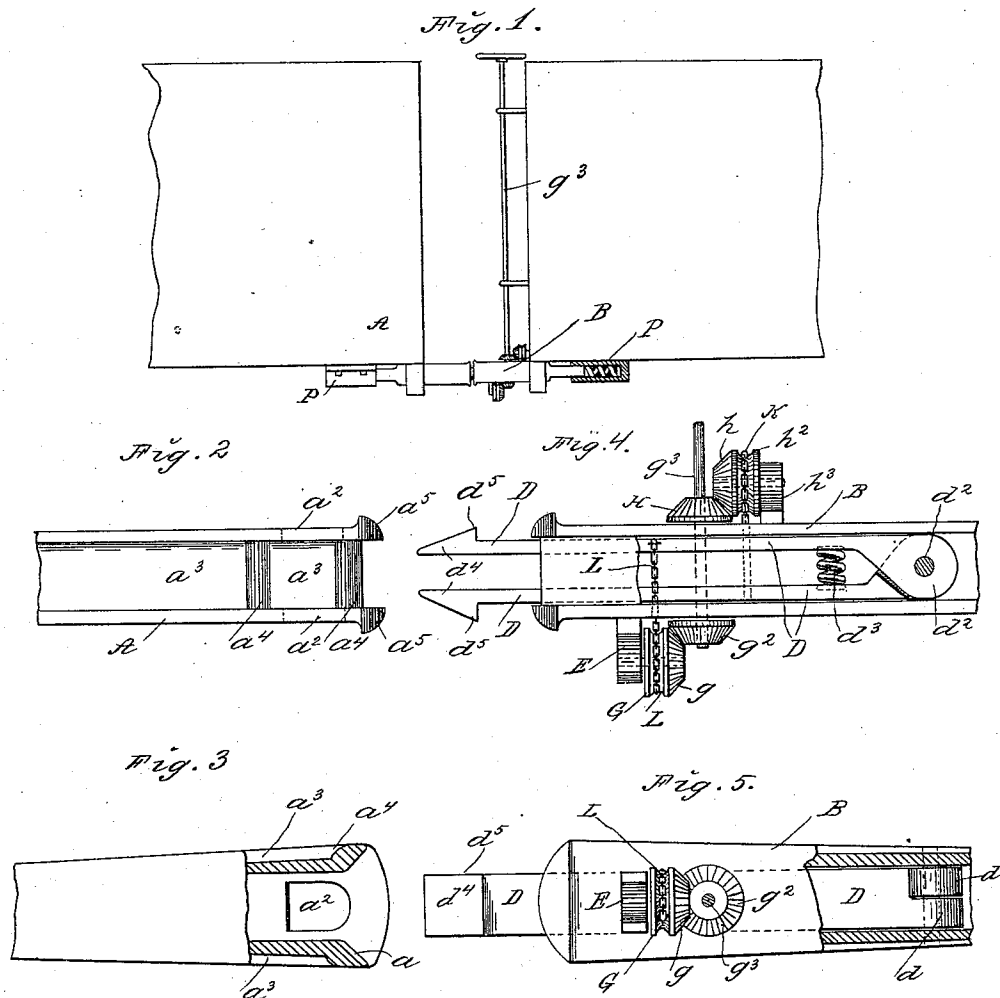


(No Model.)

M. A. WILLIAMSON.
CAR COUPLING.

No. 575.748.

Patented Jan. 26, 1897.



WITNESS:

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INVENTOR

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MARTIN ANDREAS WILLIAMSON, OF MURRAY, UTAH.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 575,748, dated January 26, 1897.

Application filed May 18, 1896. Serial No. 591,962. (No model.)

To all whom it may concern:

Be it known that I, MARTIN ANDREAS WILLIAMSON, a citizen of the United States, and a resident of Murray, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to car-couplers; and the object thereof is to provide an improved device of this class by which cars may be automatically coupled, a further object being to provide improved means for disconnecting the separate parts of the coupling, so that the cars may be separated; and with this and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side view of the ends of two cars which are connected by means of my improved coupling; Fig. 2, a side view of one part of the coupling device; Fig. 3, a sectional plan view thereof; Fig. 4, a sectional side view of the other part of the coupling device, and Fig. 5 a sectional bottom plan view thereof.

In the practice of my invention I provide a coupling device or devices for cars, which consists of two parts, one of which is adapted to be connected with one of the cars and the other with the other car. One of these parts comprises an oblong box or casing A, which is preferably rectangular in form in cross-section and which is open at its outer end and the open end of which is flaring or bell-shaped, as shown at a , and the top and bottom thereof are provided with openings a^2 , and the opposite sides are preferably provided with a longitudinal depression a^3 , and formed thereon, near the outer end, are transverse ribs or shoulders a^4 , by which additional strength is given thereto, and the extreme outer end, or the beveled or bell-shaped portion thereof, is enlarged and strengthened, as shown at a^5 , so as to form a buffer-head. The other part

of the coupler consists of an oblong box or casing B, which is somewhat similar in form to the box or casing A, and placed therein are two strong steel plates D, one of which is arranged at the upper and the other at the lower side of said box or casing, and each of which is provided at its inner end with a circular head d , whereby they are pivotally connected, as shown at d^2 , and placed between said plates D is a strong spiral or other spring d^3 , and the outer ends thereof, which project beyond the end of the box or casing B, are provided with wedge-shaped heads d^4 , which are provided with shoulders or projections d^5 , and the heads d^4 are adapted to be driven into the beveled or bell-shaped mouth or opening in the end of the opposite box or casing A. It will be understood that one of these parts is secured to each car, and when the same are driven together in the operation of coupling the cars the heads d^4 are forced into the bell-shaped opening of the box or casing A and the spring d^3 forces said heads outwardly, so that the shoulders or projections d^4 pass through the openings a^2 , and thus securely couple the cars together.

Formed in the bottom of the box or casing B is an outwardly-directed shoulder or projection E, on which is mounted a pulley-wheel G, the inner side of which is provided with a beveled gear g , which operates in connection with a beveled gear-wheel g^3 , mounted on a shaft g^3 and which passes vertically through the box or casing B and through the plates D and is provided with a beveled gear-wheel H, which operates in connection with a beveled gear h , formed on the side of a pulley-wheel h^2 , which is mounted on a shoulder or projection h^3 on the top of the box or casing opposite the shoulder or projection E.

The pulley-wheel h^2 is provided with a chain K, which is secured thereon and which passes through the top of the box or casing and through the adjacent plate D and is secured to the opposite plate D, and the pulley-wheel G is provided with a chain L, which is secured thereto and which passes through the bottom of the box or casing and through the adjacent plate D and is secured to the opposite plate D, and whenever it is desired to uncouple the cars the shaft g^3 must be revolved and the plates D will be drawn together by means of

the chains K and L, as will be readily understood, when the shoulders or projections d^5 on the wedge-shaped heads d^4 will be released from the box or casing A or the openings a^2 in the sides thereof, and said cars may be uncoupled.

My improved coupling is simple in construction and operation and is perfectly adapted to accomplish the result for which it is intended, and my invention is not limited to the form of the boxes or cases A and B nor to the exact form, construction, and arrangement of other features of the device as herein shown and described, and I reserve the right to make all such alterations therein and modifications thereof as fairly come within the scope of the invention.

The rod d^3 is adapted to be operated from the top of the car, as shown in Fig. 1, and the inner ends of the boxes or cases A and B are mounted in suitable bearings P, in which are mounted strong spiral springs, which constitute buffers and which are adapted to yield, as will be readily understood, when the cars are coupled or brought together in the operation of coupling.

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

1. The herein-described coupling devices for cars, which consist of two separate similar boxes or cases, which are adapted to be connected with the cars to be coupled, and each of which is provided with openings in their outer ends, the openings in one of said boxes or cases being beveled or bell-shaped and said box or case being provided with openings in the top and bottom, and the other being provided with two pivotally-connected plates, the outer ends of which project therefrom, and are provided with wedge-shaped heads, having outwardly-directed shoulders or projections, said plates being also provided with a strong spiral spring by which they are separated, and said heads being adapted to be driven into the opposite box or case in the operation of coupling the cars so that the shoulders or projections thereon, will enter the said openings in the top and bottom thereof, and devices for drawing said plates together so as to release the shoulders or projections on the heads thereof, from said openings when it is desired to uncouple the cars, substantially as shown and described.

2. The herein-described coupling devices for cars, which consist of two separate similar boxes or cases, mounted in suitable bearings in which are placed buffer-springs and one of which is connected with each of the cars to be coupled, said boxes or cases being each provided with openings in their outer ends, the openings in one of said boxes or cases being beveled or bell-shaped and said box or case

being provided with openings in its top and bottom, and the other being provided with two pivotally-connected plates, the outer ends of which project therefrom, and are provided with wedge-shaped heads, having outwardly-directed shoulders or projections, said plates being also provided with a strong spiral spring by which they are separated, and said heads being adapted to be driven into the opposite box or case in the operation of coupling the cars so that the shoulders or projections thereon will enter the said openings in the top and bottom thereof, and devices for drawing said plates together so as to release the shoulders or projections on the heads thereof, from said openings, and which are adapted to be operated from the top of the car, substantially as shown and described.

3. The herein-described coupling devices for cars which consist of two separate similar boxes or cases, which are adapted to be connected with the cars to be coupled, and each of which is provided with openings in their outer ends, the openings in one of said boxes or cases being beveled or bell-shaped and said box or case being provided with openings in its top and bottom, and the other being provided with two pivotally-connected plates, the outer ends of which project therefrom, and are provided with wedge-shaped heads having outwardly-directed shoulders or projections, said plates being also provided with a strong spiral spring by which they are separated, and said heads being adapted to be driven into the opposite box or case in the operation of coupling the cars so that the shoulders or projections thereon, will enter the said openings in the top and bottom thereof, and devices for drawing said plates together so as to release the shoulders or projections on the heads thereof, from said openings, consisting of a shaft which passes through the box or casing on which said plates are mounted, and through said plates, said shaft being provided at each side of the box or casing with a beveled gear-wheel, said beveled gear-wheels being adapted to operate corresponding gears, which are formed on pulley-wheels, which are suitably connected with said box or casing, and each of said pulley-wheels being provided with a chain or other device which passes through the adjacent side of the box or casing, and through the adjacent plate, and is connected with the opposite plate, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 22d day of April, 1896.

MARTIN ANDREAS WILLIAMSON.

Witnesses:

JOHN WADDELL,
NIELS LIND.