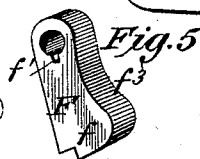
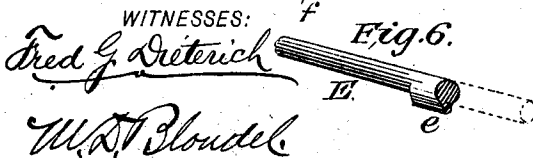
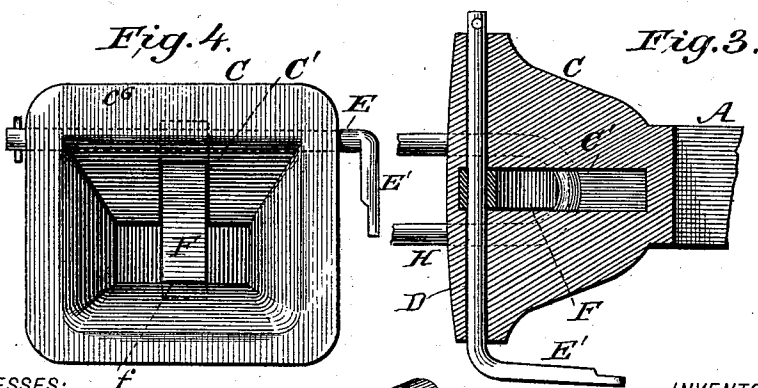
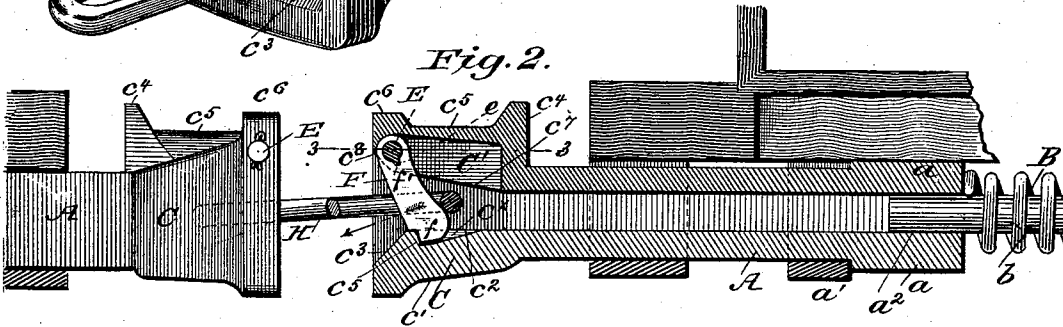
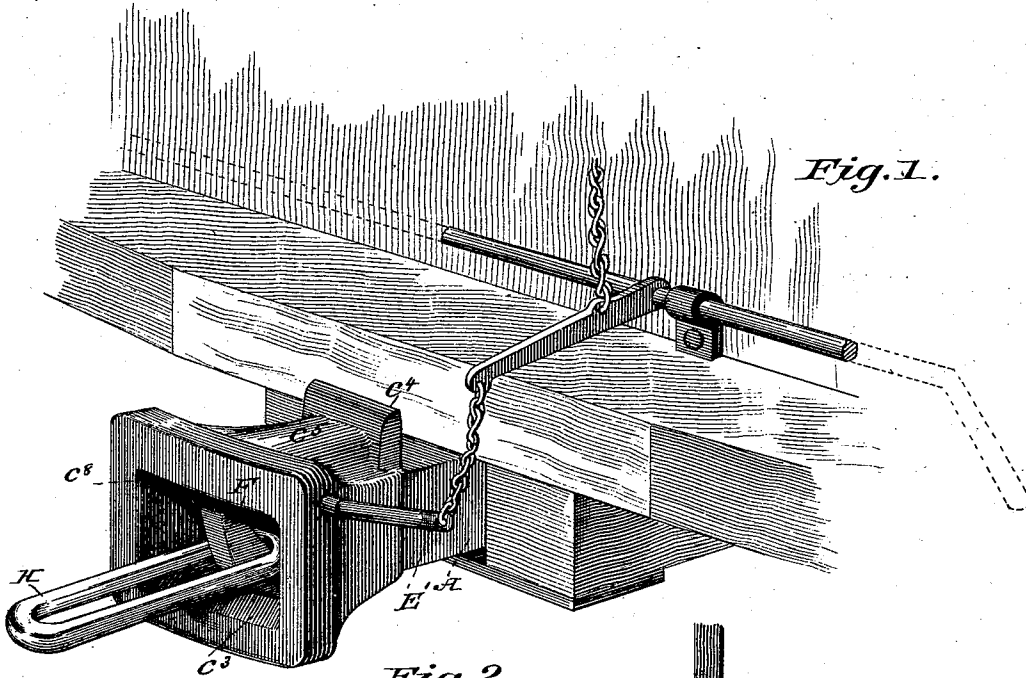


(No Model.)

E. J. LAHAN.
CAR COUPLING.

No. 517,753.

Patented Apr. 3, 1894.



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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 517,753, dated April 3, 1894.

Application filed November 11, 1893. Serial No. 490,618. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. LAHAN, residing at Quincy, in the county of Adams and State of Illinois, have invented a new and Improved Car-Coupling, of which the following is a specification.

My invention has for its object to provide a simple, inexpensive and efficient car coupling, which will automatically couple when the drawheads come together, whereby the necessity of the brakeman or switchman going between the cars is entirely avoided, and in which the uncoupling operation can be effected from the sides or top of the car.

It has also for its object to provide a drawhead formed with the usual flaring mouth, but with its sides, top and bottom solid, whereby the interior coupling members will be thereby the more effectively protected from the weather and such head rendered more stable and compact.

With other minor objects in view, which will hereinafter appear, the invention consists in such novel combination and peculiar arrangement of parts as will be first described in detail and then pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved coupler. Fig. 2 is a view of two drawheads, constructed in accordance with my invention, one of the drawheads being shown in longitudinal section. Fig. 3 is a horizontal section of one of the drawheads on the line 3—3 Fig. 2. Fig. 4 is a front view of one of the drawheads. Fig. 5 is a perspective view of the coupling hook detached and Fig. 6 is a perspective view of a portion of the combined coupling hook, pivot, and uncoupling bar, detached.

In the practical construction my improved coupling has its draw bar or shank A formed preferably hollow, its rear end terminating with the usual retaining shoulders *a*, whereby the draw bar is held from pulling out from its guide *a'*; the rear end of the bar being also provided with a circular opening *a''*, whereby it will readily slide on the buffer rod *b*, about which the spring B is held, in any approved manner. The front end of the bar terminates in the head proper C, which as

shown most clearly in Fig. 3, is somewhat shorter longitudinally, than the ordinary coupling heads, its sides being extended laterally whereby a wide bumping face *c* is provided. It will be noticed by reference to Fig. 2, that the bottom of the head curves down as at *c'* its upper or mortise face being approximately horizontal as at *c''*, and terminating at the front with the usual bevel portion *c'''*. On the top, the head has a stop portion *c''''*, which is reinforced by a straight portion *c'''''*, which connects it with the upper front edge *c''''''*, such construction providing a solid top portion, the lower or mortise face of which inclines downward and rearward from the mouth flaring portion, as indicated by *c''''''''*, centrally of which is formed a recess or seat *C'*, the front end of which terminates at the flared end *c''''''''''* as most clearly shown in Fig. 2.

So far as described, it will be noticed that the drawhead has its top, bottom and side walls formed solid, without an opening of any kind, such construction not only adding great strength to the head, but also entirely keeping rain or snow from entering the link chamber from the top and sides. The front upper or solid end of the head has a transverse aperture D which bisects the upper front end of the recess *C'*, and such aperture extends entirely across the drawhead as shown most clearly in Fig. 3, to form a long bearing for a combined pivot and uncoupling bar E which snugly fits, and is held to turn in such aperture.

F indicates a coupling member, in the nature of a gravity latch, the upper end of which seats in the upper front end of recess *C'* and is pivotally supported on the bar E, while its lower weighted end has a notched hook portion *f*, which when at its normal position fits a recess *C''* in the bottom of the drawhead, and abuts a stop shoulder *c''''''* as most clearly shown in Fig. 2. It will be noticed by reference to such figure and Fig. 4, that the upper or pivot end of the latch is held within the recess *C'* in such a manner, that such pivot end is cased in, as it were, and protected from the weather, as also laterally braced by the side walls of such recess, which construction in connection with the recess in the bottom in which the hook portion *f* fits, serving to

hold the latch rigid from sidewise movement, thereby relieving the rocker bar E from a twisting strain.

As a convenient means of attaching the latch to the bar E, I form the said bar with a feather *e*, which is adapted when inserted sidewise into the drawhead, to fit a spline *f'* in the latch, see Figs. 2, 5 and 6. By pivoting the latch in the manner shown, a long and solid bearing therefor is provided, at the front end of the coupling through its upper solid portion, thereby avoiding the necessity of opening into the link mortise proper, as well as allowing for a long sweep for the lever or crank member E', formed on one end of the bar E. To further relieve the bar E from a too great draft strain, the stop shoulder is arranged back of the vertical or pivotal axis of the latch, whereby the latch will be held inclined rearwardly, and the rear edge of such latch is curved inwardly as at *f*³. By this arrangement the greatest amount of pulling strain of the link H will be diagonally downward, against the stop shoulder C' in the direction indicated by the arrow.

The latch recess it will be noticed extends rearward under the straight portion *c*⁵ of the top of the drawhead, in which the latch is thrown, as the link enters, it being understood that such latch drops by gravity between such link as its front end passes rearward into the mortise.

Any suitably arranged means may be employed for uncoupling the cars from the sides or top of the car, such for instance as shown in Fig. 1.

From the foregoing description taken in connection with the drawings, it will be readily seen that, the construction shown and described, embodies the elements of compactness, strength and efficiency. The head is practically without an opening, other than its mouth, rendering it practically weather proof, and reducing the danger of the several parts being disconnected to the minimum.

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

1. An improved car coupling comprising a draw-head having its top, bottom and side walls formed solid, provided with a vertical abutting extension on its top, and a reinforce portion connecting such extension and the upper front edge of the head, said head having a link mortise formed with an upper face inclined from the front downward, said reinforce portion having a central longitudinal seat or recess terminating at the front at a point behind the upper front edge, a shaft journaled transversely in the upper solid edge of the head, passed through the front end of the aforesaid recess, a gravity pin journaled on such portion, adapted to snugly fit the said recess when pushed up, and having a stop portion adapted to engage the bottom of the link mortise to limit its down movement all substantially as shown and for the purposes described.

2. As an improvement in car couplers, the combination of the shank *a*, the head portion C, having a mortise formed with non-apertured top, bottom and side portions, and having its front or bumping face extended laterally, and formed at its upper end *c*⁶ with a transverse bearing, and having a reinforced portion provided with a recess C', its front end bisecting the transverse bearing, said reinforced portion terminating in an abutment *c*⁴, the bottom of mortise of the head having a recess provided with a stop *c*⁵, at a point to the rear of the front end of the upper recess, the rock shaft E, the link F having a keyed connection therewith and formed with a curved rear face *f*³ all arranged substantially as shown and for the purposes described.

EDWARD J. LAHAN.

Witnesses:

JOHN P. McDONNELL,
THOMAS J. LAHAN.