(No Model.)

A. WICHLER.

CAR COUPLING.

No. 458,437. Patented Aug. 25, 1891.

Fig. 1

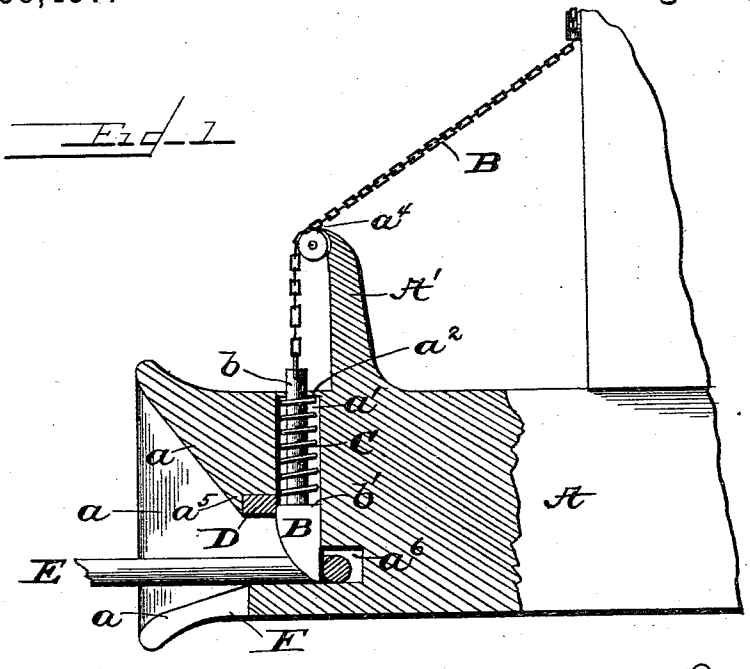
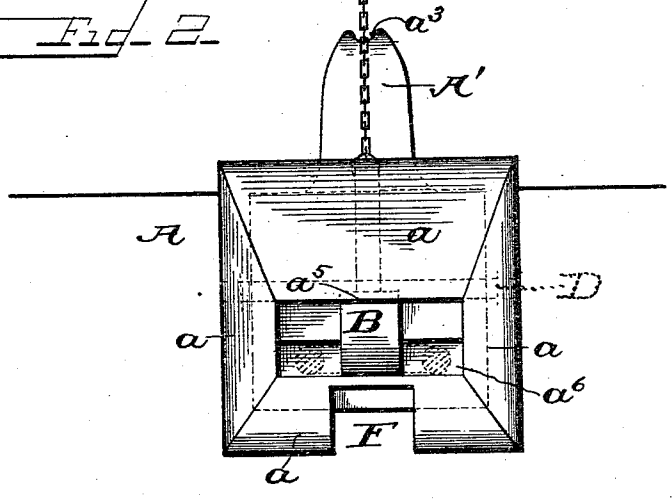




Fig. 2



Witnesses

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ADAM WICHLER, OF MONROE, WISCONSIN, ASSIGNOR OF ONE-HALF TO JACOB SACKER, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 458,437, dated August 25, 1891.

Application filed April 13, 1891. Serial No. 388,629. (No model.)

To all whom it may concern:

Be it known that I, ADAM WICHLER, a citizen of the United States, residing at Monroe, in the county of Green and State of Wisconsin, have invented certain new and useful Improvements in Car-Couplers; 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.

My invention is an improvement in car-couplers; and it consists in the novel features of construction and combination of parts hereinafter fully described.

In the accompanying drawings I have illustrated one form in which I have contemplated embodying my invention, and the same is fully disclosed in the following description and claims.

Referring to said drawings, Figure 1 is a view, partly in section, of a draw-head having my improvements embodied therein. Fig. 2 is a front view of the same.

In the said drawings, A is the draw-bar, which is secured to the car in any usual or preferred manner. The outer end of said draw-bar is provided with a flaring recess formed by the inclined beveled or curved guiding-faces *a a*. The draw-bar is also provided with a vertically-extending recess *a'*, which receives the stem *b* of the coupling-pin B. This pin consists of the beveled link, engaging portion B, and the stem *b*, which is of less diameter than the part B, thus forming a shoulder at *b'*. A coiled spring C encircles the stem *b* of the pin and engages the shoulder *b'* of the pin and the shoulders a^2, located adjacent to the upper part of the recess *a'*. This spring presses downward on the shoulder *b'* of the pin and holds it normally in its operative position, thereby preventing it from rising accidentally and uncoupling the car. The stem *b* of the pin extends upward through the top of the draw-bar and is attached to a chain, cord, or other flexible connection B', which passes over suitable pulleys to the sides of the car, so that the cord or chain can be pulled and the pin raised to uncouple the car, without passing into the space between two adjacent cars. I prefer to provide the draw-bar with an upwardly-extending standard A', just in rear of the pin B, having its upper end extending into the vertical plane of the pin and provided with a recessed portion a^3 or with a pulley a^4 to guide the chain and enable it to pull the pin in a substantially vertical direction. Adjacent to the shoulder *b'* of the pin and in front of the same the draw-bar is recessed to form an angular shoulder at a^5, which is engaged by a horizontal transverse draft-bar D, which bar is engaged by the link-engaging portion of the pin. The draw of the pin comes mainly on this bar D and the angular shoulder of the draw-bar against which it fits. The transverse bar D may be held in place by nuts or other desired means. The part B of the pin is preferably made very solid and has its outer side beveled, as before stated. The draw-bar A is also provided with a recess a^6 in rear of the pin B, which receives the coupling-link E, as shown in the drawings. This recess a^6 is of such size that the link will have but very little play vertically, and the link when engaged by the pin B will thus be held in a substantially horizontal position, so as to readily engage the flaring orifice of the opposing coupling.

The lower face of the recessed portion of the draw-bar is provided with an inwardly-extending recess F of substantially the width of the pin B. When it is desired to remove the pin B to replace it, or to replace a broken spring, or for any other reason, the bar D is removed and the pin is disconnected from the chain or other flexible connection B'. The pin B can then be drawn forward and downward and removed through the recess F in the lower part of the draw-bar. A new pin or spring can be inserted and the bar D replaced, when the coupling will be in operative condition.

When it is desired to couple two cars which are provided with my improved couplers, a link is inserted in one draw-bar and made to engage the pin B. The link will be held in substantially a horizontal position, as before stated, by the walls of recess a^6, and as the two cars are brought together the link will engage the beveled or inclined edges of the flaring recess of the draw-head and will be guided up to the pin B. The link will then engage the beveled face of the pin B, and as

the cars come together will raise the pin and pass rearward into the recess a^6 of the opposing coupling. The spring C will force the pin down into operative position as soon as the end of the link has passed the pin and the cars are securely coupled. When it is desired to uncouple two adjacent cars, the pin B of either is raised by pulling the flexible connection B′ from the side of the car without going between the cars. When it is desired to couple a car having one of my improved couplings to one having the plain link-and-pin coupling or a coupling of any kind having a pin adapted to engage a link, the link is secured to the car not having my improved coupling, and the said link can then be held up by means of a stick or rod as the cars come together until the link engages one of the beveled faces of the draw-bar, when the pin will be lifted and the cars coupled, as before described.

It will be seen that my improved constructions provide a coupler which is very simple and easy of operation, and in which the parts are easily replaced when worn or broken.

I prefer to make the portion B of the coupling-link of such size as to fit snugly in the recess a', and by providing the standard A′ with a portion which is curved forward into the vertical plane of the pin the pin will be lifted vertically and strain or binding of parts will thus be avoided.

What I claim, and desire to secure by Letters Patent, is—

1. In a car-coupler, the combination, with the draw-bar provided with the horizontal draft-bar, of the spring-actuated pin capable of vertical movement engaging said draft-bar, substantially as described.

2. In a car-coupler, the combination, with the draw-bar provided with a removable draft-bar, of a removable spring-actuated coupling-pin engaging said removable draft-bar, said draw-bar having a slot or recess for the removal of said pin when the draft-bar is disengaged therefrom, substantially as described.

3. The combination, with the draw-bar having its lower face provided with a slot or recess, of the removable draft-bar, the pin engaging said draft-bar, having a stem of less diameter than the main portion of said pin engaging an aperture in the top of the draw-bar, and a spring holding said pin against accidental displacement, substantially as described.

4. The combination, with the draw-bar provided with the horizontal draft-bar, of the spring-actuated pin provided with a curved or beveled face and a flexible connection extending from said pin to a point adjacent to the side of the car, substantially as described.

5. The combination, with the draw-bar provided with the vertically-disposed standard, of a spring-actuated pin and a flexible connection extending from the pin to a point adjacent to the side of the car engaging said standard, said standard having a portion in the vertical plane of the pin, substantially as described.

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

ADAM WICHLER.

Witnesses:
J. D. DUNWIDDIE,
C. W. TWINING.