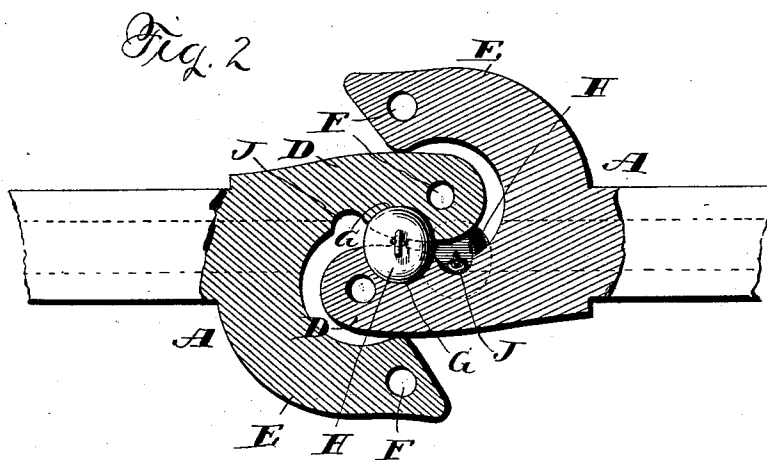
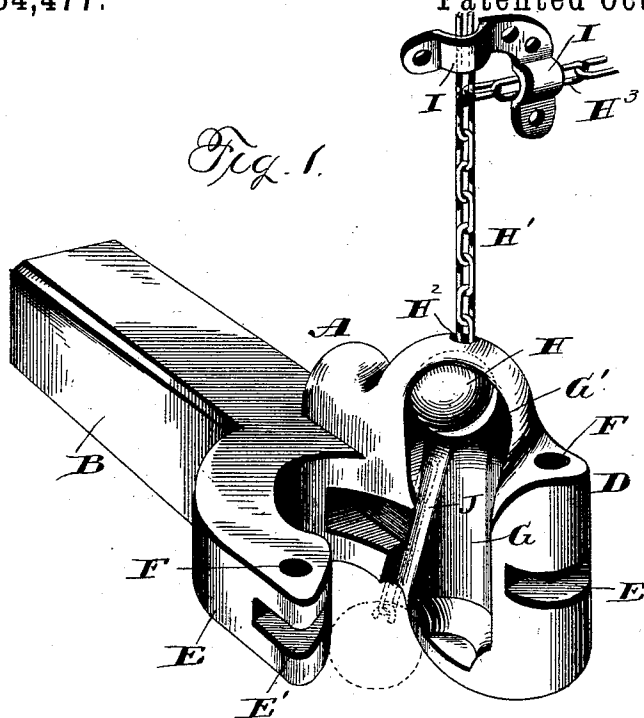


(No Model.)

O. TWEEDEN.
CAR COUPLING.

No. 484,477.

Patented Oct. 18, 1892.



Witnesses
G. J. Williamson.
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Inventor
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UNITED STATES PATENT OFFICE.

OLE TWEEDEN, OF WEST SUPERIOR, WISCONSIN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 484,477, dated October 18, 1892.

Application filed May 10, 1892. Serial No. 432,449. (No model.)

To all whom it may concern:

Be it known that I, OLE TWEEDEN, a citizen of the United States, residing at West Superior, in the county of Douglas and State of Wisconsin, have invented certain new and useful Improvements in Car-Couplings; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in car-couplers; and it relates more particularly to improvements in that class of couplers which are known as "twin-jaw" couplers, in which the common form of link-and-pin connections are dispensed with.

My invention has for its object to provide a simple, inexpensive, and durable form of coupling of the character described, in which the coupling of the cars is effected by the lowering of a small metallic ball within a recess provided within the entrances of the two adjacent couplers. When not in use, the ball is permitted to hang beneath the lower face of the draw-head, it being attached to the end of a chain, which chain is used in releasing the ball from its coupling or fastening position when in use.

The invention has for a further object to provide means whereby the ball may be raised from its locking position, so as to uncouple the cars either from the side or roof of the car without necessitating passing between the cars.

To these ends and to such others as the invention may pertain, the same consists in the peculiar construction and in the novel combination, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claims.

The invention is fully illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference

indicating the same parts throughout the several views, and in which drawings—

Figure 1 is a perspective view of one of the coupling devices with the coupling-ball shown in its raised position. Fig. 2 is a horizontal section through two of the couplers, the same being shown as locked together in accordance with my invention.

Reference now being had to the details of the drawings by letter, A designates a draw-head, which in general form of construction is similar to that of the twin-jaw draw-heads which are in common use. The rear end of the draw-bar B is provided with the usual spiral spring, which serves to counteract the shock sustained by contact in coupling. As the draw-heads are counterparts, a description of one will suffice.

The main arm D on the draw-head is, as will be observed, slightly curved outwardly from the body of the draw-bar, and its upper and lower edges extend for a considerable distance above and below the upper and lower edges of the opposite arm E of the draw-head, which latter arm E is curved outwardly from the longitudinal center of the draw-head upon the arc of a circle. The extreme ends of the arms D and E, it will be observed, are each provided with horizontal recesses, as shown at D' and E', within which recesses may be received the ordinary form of coupling-link in case it should at any time be desired to attach the coupler to a car provided with the common link-and-pin coupling. In such case the link is held within the recess by a coupling-pin passed vertically through an opening F, provided for the purpose. The inner face of the main arm or jaw D is provided with a groove G, which extends from the extreme upper edge of the said arm to a point near its lower edge, the said groove at its upper end being enlarged to form a substantially-annular chamber G'. It is not, however, essential that this chamber should be annular, as shown, as it is evident that the form of the chamber should in all cases correspond with the form of the locking-casting H, which is to be seated therein, and, although the form of said casting may vary, still I prefer the use of either an elliptical casting—such as I have shown in the drawings—or that it should be

in the form of a perfect sphere. This locking-casting H is suspended at the end of a chain H', which is passed through an opening H² at the upper end of a chamber G' and is extended to the roof of the car, and, if desired, may be provided with branch chains, as shown at H³, leading either to the side of the car or to such other convenient point as desired. These chains are passed through suitable guides or keepers I, and they serve as a means for raising the casting H when it may be desired to uncouple the cars, as will be readily understood.

When it is proposed to couple two adjacent draw-heads, one of the castings H is allowed to fall below the lower face of the draw-head, as indicated by dotted lines in Fig. 1 of the drawings, the chain resting within a vertical groove J, formed for its reception immediately at the rear of the groove G. The casting H of the other draw-head is raised until it enters the chamber G', and as soon as the two draw-heads contact the casting H is allowed to drop from its chamber G' into the groove G, where it serves to lock the draw-heads together.

It will be seen that the chamber G' serves to limit or stop the upward movement of the ball when lifted by the chains, and its position in line with and at the top of the groove G causes the ball to be guided or directed down into the latter. Since said groove G is not continued down through the side of the arm D, there is no danger of the ball falling down between and below the two draw-heads should the lifting-chains be so long as to permit it or should they break. By the employment of the ball, owing to its rounded sides, its dropping into place to couple two draw-heads is greatly facilitated and no careful manipulation or adjustment of it is necessary, as would be the case were a long pin employed.

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

1. In a car-coupling, the combination, with a draw-head recessed, as described, of a ball within said recess, said ball serving in coupling to engage said recess and a corresponding recess in a connecting draw-head and lock

the draw-heads together, substantially as described.

2. In a car-coupling of the character described, the combination, with two connecting draw-heads, of a ball seated within a chamber in one of said draw-heads and adapted to engage a recess formed between the contacting-faces of the two adjacent draw-heads and to lock the same together, substantially as shown and described.

3. In a car-coupling, the combination, with two connecting twin-jaw draw-heads having their inner faces recessed, as described, of a ball engaging said recesses to lock the draw-heads together and a lifting device for moving the ball out of the recesses, substantially as described, and for the purpose specified.

4. The combination, with two connecting draw-heads having their contacting faces recessed, as described, of a ball seated within the recess and serving to lock the draw-heads together, substantially as and for the purpose specified.

5. In a car-coupling, in combination with a draw-head of the class described having a recess or groove in the inner face of one of its arms and a chamber leading to the top of said groove, a ball adapted to be moved into and out of said chamber from and to the groove, substantially as and for the purpose described.

6. In a car-coupling of the class described, in combination with a draw-head having a recess or groove extending partially down the inner face of one of its arms, but not to its lower edge, a ball adapted to be placed in said groove, substantially as described.

7. In a car-coupling of the character described, in combination with the draw-head having a recess or groove extending partially down the inner face of one of its arms and a chamber leading to the top of the groove, a ball adapted to be moved into and out of said chamber from and to said groove, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

OLE TWEEDEN.

Witnesses:

DAN DANIELSON,
AMES TWEEDEN.