(No Model.)

C. PALMER.

CAR COUPLING.

No. 534,660. Patented Feb. 26, 1895.

Fig. 1.

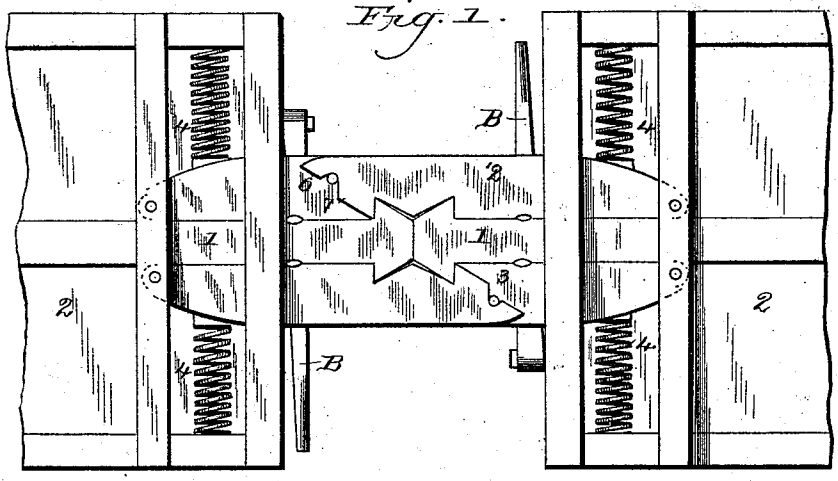


Fig. 2.

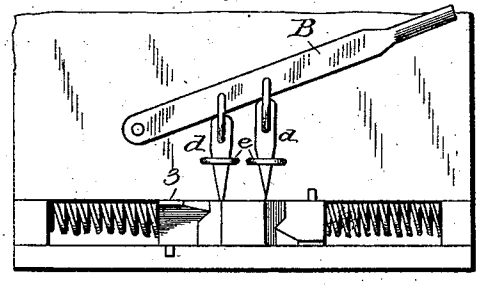


Fig. 3.

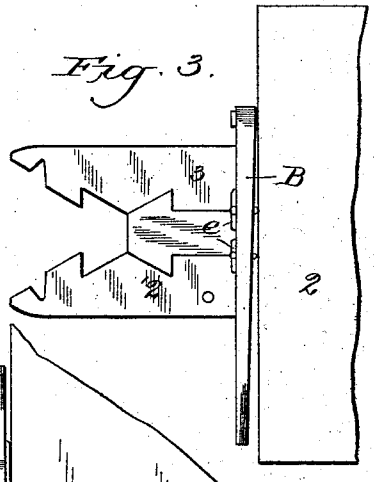
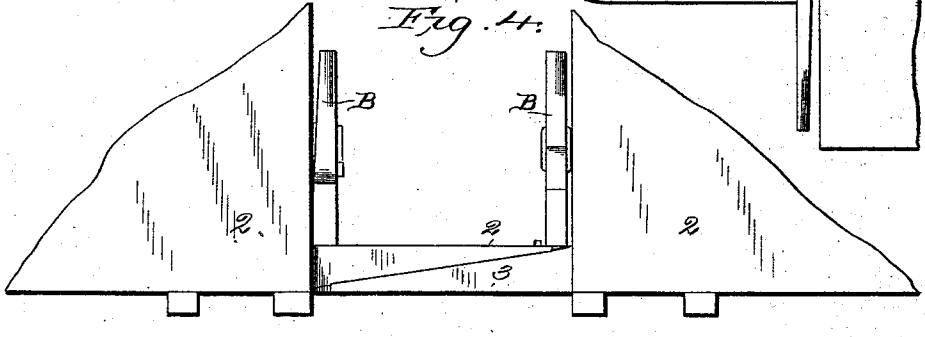


Fig. 4.



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CHARLES PALMER, OF BURBANK, NEBRASKA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 534,660, dated February 26, 1895.

Application filed April 11, 1894. Serial No. 507,140. (No model.)

To all whom it may concern:

Be it known that I, CHARLES PALMER, a citizen of the United States, and a resident of Burbank, in the county of Boxbutte and State of Nebraska, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The purpose of the present invention is to provide a reversible car coupling, that is a device which will couple the cars no matter which ends are run together. This car coupling in common with others aims to obviate the necessity of a person going between the cars to couple them when making up a train, thereby lessening the loss of life and injury to limb resulting from the coupling of cars in the old style of link and pin.

The present invention relates more particularly to that class which employs twin or similarly constructed jaws which co-operate with an approximately arrow shaped bumper to produce the coupling.

The improvement consists, essentially, of twin jaws one jaw of each pair occupying a different elevation and the corresponding jaws tapering on their meeting faces to allow and compensate for the thickness so that when the cars are run together the jaws will glide past each other and occupy approximately the same space as if the jaws were of the same thickness throughout their length and were rigidly attached at their ends to the cars.

The improvement also consists of stops provided near the inner ends of the jaws to engage with the outer ends of the opposing and corresponding jaws to limit the relative inner movement of the jaws to hold the same in about the horizontal plane of one another.

The improvement also further consists of an uncoupling lever provided with wedge shaped prongs which are adapted to be forced between the opposing edges of the jaws and bumper, the said prongs having a pivotal connection with the lever and directed in their movements by suitable guides.

The improvement further consists of the novel features and the peculiar construction of the parts which will be hereinafter more fully described and claimed, and which are shown in the annexed drawings, in which—

Figure 1 is a bottom plan view of the opposing ends of two cars connected by the improved coupling. Fig. 2 is a front view of the coupling. Fig. 3 is a top plan view of one-half of the coupling as provided on one end of the car. Fig. 4 is a side view of the coupling, the parts being connected.

Similar letters and numerals refer to corresponding parts of the several views of the drawings, in which the numeral 1, designates a bumper which is attached to the car 2 in any well known manner. This bumper is provided with an approximately arrow shaped head, and is designed to receive the end thrust of the cars when the latter are run together in making up a train. The jaws 2′ and 3 are of similar construction and are placed one on each side of the bumper 1, and are pivoted at their inner ends so that the outer ends are adapted to swing or move in a horizontal plane. Springs 4 are conveniently disposed to operate on the jaws 2′ and 3 to press the same inward against the sides of the bumper 1, which latter limits the inner movement thereof and normally holds the jaws in operative relation.

The free ends of the jaws are constructed to engage with the opposite sides of the arrow shaped bumper on the car to be coupled, and have projecting portions 6 which are adapted to extend beneath headed stops or projections 7 near the inner end of the corresponding opposite jaws. The jaws 2′ and 3 taper gradually from the inner to the outer end, and are arranged in an inverse order, that is the jaw 2′ tapers on its upper face and the jaw 3 on its under face. In arranging the jaws on a car, they will be so placed that the jaw 2′ will always occupy the same relative position with reference to the end of the car and bumper, and the jaw 3, will be similarly located. By this arrangement of the jaws the meeting faces thereof will be correspondingly tapered or inclined, and match when the cars are coupled. The free ends of the jaws being engaged by the headed stop or projection 7 will be held close against the inner end of the overlapping jaw when the coupling is in efficient service. It will be seen that the jaws

are also constructed to embrace the arrow shaped head provided on the car to which the jaws are pivotally attached. Therefore the draft is transferred from the pivotal supports of the jaws to the bumpers or draw bars 1.

The uncoupling lever B is provided with a pair of wedge shaped prongs *d*, which work through suitable keepers *e*, by which they are guided in their vertical movements. The penetrating or sharpened ends of the prongs *b* are adapted to enter between the opposing edges of the jaws and the bumper to move the free ends of the jaws outward, and disconnect them from the bumper of the car to be released. An outward movement of one set of jaws through the stops or projections 7 and the end projections 6 effects and produces a corresponding outward movement of the opposite set of jaws, whereby both sets of jaws are simultaneously disengaged from the two bumpers on the operation of either one of the uncoupling levers B.

The foregoing is the preferred form of construction and relative disposition of the parts. Obviously, slight changes and modifications can be made in adapting the invention to different styles and makes of cars without departing from the spirit of the invention, and are contemplated in the present construction.

Having thus described the invention, what is claimed as new is—

1. In a car coupling, the combination with an approximately arrow shaped bumper of twin jaws adapted to engage with the arrow head of the bumper on the same car to which the jaws are pivoted and also engage with the corresponding arrow shaped head of the bumper on the car to be coupled, substantially as set forth.

2. In a car coupling, the combination with pairs of twin jaws, inversely tapered on their opposing or meeting faces and having projecting end portions, of stops or projections near the inner ends of the jaws to engage with the free ends of the jaws carried by the opposing car, substantially as described for the purpose specified.

3. In a car coupling, the combination with a bumper and twin jaws, of an uncoupling lever provided with wedge shaped prongs which are adapted to be pressed between the opposing edges of the jaws and bumper, substantially as set forth.

4. In a car coupling, the combination with a bumper and twin jaws of a lever, and wedge shaped prongs loosely connected with the said lever and guides to direct the movements of the said prongs in the operation of the lever, substantially as set forth.

5. The herein shown and described car coupling comprising a bumper having an approximately arrow shaped head, twin jaws pivoted at their inner ends to the draw bar and having their outer ends constructed to engage with the arrow head of the bumper on the car to which the jaws are connected and also engage with the bumper on the car to be coupled, the upper and lower faces of the jaws being inversely tapered, and the jaws having projecting end portions, springs to normally hold the jaws against the sides of the bumper, stops or projections on the beveled or inclined faces of the jaws, an uncoupling lever, and wedge shaped prongs having connection with and operating by the said lever, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES PALMER.

Witnesses:
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