(No Model.)

E. M. BUTLER.

CAR COUPLING.

No. 478,087. Patented July 5, 1892.

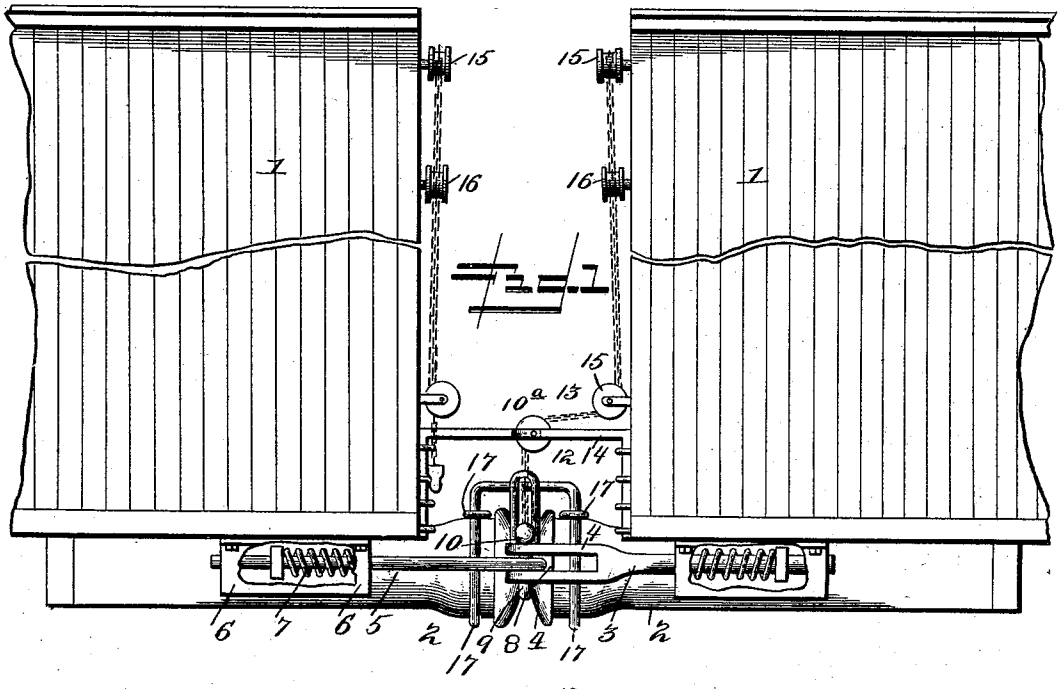

Fig. 1.

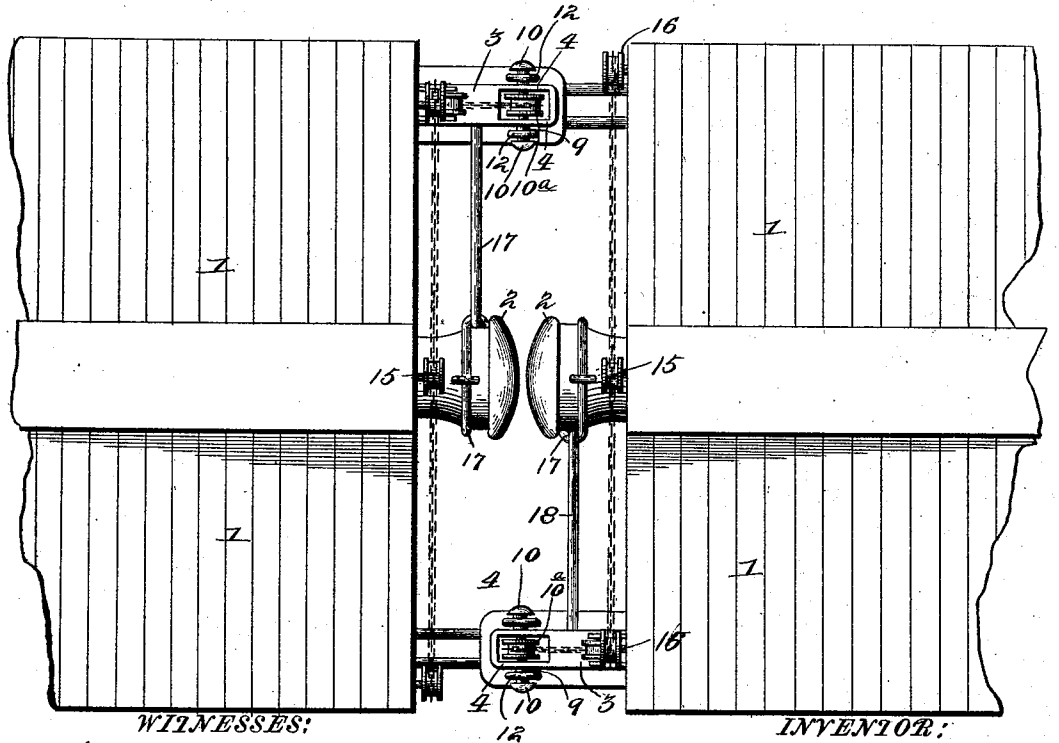

Fig. 2.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 478,087, dated July 5, 1892.

Application filed September 28, 1891. Serial No. 407,021. (No model.)

To all whom it may concern:

Be it known that I, EDWIN MILES BUTLER, a citizen of the United States, and a resident of Virden, in the county of Macoupin and State of Illinois, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in automatic car-couplers, the object being to provide an improved construction of same, whereby superior advantages are obtained with respect to simplicity and economy in construction and efficiency in operation.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a side elevation of portions of two cars provided with my invention. Fig. 2 is a plan view of the same.

My invention is adapted to be applied to cars now in use provided with the ordinary bumpers, thus obviating the necessity of removing the same, although it can be employed with equal advantage to new cars without any bumpers.

In the drawings I have shown the invention in connection with the old-style bumpers, and in said drawings the reference-numeral 1 designates the cars, and 2 the bumpers thereof.

The coupling devices are placed on each side of the bumpers, and as they are identical in construction a description of one will suffice for both.

The numeral 3 denotes the coupling-head, secured to the car in any desirable manner and having bifurcated end consisting of the parallel arms 4, between which the coupling-link passes and is located when the cars are coupled. This coupling-link is formed substantially like the ordinary link, except that it has a rearwardly-projecting rod 5, working in bearings 6, secured to the under side of the car. A coiled spring 7 embraces this rod, so as to take up the shock in coupling and preventing a dead-pull in starting. The coupling-head may also be provided with a similar rod and spring, if desired, and the arms 4 are provided with aligned holes to receive the coupling-pin 8, which has laterally-projecting arms or lugs 9, with headed ends 10. These arms work in vertical guides 12, secured to the coupling-pin, consisting of metallic rods bent upon themselves at the centers and the ends attached to the coupling-head at each side of the upper arm. Connected with the coupling-pin is a cord or chain 13, which passes over a pulley 10^a in an arm 14, secured to the car, and from thence said cord passes to a pulley 15, secured to the top of the car, where it is divided and passes, respectively, through pulleys 16 on each side of the car.

The numeral 17 denotes a pin-holder, consisting of a metallic bar or rod passing around and secured to the bumper and having one end bent upwardly and transversely and then horizontally outward, forming an arm 18, so as to lie between the guides near the upper ends thereof. As before stated, these coupling devices are identical in construction; but they are arranged reversely to each other—that is to say, the coupling-head on one car is so located as to engage with the link on the opposite car, as is clearly shown.

The operation is as follows: Supposing the cars to be coupled, and it is desired to uncouple the same, the cars are made to approach each other, when the bumpers 2 will strike each other, forcing them inwardly and causing the arms 18 to be carried back out of the path of the lateral arms of the coupling-pins. The latter can now be raised by means of the cords 13 and the cars uncoupled, and the pressure on the bumpers being relieved the arms 18 will spring forward and pass under said transverse arms and hold the pins at their elevated position. When the cars are to be again coupled, the links will enter between the bifurcated arms of the coupling-head, and the bumpers coming together will force back the arms 18 and allow the pins to drop and couple the cars.

From the above it will be seen that the cars automatically couple themselves, thus

rendering it unnecessary for a brakeman or other person to pass between the cars for that purpose.

Having thus described my invention, what I claim is—

1. In a car-coupling, the combination, with the coupling-head having a bifurcated end with aligned holes and the coupling-link, of the vertical guides, the bumpers having pin-holding arms, the coupling-pin having lateral lugs or arms, and the operating cords or chains, substantially as described.

2. In a car-coupling, the combination, with the coupling-head having bifurcated end with aligned holes, the coupling-link having rearwardly-projecting rod, the bearings for said rod, and the coiled spring encircling the same, of the vertical guides consisting of the metallic rods or bars bent over upon themselves and their ends secured to the coupling-head, the bumpers having the rods secured thereto with the ends bent upwardly and transversely and then horizontally outward, the coupling-pins having lateral headed lugs or arms, and the operating-cords, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

EDWIN MILES BUTLER.

Witnesses:
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