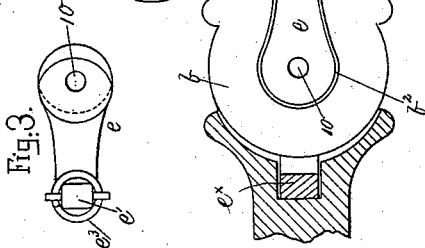
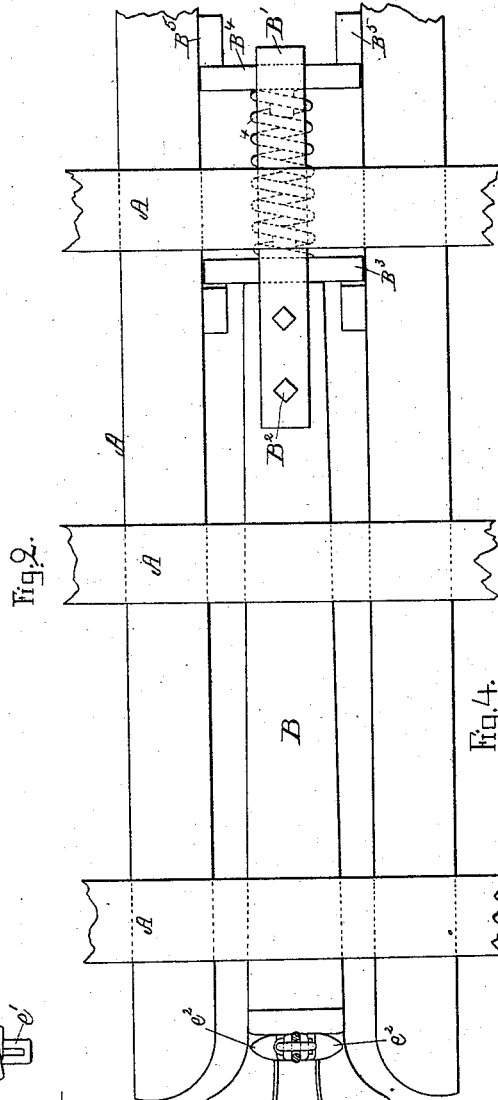
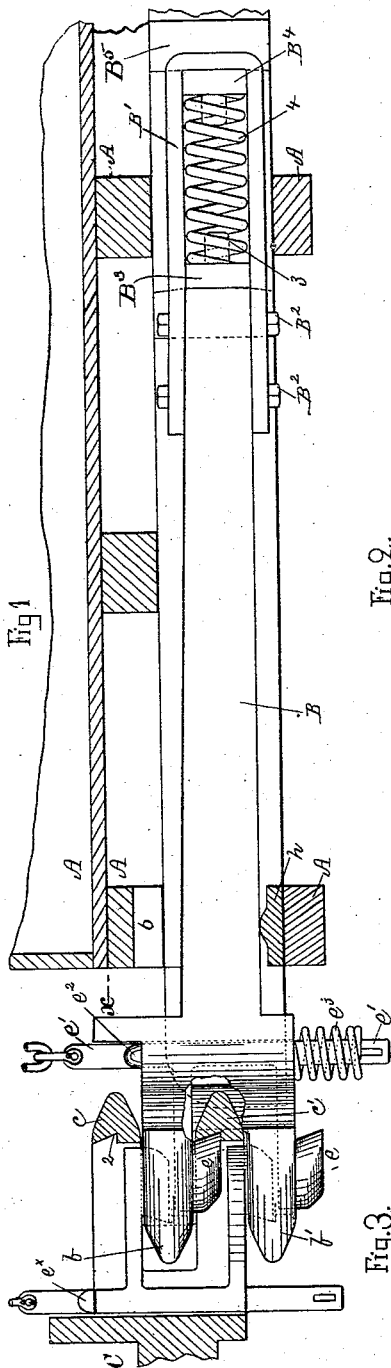


(No Model.)

M. HOWE.
CAR COUPLING.

No. 455,795.

Patented July 14, 1891.



Witnesses.

Edward F. Allen
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Inventor

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UNITED STATES PATENT OFFICE.

MANLEY HOWE, OF BOSTON, MASSACHUSETTS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 455,795, dated July 14, 1891.

Application filed November 14, 1890. Serial No. 371,425. (No model.)

To all whom it may concern:

Be it known that I, MANLEY HOWE, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Car-Couplings, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention in car-couplings has for its object the production of a coupling adapted to couple readily with its fellow, and that notwithstanding the cars are at the time on a curved track, and the coupling may be effectually done even when the tracks on which the cars stand are not at the same level.

The draw-bar herein shown as embodying my invention has two disk-like plates or projections inclined or beveled at their front ends or edges, so as to readily pass one beyond the other, the said projections being recessed centrally and provided with a guideway for the reception of a sliding bolt having a locking-dog adapted to engage the interior of one of the projections of a fellow coupling.

Figure 1 in section and elevation shows at the right part of a car and its draw-bar and coupling, the said figure at the left showing part of the fellow coupling supposed to be attached to another car; Fig. 2, a top or plan view of the parts shown in Fig. 1 below the dotted line x . Fig. 3 is a detail showing an under side view of one of the bolts and its locking-dog, and Fig. 4 is a detail to be referred to.

Referring to the drawings, let A represent part of a car-body of any usual construction, and B C draw-bars of like construction, each having like projections $b b' c c'$, and as these draw-bars and their attached parts are alike a specific description of only the one B need be made. The projections $b b'$ of the draw-bar are represented as of disk shape, as best shown in Fig. 2 by the projection b , the outer edges of the projections being inclined or beveled, as best shown in Fig. 1. Each disk or plate like projection is provided with an elongated eye or opening, as b^2 , for the reception of a locking-dog e , projecting laterally from a vertically-movable bolt or slide e' , having shoulders e^2 to take seat on the projection b , the said shoulders being normally kept

seated thereon either by gravity, as at the left in Fig. 1, where the bolt is lettered e^x , or by a spring e^3 , as at the right in Fig. 1. The projections $b b' c c'$ at the inner sides of the open central spaces are each notched, as shown at 2 in the projection c , (see Fig. 1,) said notches being preferably undercut to be engaged by the edge of one of the locking-dogs, as represented in Fig. 1, by the dog e engaging the projection c' . The locking-dogs extended from the bolt e^x are shown by dotted lines as entering and engaging the projections $b b'$. Each draw-bar will have at its inner end a strap, as B' , herein shown as secured thereto by bolts B^2 , and each bar will have fixed to it a cross-head B^3 , having, preferably, a seat, as 3, to hold one end of a spring 4, the other end of the spring resting on a cross-bar which is not fixed to the draw-bar or strap. The cross-bar B^4 , acted upon by the spring 4, is kept seated against lugs B^5 , fast to the truck or car, and the spring is strong enough to keep the front end of the draw-bar out in operative position; but when the cars come together and the draw-bar projections $b b'$ on one side meet the projections $c c'$ on the other side the spring is made to yield, the cross-bar B^3 moving with the draw-bar. When the cars come together; the projections $b b'$ strike the projections $c c'$. It may be above or below, according to the track on which the cars are supported, and one set of projections rides over the other set, the space 6 above the draw-bar permitting it to rise. As the projection on one draw-bar runs under the projections of another draw-bar it meets the beveled downward projection of a locking-dog, and acting thereon lifts the dog and the bolt carrying it; but as soon as an open space b^2 in one of the projections passes beyond a locking-dog the latter drops and enters the said space, as shown in Fig. 1, forming a secure lock for the coupling. The locking-dogs have a hole, as 10, into which may be entered a coupling, as f , of usual construction, (see Fig. 4,) when a car having my improved coupling is to be joined to a car having an ordinary link-coupling, the usual link being entered into the space between two projections b or b' or c or c' . The draw-bar rests near its forward end on a rounded bearing h ,

which permits the ends of the draw-bar to rise and fall over the bearing as a fulcrum, as required.

I have shown my improved coupling as provided with two disk-like projections, each having inclined or beveled or rounded edges, and the bolts e' as having each two locking-dogs e , and although I prefer and intend for the best results to provide each draw-bar with two projections it is not intended to limit this invention to two projections, as I may use one or two, or more than two, such projections, each having its front edge inclined or rounded, so as readily to pass each other when opposed couplings come together, each projection having co-operating with it a locking-dog, each locking-dog having a downwardly-extended hook part. The bolt e' may be lifted in any usual way by band or by chain from the top of a car.

I claim—

1. In a car-coupling, a draw-bar having a disk or plate like projection provided with an inclined or rounded edge and having a central opening, combined with a vertically-movable bolt having a hooked locking-dog extended therefrom to co-operate with a disk-like projection of a fellow draw-bar, substantially as described.

2. In a car-coupling, a draw-bar having two or more disk or plate like projections having beveled or inclined edges and provided with central openings, combined with a bolt having two or more laterally-extended locking-

dogs, and lugs e^2 to support the said bolts, substantially as described.

3. In a car-coupling, a draw-bar having two or more disk or plate like projections having beveled or inclined edges and provided with central openings, combined with a bolt having two or more laterally-extended locking-dogs, and lugs e^2 to support the said bolts, and a spring c^3 , to operate substantially as described.

4. In a car-coupling, a draw-bar having a disk or plate like projection provided with an inclined or rounded edge and having a central opening, combined with a vertically-movable bolt having a hooked locking-dog extended therefrom to co-operate with a disk-like projection of a fellow draw-bar, and having a hole to receive a coupling-pin, substantially as described.

5. The draw-bar having the disk or plate like projection, the loop B' , the cross-bar B , and the spring 4, combined with the bolt e' and its attached locking-dogs having downwardly-extended hooks, and the bearing h , on which the draw-bar may tip, substantially as described.

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

MANLEY HOWE.

Witnesses:

GEO. W. GREGORY,
EMMA J. BENNETT.