITNESSES:

Edward Thorpe
Attest

INVENTOR

P. Gallien

BY

Munsey
ATTORNEYS.

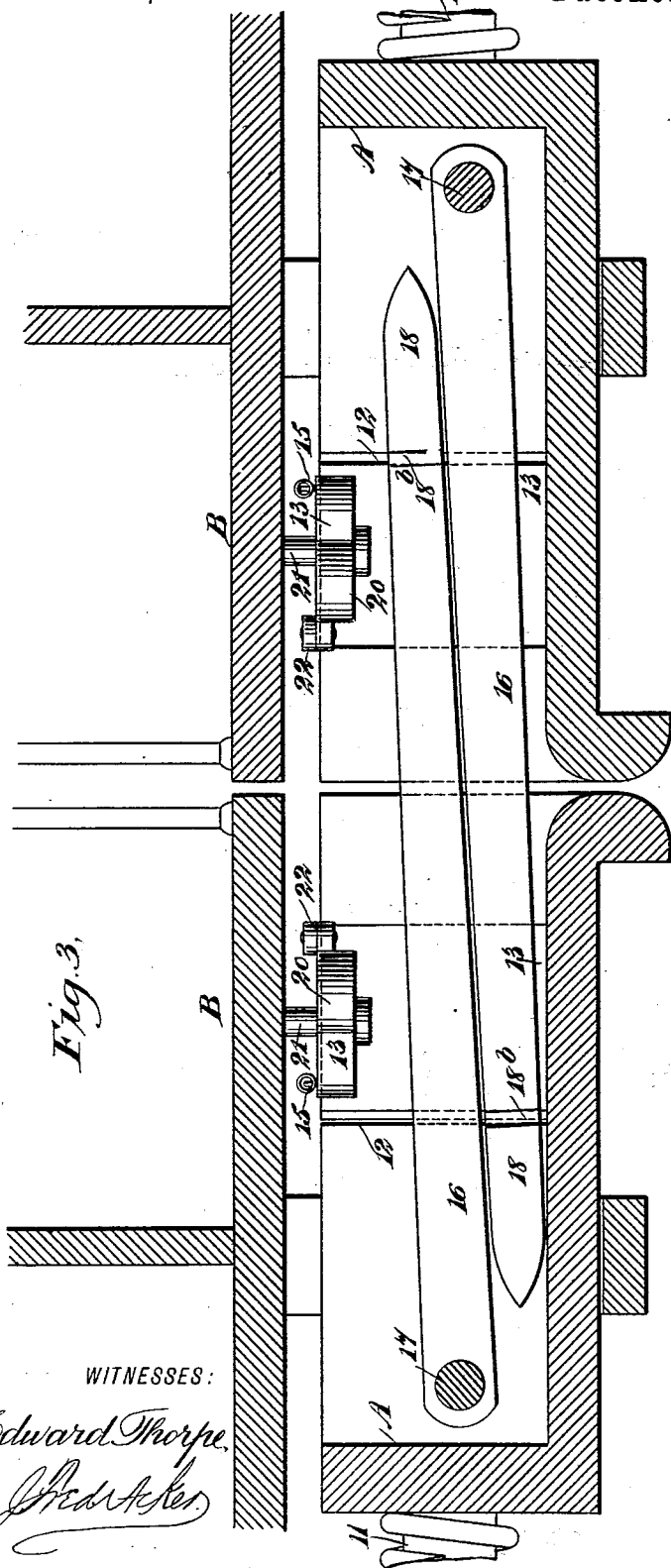
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2 Sheets—Sheet 2.

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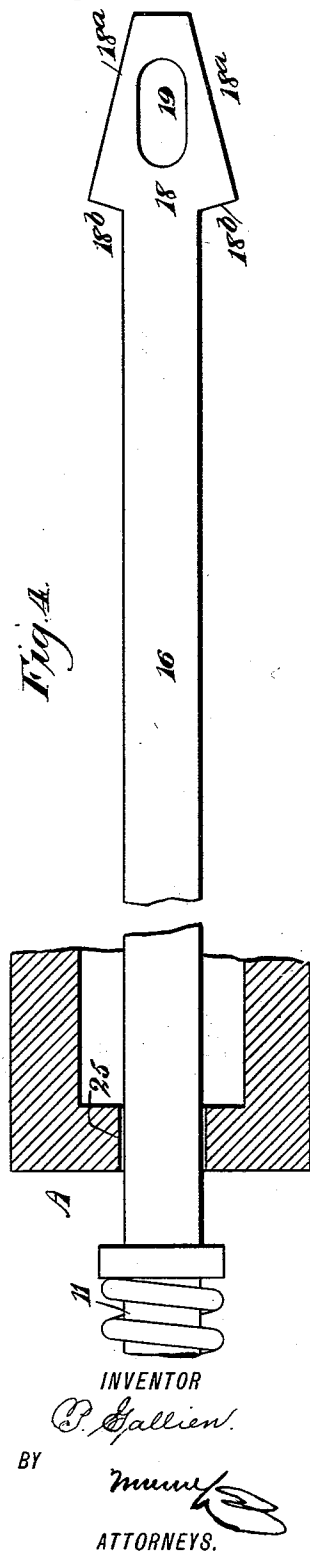
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WITNESSES:

Edward Thorpe.
Fred Aker.



INVENTOR

P. Gallien.

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

PETER GALLIEN, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO HIMSELF
AND EDWARD M. CLARK, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 560,158, dated May 12, 1896.

Application filed January 31, 1896. Serial No. 577,493. (No model.)

To all whom it may concern:

Be it known that I, PETER GALLIEN, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Car-Couplers, of which the following is a full, clear, and exact description.

The object of the invention is to provide an automatic double-lock coupler for freight and passenger cars and adapted for use in connection with pin-couplers.

A further object of the invention is to construct the coupler in a durable and economic manner, rendering it readily adaptable to any form of car, and to provide a simple device for effecting a release of the coupling-bar from the top, sides, or platform of said car.

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 characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improved coupler, a portion of the releasing mechanism being in section. Fig. 2 is a plan view of two couplers in coupled position, a portion of the releasing device being in section. Fig. 3 is a vertical section through coupled draw-heads and through a portion of the bottom of the car, and Fig. 4 is a partial plan view of a slightly-modified form of the improved coupler.

In carrying out the invention the draw-head A is made open at the top, and is provided with the usual coupling-chamber 10, and any approved form of draw-bar 11 is secured to the said draw-head. A pocket 12 is vertically produced in each side of the draw-head near the front, the said pockets extending from the top to a point at or near the bottom of the draw-head, as shown in Fig. 3. A latch 13 is located in each of the said pockets 12, corresponding in width to the depth of the pocket, and each latch is pivoted near its forward end at the forward portion of the pocket to which it belongs by means of a suitable pivot-pin 14, as shown in Figs. 1 and 2. The rear or free ends of the latches 13 of the draw-

head are drawn together to a certain extent by means of a spring 15.

The draw-head is provided with a coupling-bar 16, which is pivoted at its inner end on a pin 17, horizontally located in the back portion of the coupling-chamber 10. The coupling-bar is of sufficient length to extend some distance beyond the front of the draw-head, and terminates at its outer end in a head 18, substantially arrow-shaped, the said head being provided with oppositely-inclined sides 18^a and rear shoulders 18^b, the said shoulders having, preferably, an outward inclination, being adapted in entering an opposing draw-head to engage with the free ends of the latches 13 of the same. The extreme forward end of the coupling-bar head is ordinarily straight, and said head is provided with an opening 19 to receive a coupling-pin when the improved draw-head is to be coupled with a link-and-pin coupler.

The top and bottom faces of the coupling-bar head are inclined at their outer ends, the inclinations being in direction of each other, whereby a central sharp edge is formed at the extremity of the head, as illustrated in Fig. 3. A cam 20 is mounted to revolve upon a pin or a post 21, secured to the bottom portion of the body B of the car or the platform thereof, the cam occupying such a position as to be located between the opposing latches 13 of the draw-head when said draw-head is in position beneath the car. The cam is of elongated or substantially oval construction, and normally its longitudinal axis is parallel with the corresponding axis of the draw-head, and when the cam is thus placed the inner ends of the latches 13 will be held somewhat closely together by the spring 15; but when the cam is turned to present its end portions to the latches 13 the said latches will be forced apart sufficiently to permit the head of the coupling-bar that may be in engagement with the latches to leave the draw-head. A link 22 is pivotally connected with one end of the cam 20, and the link is ordinarily connected to one end of a lever 23, fulcrumed beneath the car and connected with a hand-lever 24, which may be located on the platform of the car, or may be operated from the

top of the car, or from either of its sides. In the operation of this draw-head, when opposing draw-heads are brought together, the coupling-bars of the draw-heads will ride upon one another, as shown in Fig. 3, entering the opposing draw-heads, and owing to the tapering form of the heads of the coupling-bars the said heads will force open the latches 13, and after the heads have passed these latches the shoulders 18^b of the heads will be in engagement with the inner or free ends of the latches, as shown in Fig. 2, thus effecting an automatic and positive coupling. When the draw-heads are to be uncoupled, the cams 20 of each draw-head are carried transversely of the draw-heads, forcing apart the latches 13 which they control, so that the heads of the coupling-bars may be withdrawn from the draw-heads with which they were in locking engagement.

In Fig. 4 I have illustrated the coupling-bar 16 as being a continuation of the draw-bar 11, and in this event the coupling-bar passes through a slot or a recess 25 in the draw-head and operates independently of the same.

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

1. A car-coupler comprising a chambered coupling-head, provided with a pocket in each of its side walls, latches pivoted in said pockets, a spring for moving the free ends of said latches toward each other, and a coupling-bar having its rear end pivoted in the rear end of

the coupler-head so as to swing vertically to engage either the upper or lower side of a similar bar of another coupling-head, the said bar having lateral projections to engage the latches of said other coupling-head, substantially as specified.

2. A car-coupler comprising a chambered head open at the top and having inwardly-swinging spring-controlled wings extending from the top to the bottom of the side walls, a cam having a support independent of the draw-head for moving said latches outward, and a coupling-bar pivoted in the draw-head and having an arrow-point head the rear shoulders of which are arranged at an acute angle to the body portion to engage squarely with the ends of latches in another coupling-head, substantially as specified.

3. A car-coupler comprising a chambered coupling-head, provided with a pocket in each of its side walls, latches pivoted in said pockets, a spring for moving the free ends of said latches toward each other, and a coupling-bar mounted to swing vertically in said coupling-head so as to engage either the upper or lower side of a similar bar of another coupling-head, the said bar having lateral projections to engage the latches of said other coupling-head, substantially as specified.

PETER GALLIEN.

Witnesses:

EDWARD M. CLARK,
CLARENCE P. WILSON.