No. 709,708.

Patented Sept. 23, 1902.

G. GROOBEY & S. P. BUSH.

UNCOUPLING MECHANISM FOR RAILWAY CARS.

(Application filed Dec. 2, 1901.)

(No Model.)

Fig. 1.

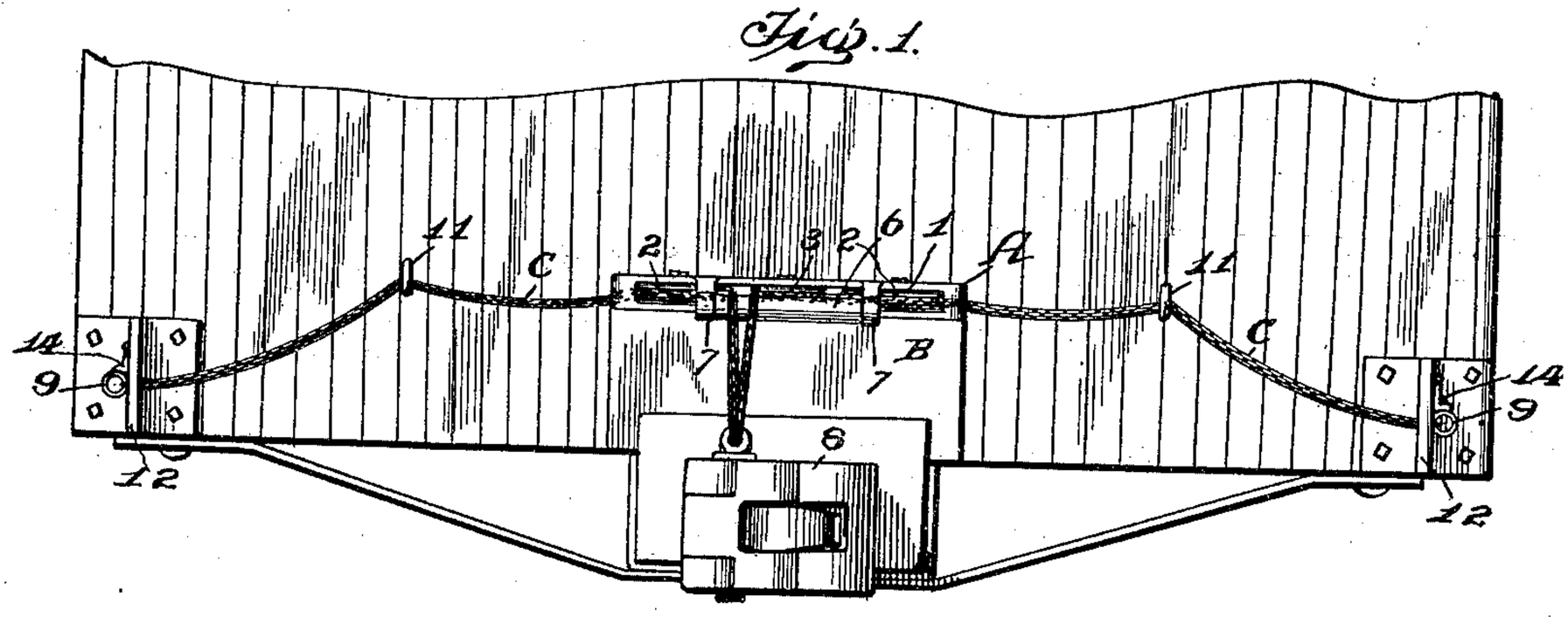


Fig. 2.

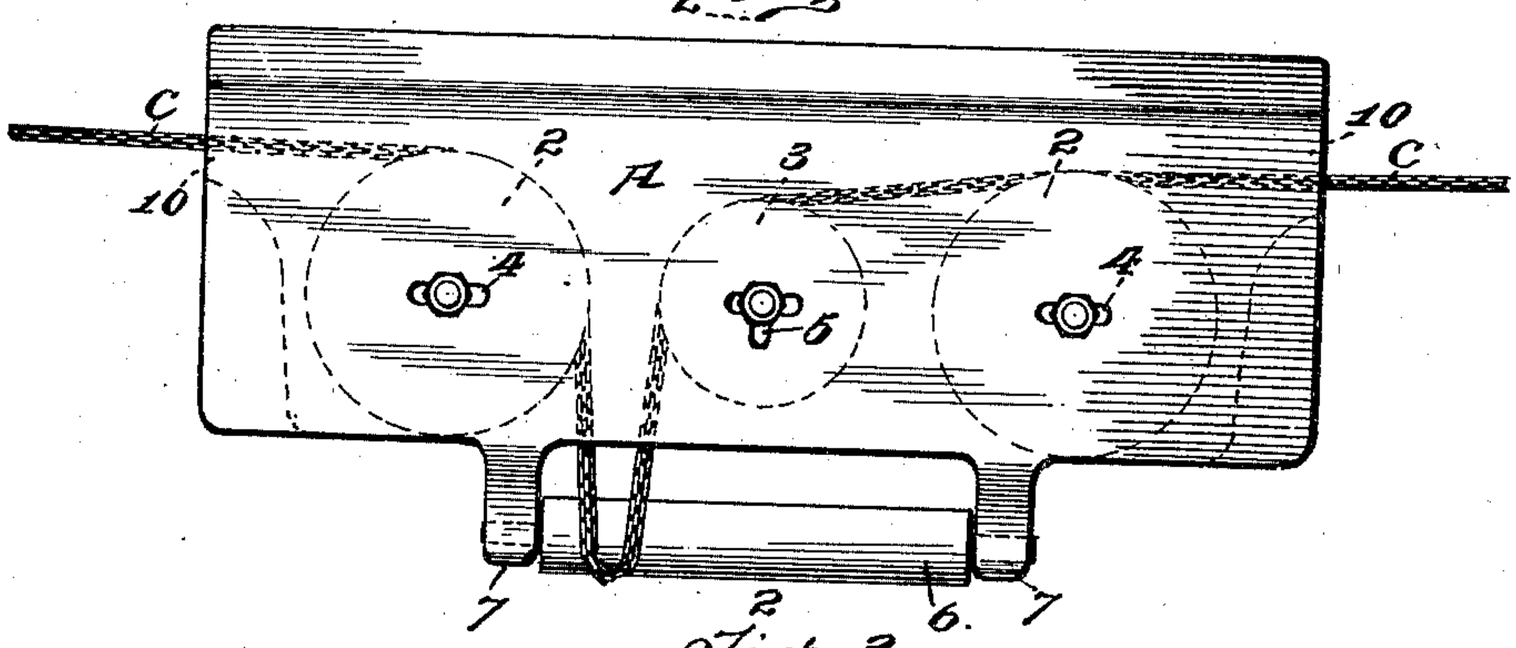


Fig. 3.

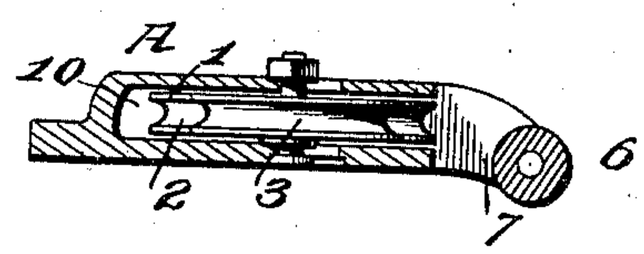


Fig. 4.

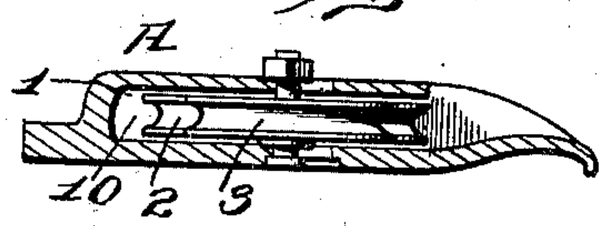
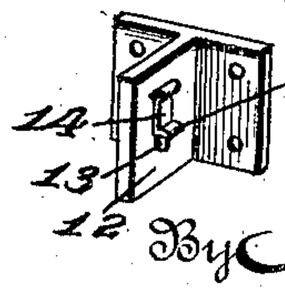


Fig. 5.



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UNITED STATES PATENT OFFICE.

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UNCOUPLING MECHANISM FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 709,708, dated September 23, 1902.

Application filed December 2, 1901. Serial No. 84,458. (No model.)

To all whom it may concern:

Be it known that we, GEORGE GROOBEY, a resident of Chicago, in the county of Cook and State of Illinois, and SAMUEL P. BUSH, a resident of Columbus, in the county of Franklin and State of Ohio, citizens of the United States, have invented a new and useful Improvement in Uncoupling Mechanism for Railway-Cars, of which the following is a specification.

Our invention relates to an improvement in uncoupling mechanism for railway-cars; and the primary object is to provide means for utilizing and adapting flexible uncoupling devices in the unlocking of couplings and in so doing in employing mechanism for rendering this uncoupling mechanism universal in its applicability to all of the various recognized types of car-couplings now in use built on the Master Car-Builders' lines regardless of the position of the lock, which varies in the different couplings now in service.

With the foregoing object in view our invention consists in a guide-plate adapted to be secured adjustably or otherwise to the head-block or convenient part of the car, in connection with suitably-disposed sheaves and other guiding means acting in conjunction therewith and a flexible connection adapted to pass over and around said sheaves and guiding means whereby the flexible connection can be extended to different points—as, for instance, opposite sides of the car—and attached to the uncoupling device regardless of the position of the latter with respect to the median line of the car.

Our invention still further consists in details of mechanism, which will be described more fully hereinafter in the disclosure of the invention.

In the accompanying drawings, Figure 1 is a view in end elevation of a portion of a freight-car, showing our improved equipment thereon. Fig. 2 is a plan view of the guide-plate. Fig. 3 is a transverse section on the line 2 2 of Fig. 2. Fig. 4 is a view of a modification, and Fig. 5 is a detail.

The letter A denotes our improved guide-plate, it being cast of malleable iron, preferably, with a cavity 1 therethrough, so that the casting affords a housing for the three sheaves 2 2 and 3. This casting is secured adjustably or otherwise to the head-block B of the car by bolts or other suitable means. (Not shown.) The outer sheaves 2 2 are capable of adjustment laterally, as indicated by the elongated slots 4 4, (shown in dotted lines in Fig. 2,) and the intermediate sheave 3 is capable not only of lateral but also of forward and backward adjustment through the T-shaped slot 5. (Indicated in dotted lines in Fig. 2.) The object of these adjustments and the function of the sheaves will appear as we proceed in the description of other parts of our present invention. A horizontally-disposed guide-roller 6 is journaled in bearings in the horns 7 7 at some distance forward of the front edge of the guide-plate and opposite the space intervening between sheaves 2 2. Flexible connections C C extend from the uncoupling device 8 of the coupler over this roller 6 and thence through the space between one or the other of the sheaves 2 2 and the intermediate sheave 3, after which they extend outwardly around the rear surfaces of sheaves 2 2 to the opposite sides of the car, where they are provided with handles or rings or equivalent devices 9 9, by which they are manipulated.

From the foregoing it will be seen that the sheaves and roller operate in conjunction to guide the flexible connections. The length of the roller 6 is calculated to be sufficient and adequate to afford an antifriction-bearing for the flexible connections rising from the uncoupling device of any type of coupler the position of which with respect to the median line of the car never extends beyond the limitations defined by the length of said roller. In other words, the length of this roller 6 is sufficient to meet all of these requirements. The provision for adjustment of the sheaves is made so that their position may be always regulated with respect to the position of the uncoupling device. The flexible connections pass through openings 10 10 in the guide-plate casting, and thence through staples or other guides 11 11, and finally through plates 12 12, secured to opposite sides of the car, slots 13 13 being provided for this purpose. As a means for locking the flexible connections when the uncoupling device

is raised and the coupling unlocked or uncoupled gravity-latches 14 14 are pivoted above the openings 13 13 in position to drop against the flexible connections and hold them against sliding inwardly through the plates. These latches have a lip 15 15, which the operator grasps when he desires to release the flexible connections to permit them to slide inwardly therethrough. When the connections are pulled outwardly, the gravity-latches are forced out of the way by the flexible connection passing under them.

It will be readily understood from the foregoing description that a car thus equipped with our improved guide-plate is in condition without change of part for any type of twin-jaw car-coupling now in use and that the couplings can be unlocked from either side of the car.

The various details of the invention are capable of slight modifications, which we desire to have it understood we do not wish to refrain from making so far as they fall legitimately within the range of our invention, and one of these we have illustrated in Fig. 4, in which the forward edge of the guide-plate is rounded and curved downwardly to form a bearing for the flexible connection in lieu of the roller.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A guide-plate for railway-cars, comprisiug a housing-plate having sheaves journaled therein, a flexible connection extending from the coupling mechanism over one of said sheaves, and means for guiding said connection located at the forward edge of the plate and upon which said connection bears, said means being of sufficient extent with respect to the coupling used so that some part of it is always in line with the uncoupling mechanism of any known car-coupling of the Janney type.

2. A guide-plate for railway-cars, having an elongated antifriction-roller journaled at its forward edge, sheaves journaled on the plate in approximately the same plane with the elongated roller, and flexible connections extending from the coupling mechanism over the roller and around two of the sheaves.

3. A guide-plate for railway-cars, having an elongated antifriction-roller journaled at its forward edge, sheaves housed in the plate in approximately the same plane with the roller, said plate having openings at its opposite ends rearward of the sheaves, and flexible connections extending from the coupling means over the antifriction-roller and around two of the sheaves and out through the opening or openings in the ends of the plate.

4. A guide-plate for railway-cars, having two outer sheaves, an intermediate sheave and an elongated antifriction-roller disposed at the edge thereof, said sheaves and roller located in substantially the same plane and adapted to form guides for a flexible uncoupling device.

5. The combination with a guide-plate having sheaves journaled thereon and an elongated antifriction-roller journaled on said plate, of an uncoupling device, flexible connections extending therefrom over the roller and two of the sheaves to opposite sides of the car, and means for fastening the flexible connections, said means consisting of a plate having an opening through which the connection passes, and a gravity-latch operating in conjunction therewith for locking the connection.

6. The combination with a plate having guiding means at its forward edge, of a pair of horizontally-disposed sheaves adjustably connected with the plate, and a flexible connection which passes between said sheaves.

7. The combination with a plate having guiding means at its forward edge, of a pair of sheaves disposed horizontally and adjustable endwise of the plate, and flexible connections extending between said sheaves.

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

GEORGE GROOBEY.
SAMUEL P. BUSH.

Witnesses as to the signature of George Groobey:

BLOOM D. CHAPMAN,
WM. H. CONNOLLY.

Witnesses as to the signature of Samuel P. Bush:

HARRY N. SMITH,
ARNO EBERLEIN.