

J. B. SAFFORD.
Car-Couplings.

No. 146,714.

Patented Jan. 20, 1874.

Fig. 1.

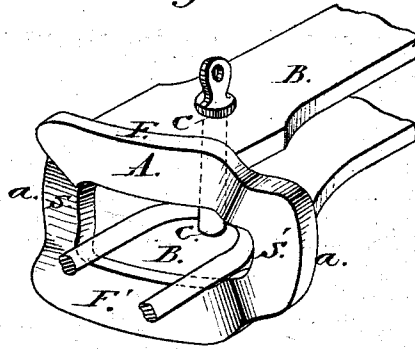


Fig. 2.

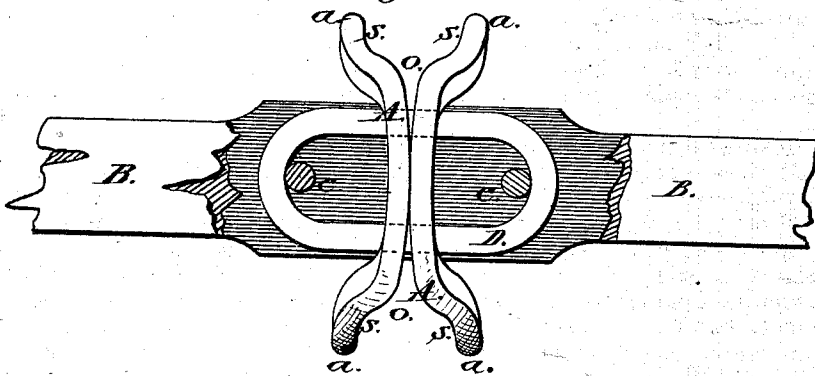


Fig. 3.

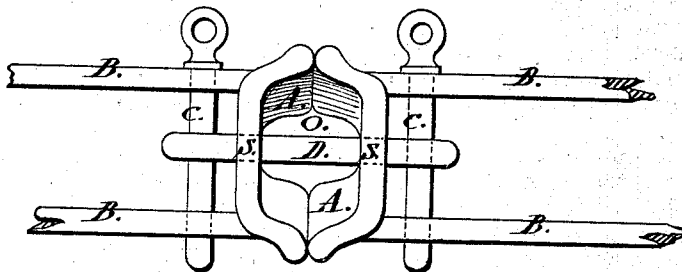
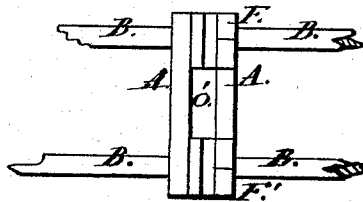


Fig. 4.



attest:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **146,714**, dated January 20, 1874; application filed March 3, 1873.

To all whom it may concern:

Be it known that I, JAMES B. SAFFORD, of the city and county of Albany, State of New York, have invented certain Improvements in Buffers for Railroad-Cars; and I do hereby declare that the following is a description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a perspective view of a buffer embodying the improvements in this invention. Fig. 2 is a vertical view of the same with the upper draw-bar removed, illustrating the invention. Fig. 3 is a side elevation of the same when coupled together. Figs. 4 and 5 are modifications of the improved features in this invention.

My invention relates to the improvement of the face-plates of railroad-car buffers; and consists in constructing one or both of the lateral ends with an offsetting recess, back from a range with the upper and lower side pieces of the said face-plates, in such a manner that when a pair of such face-plates are brought in contact face to face, that the said offsetting recesses will afford ample space for the insertion of the hand to the coupling-link, to raise or guide the link (when the buffers are to be coupled) without endangering the hand so directed and employed, the object of this invention being to shield the hand from liability of being injured by affording a space communicating with the usual space for receiving the coupling-link, through which the hand may be inserted.

In the drawings, A represents the face-plate of the buffer. B B is the draw-bar. *c c* are the coupling-pin holes. C is the coupling-pin. D is the coupling-link—all of which are so well known as to require no description.

It is well known that the common buffer, consisting of the face-plate and a draw-bar, is one of the oldest and simplest forms in use, and is generally reliable, when coupled, for resisting violent and continuous strain, and their use by railroad companies is very general on account of its cheapness of construction and repairs, and their general usual adaptation to the unequal loadings and the varying heights of cars. It is also well known that by the use of this

common buffer many terrible accidents have resulted, either from neglect of proper precaution, or mismanagement, or both, which have both destroyed life or have greatly injured and maimed the arms or hands. With these buffers it is almost generally required, to properly connect them, to have a person to hold up one end of the coupling-link, and guide it into the end opening, receiving the same. This operation is always attended with great danger to the hand and arm, and also to the person, and very many crushings of the hands and arms of persons so operating has resulted. To shield the hand of the operator, and to cause the buffer to act as a guard to prevent the hand being crushed when the coupling-link is being held and guided into the opening in the face-plate, I construct the face-plate A in their lateral ends *a a* with the back set-off recesses *s s'*, which are set off toward the draw-bars B B, and from the relative set forward upper portions F F' of the face-plate, which connect with the draw-bars B B. The said set-back recesses *s s'* are so formed as to constitute, with another similar-constructed face-plate, the extensive lateral opening O, Figs. 2, 3, and 4, sufficiently large to receive a large-sized hand without being crushed or pressed upon by face-plates. If desired, in lieu of such recesses *s s'*, one of the lateral sides on each face-plate, (say the right-hand side,) may be cut out so as to leave a space, O', between the upper and lower portion F F', as in Fig. 5, which, cut out of the said side, will give permission for the hand to raise and guide the coupling-link without the hand being endangered.

The manner in which the improvements in this invention operate to guard the hand and insure its safety when the buffers are to be coupled, is as follows: The link, supposed to be already secured in one of the buffers, is taken in the hand by its loose end, and with the hand held in the recess *s* and supporting the link, the person operating will steady and guide the link in position, so that when the advancing buffer approaches it will readily enter the mouth of the approaching buffer. The projecting portions P F' of each face on coming in contact with each other will operate as barriers, and, with the recesses *s s*, prevent

crowding against the hand, and enable the operator to steady and guide the link in a proper manner.

Though these improvements are very simple in their nature, yet they are thoroughly effective to preserve the hand of the operator from being smashed in the dangerous operation of coupling cars. Another advantage attending these improvements is that while they can be readily applied to the railroad-cars, their application will not revolutionize the whole construction of the buffer or their adjuncts, but the change from the old flat or slightly-curved face-plates can be effected with but little expense.

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

The face-plate A of the buffer, having the lateral end recesses *s s'* projecting back from the faces F F' of the face-plate, and forming a space for the admission of the operators' hand to the link as the buffers come together, substantially as and for the purpose set forth.

J. B. SAFFORD.

Witnesses:

CHAS. SELKIRK,
GEO. A. THOMPSON.