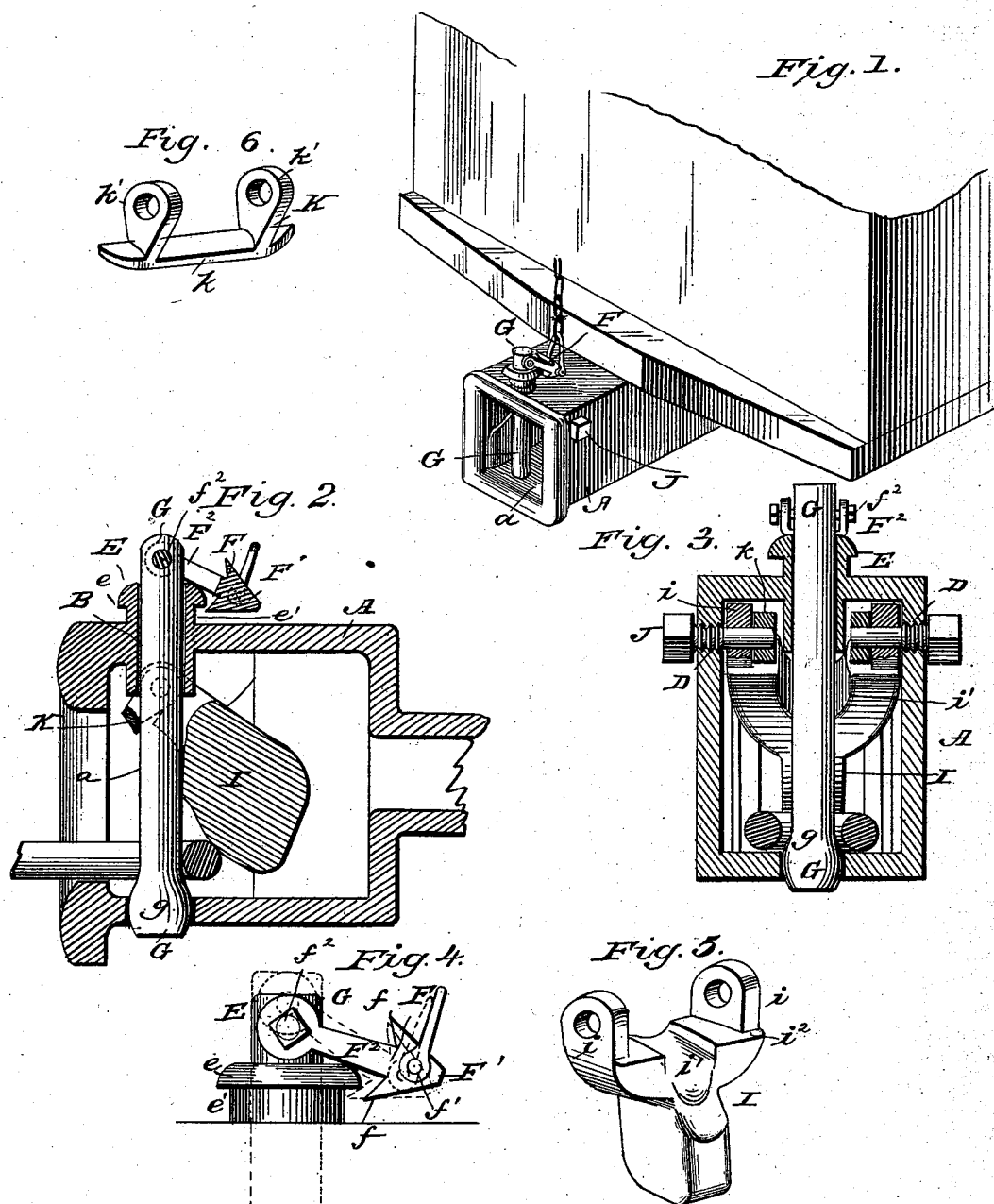


(No Model.)

B. F. LAIRD.
CAR COUPLING.

No. 380,208.

Patented Mar. 27, 1888.



WITNESSES:

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BUSH F. LAIRD, OF OCEAN SPRINGS, MISSISSIPPI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 380,208, dated March 27, 1888.

Application filed November 23, 1887. Serial No. 256,017. (No model.)

To all whom it may concern:

Be it known that I, BUSH F. LAIRD, of Ocean Springs, in the county of Jackson and State of Mississippi, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

My invention is an improvement in car-couplings; and it consists in certain features of construction and novel combinations of parts, as will be described and claimed.

In the drawings, Figure 1 is a perspective view of my improvements in place on a car. Fig. 2 is a vertical longitudinal section of a draw-head provided with my improvements. Fig. 3 is a vertical cross-section of the draw-head and improvements. Fig. 4 is a detail perspective view illustrating the operation of the pin-anchor. Fig. 5 is a detail view of the swing-rest or pin-support, and Fig. 6 is a detail view of a supplemental pin-support.

The draw-head A has a link-mortise, *a*, upper and lower pin-openings, B C, and lateral holes D for the bolts or pins which form pivots for the pin-supporting devices. It is usual to augment the top bearing, B, for the pin by forming flanges depending from and projecting above said top bearing and surrounding the same, the top flange, E, being utilized as a bearing or portion for engagement by the pin-anchor. This provision of flanges above and below bearing B extends such bearing, enabling it to guide the pin better and furnish more support for such pin. Manifestly, these extensions or flanges may be secured by casting them integral with the draw-head or forming them separate from and suitably attaching them to such draw-head, as may be desired.

The bearing E for the pin-anchor is by preference circular and provided with a rib or head, *e*, for engagement by the anchor, such rib being preferably secured by forming a groove, *e'*, below it, as shown. The pin-anchor F is preferably made in the form of a link pivoted at one end to the pin G, near the upper end of the latter, and having at its opposite end a hook or shoulder, *f*, to engage the bearing of the draw-head.

In the construction shown the anchor is so connected with the pin that it may fall in either of two opposite directions, and is provided with two hooks or shoulders, *f*, on two opposite sides, so that it may fall in either direction

and will properly engage the bearing in either case. In the construction shown the pin is free to rotate, so that to enable the proper engagement of the anchor with the bearing I form the latter circular or endless and encircling the pin-opening, so that no matter at what point the anchor may fall it will engage the bearing. Manifestly should the pin be prevented in any way from rotating and the pin-anchor be arranged to fall only in one direction but a single hook or shoulder on the said anchor would be necessary, and a bearing on but one side of such pin would be required. I prefer, however, to arrange the anchor to fall in either direction and to provide bearings on opposite sides of the pin, as thereby a better action of the anchor is secured, and it is also preferred to make the bearing circular in connection with the coupling-pin free to rotate.

In operation, when the pin is in coupled position and the anchor is lowered, it will be in position for its hook or shoulder to engage the bearing of the draw-head, so that in case the pin should be jarred or pressed upward in any manner the anchor will engage the bearing and prevent the pins being drawn or forced up in use.

In order to adjust the anchor out of position to engage the bearing when it is desired to raise the pin, I preferably arrange said anchor to be operated out of such position by the chain or other connection, H, employed to elevate the pin. This coaction of the pin-lifting connection and anchor is preferably effected by making the anchor the medium through which the lifting-connection unites with the pin.

In specifically describing the anchor F it may be said to have an arrow-head, F', provided at its ends with studs *f'*, to facilitate the attachment of the lifting-connection to it, and arms F², extended from the head and connected by a suitable bolt, *f*², or other suitable means with the coupling-pin G. This pin G is usually inserted in the draw-head from below and has on its lower end an enlargement, *g*, which prevents the pin being drawn upward out of the draw-head.

The swing-rest or pin-support I has at its upper end ears *i* at its opposite sides, perforated for the passage of the pivot-pins J, and has a cut-away portion or mortise, *i'*, in its upper side to receive the coupling-pin, and is

provided in its front side with a shoulder, i^2 , forming a seat for the cross-bar k of the supplemental pin-support K. This pin-support K has near its ends eyes or loops k' , which receive the points of the pivot-pins J, on which this supplemental pin-rest is supported.

In operation the pin, when raised, is supported on the swing-rest I, which swings forward under the pin. A link entering the draw-head engages the swing-rest and forces said rest back, when the pin will fall between the swing-rest and the supplemental pin-support and through the link, securing the same. If it is desired to uncouple the cars when they are jammed together in a train, the coupling-pin may be raised, when the supplemental support will swing under the pin and will hold it elevated, so that when the cars are drawn apart they will be uncoupled, as will be readily understood, the swing-rests swinging forward and supporting the pin.

It will be noticed that the pin-support rests normally in the path of the pin, and by its weight counterbalances and holds the supplemental pin-support out of such path; but when the pin-support is pushed rearwardly into the draw-head—as when several cars of a train are jammed together and the coupling-pin is raised—the supplemental pin-support will swing into the path of and below the coupling-pin, so that as the cars are drawn apart the coupling-pin will be out of the path of the link, and the uncoupling of the cars will be effected.

Having thus described my invention, what I claim as new is—

1. In a car-coupling, the draw-head having a pin-opening and bearings adjacent to and on the opposite sides of same, combined with the pin fitted to said opening, and a pin-anchor connected at one end to the pin and movable to one or the other side thereof and provided at the opposite sides of its movable end with hooks or shoulders whereby to engage the bearings on either side of the pin-opening, substantially as set forth.

2. In a car-coupling, a draw-head having a pin-opening and a bearing surrounding the same, combined with an anchor pivoted at one end to the coupling-pin and having an arrow-

like head at its opposite end forming shoulders or hooks on its opposite sides, substantially as and for the purposes specified.

3. The combination of the draw-head having a bearing, the coupling-pin, the pin-anchor constructed with an arrow-like head and having an arm or arms extended therefrom and pivoted to the pin, and the pin-lifting connection secured to said head, substantially as set forth.

4. In a car-coupling, a pin-anchor constructed with an arrow-like head and having an arm or arms whereby such head may be connected with the coupling-pin, substantially as set forth.

5. In a car-coupling, the combination of the draw-head, the pivoted swing-rest or pin-support, and the supplemental pin-support pivoted and adapted to operate substantially as set forth.

6. In a car-coupling, the combination of the draw-head, the pivoted swing-rest or pin-support, and the supplemental pin-support pivoted concentrically with said pin-support, substantially as set forth.

7. A car-coupling having a pin-seat movable into and out of the path of the coupling-pin and provided with a supplemental pin-support movable normally into the path of the pin when the pin-support proper is pushed rearwardly out of normal position, whereby the coupling-pin may be held out of coupled position when a train of cars is jammed together, substantially as described, and for the purposes specified.

8. The combination, in a car-coupling, of the draw-head, the pin-support having a seat or shoulder, i^2 , and the supplemental pin-support having a cross-bar arranged to rest on said seat, substantially as set forth.

9. In a car-coupling, the combination of the draw-head, the swing-rest or pin-support having a cut-away portion or mortise, i' , and a seat, i^2 , and the supplemental pin-support having a cross-bar arranged to rest on said seat, substantially as set forth.

BUSH F. LAIRD.

Witnesses:

E. Z. LAIRD,
M. Z. LAIRD.