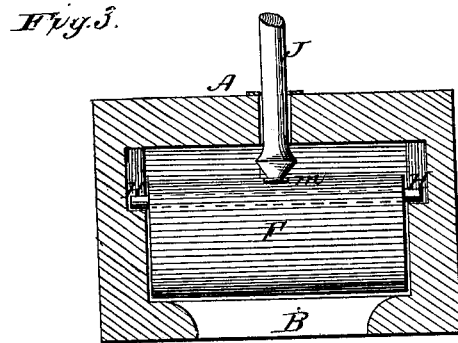
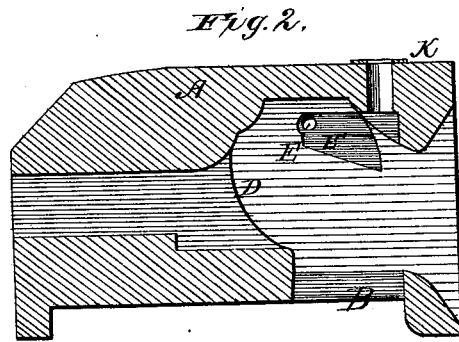
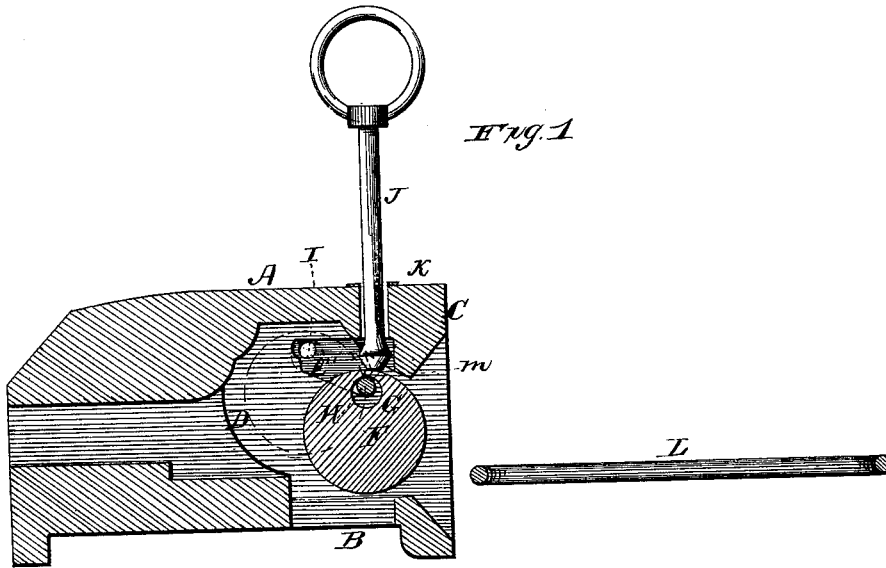


R. S. RUSSELL.  
Car-Coupling.

No. 208,694.

Patented Oct. 8, 1878.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

ROBERT S. RUSSELL, OF BROWNSVILLE, TENNESSEE.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **208,694**, dated October 8, 1878: application filed March 2, 1878.

*To all whom it may concern:*

Be it known that I, ROBERT S. RUSSELL, of Brownsville, in the county of Haywood and State of Tennessee, have invented a new and Improved Car-Coupling; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal section of my improved coupling with the weighted cylinder in place. Fig. 2 is a similar view with the cylinder removed; and Fig. 3 is a transverse section.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention has for its object to improve the construction of car-couplings, whereby they are rendered more efficient in operation, more economical in construction, and less liable to be injured by snow and ice than those generally in use at this time.

To this end the invention consists in a certain novel construction of the various parts, which I will now proceed to describe, and point out particularly in the claims.

In the accompanying drawings, A is the buffer or coupling-head, cast with an open bottom, B, a convex top, C, and with curved shoulders D D at or near the rear end of its interior, as shown. The inner proximate faces of its side walls are recessed in front of the shoulders D, around the lateral holes E, so as to form inclined shoulders or guideways E' from the holes downward a short distance toward the mouth.

F is the cylinder, cast with an eccentric opening, G, so as leave a heavy weighted side on one side the opening, and through such opening is passed a rod, H, whose ends rest upon the guideways E', for the purpose of rolling up and down the same when the weighted cylinder is in place. The rod is applied by being inserted through one or the other of the holes in the sides of the buffer, as will be readily understood, the holes being afterward closed by headed pins or set-screws I. These set-screws not only prevent the casual removal of the rod, but exclude dirt, &c., from its ends, which form the journals of the cylinder, and from the guideways upon which such journals

travel. They may be easily removed, when necessary, to lubricate such journals or to remove or adjust the rod.

J is the coupling-pin, constructed with an enlarged lower end, and inserted in the buffer from the bottom opening B up through the raised collar K, surrounding the upper pin-hole, receiving upon its upper end a ring or other equivalent device, firmly fastened to it to prevent it from dropping out of the buffer. The upper pin-hole is of such diameter that the pin will work freely through it, but is too small to allow the enlarged point of the pin to pass. By this construction the pin is securely attached to the buffer, and cannot therefore be stolen or removed, but is always in place ready for use. It may also be fastened to the car by a chain or other connection to facilitate its operation; but this is not absolutely essential, it being lifted out in any of the well-known ways in use on passenger, box, and platform cars.

When the coupling is in use, the coupling-link L rests upon the bottom of the buffer, with the pin through it and the weighted cylinder resting upon its inner end, such cylinder playing freely back and forth by means of its journals on the guideways, and along the curved shoulders D D, as the motion of the cars changes the position of the link.

To uncouple the cars, the pin is lifted up by any suitable means, when the cylinder will roll down to the mouth of the buffer, so as to bring the notch *m* in its upper or least-weighted side directly under the point of the pin, to hold the latter in its raised position. The link is then easily withdrawn.

The shoulders at the front of the guideways limit the forward movement of journals of the cylinder, and only allow the latter to swing and roll down to the mouth of the buffer the required distance, while the eccentric weight of the cylinder insures the proper position of the notch *m* under the point of the pin every time the latter is raised.

The link is always held in a horizontal position ready for coupling by the weight of the cylinder on its inner end, thereby avoiding the danger incident to the use of ordinary couplings, where the link is held up by hand to effect the coupling.

In coupling the cars, the end of the link passes under the weighted cylinder, lifting it upward and backward, thereby releasing the coupling-pin, which then drops down through the link in front of the cylinder, when the latter again sinks to its place on the inner end of the link, and holds it in a horizontal position.

By constructing the buffer with the convex top it readily sheds snow and ice, while the opening B in the bottom prevents the accumulation of snow and ice in the interior to obstruct the working of the cylinder.

Having thus described my invention, what I claim as new is—

1. A car-coupling consisting, essentially, of an eccentrically-weighted cylinder, combined with the buffer, coupling-pin, and link, substantially as described, for the purpose specified.

2. The combination of the eccentrically-weighted cylinder and its rod H with the guideways E' of the buffer, substantially as described, for the purpose specified.

3. The combination of set-screws or plugs with the lateral rod-holes E in the sides of the buffer, substantially as described, for the purpose specified.

4. The buffer constructed with the convex top, the open bottom B, the interior rear-curved shoulders D D, and the interior guideways E' in the side walls, substantially as described, for the purpose specified.

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