

Car Coupling.

Patented April 11, 1871.

[illegible]

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IMPROVEMENT IN BUFFER-HEADS AND DRAW-BARS FOR RAILWAY-CARS.

Specification forming part of Letters Patent No. **113,608**, dated April 11, 1871.

To all whom it may concern:

Be it known, that I, JOHN T. WILSON, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Buffer-Heads and Draw-Bars for Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 represents, in perspective, a pair of buffer-heads and draw-bars constructed after my plan, and linked together as in use. Fig. 2 represents a top plan of the same, and Fig. 3 represents a longitudinal vertical section through said buffer-heads and draw-bars.

Similar letters of reference, where they occur in the separate figures, denote like parts of the contrivance in the drawing.

My invention consists, first, in pivoting the buffer-heads to the draw-bars so that the former may swing or play horizontally upon the latter, and so yield when one buffer-head comes up against its mate or fellow; and my invention further consists in so constructing the lateral arms of the buffer-heads, by which they are linked together, as that the link may be removed when the cars are on a curve, and may bear against the draw-bolt to prevent it from jumping out, and be shifted to take up lost motion between the buffer-heads.

In a patent heretofore granted to me—viz., July 19, 1869—the links were passed over horizontal arms extending each way from the buffer-heads; but in this construction it was difficult to take off the links or uncouple when the cars stood on a curve, and as there was little or no strain upon the draw-bolts they were liable to jump out. These objections are overcome in my present invention.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawing.

The buffer-heads A are hinged or pivoted to the draw-bars B, as at *a*, so that the buffers may swing or play horizontally on the draw-bars. The faces of the buffer-heads, as at *b*, are in the arc of a circle, of which the pivot *a* is the center, and these two faces are almost in juxtaposition, so as to bring the platforms

of the cars close together, and when one car jams up against the next one the buffer-heads roll against each other, and one or both may yield laterally to take up any jar and dispense with any springs.

From the buffer-heads A project laterally and horizontally arms *c d*, both above and below, and the top and bottom plates of the buffer-heads are riveted together, as at *e e*.

The links *f f*, one on each side and one on top, and the other, if so preferred, on the under side, pass over these arms, being secured to one by a permanent rivet or bolt, *e'*, and held to the other by the draw-bolt *g*; and said links, when the draft or strain is on, though drawing by the arms *c d*, would slip off from the one, *e*, were it not for the draw-bolt *f*, against which it is pressed. This is so arranged, in part, that when the cars are standing upon a curve they may be readily uncoupled.

That there may be little or no lost motion between the buffer-heads, (the modern plan being to keep them in contact,) I provide one or more sets of bolt-holes, *i*, into which the draw-bolt *f* may be put, and so take up all slack, shackle, or lost motion.

The double couplings, one at each side, make the security greater, and avoid the necessity of the employé's getting in between the cars to connect the couplings, and the close couplings avoid all liability of any one falling between the platforms.

It may sometimes be necessary to couple temporarily with the ordinary link and bolts, and for this purpose an extra link, *m*, may be carried; or a link may be held by bolts passing through the holes *n n* in the buffer-heads, and through slotted arcs *o o* in the draw-bar plates, so that the buffers may still swing horizontally when they come together.

The draw-bar plates extend to nearly the fronts of the buffer-heads, as seen by the dotted lines in Fig. 2, and they may be recessed to let in the buffer-head plates, and a plain or a rule-joint hinged connection may be used between the buffer-heads and the draw-bars, so as to admit of the lateral or horizontal play of the buffer-heads, as described.

The faces of the buffer-heads being in the

arc of a circle of which the hinged joint *a* is the center, the contact-point of the two buffer-heads, when together, will always be radial to the centers of motion, and the strain will be directly on the hinge-joint, and to save the pivots the lugs *p* of the buffer-plates beyond the pivot move in shouldered recesses.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

1. In couplings for railroad-cars, the combination of the curved buffer-heads with the hinged joints between said buffer-heads and the draw-bars, when said buffer-heads are curved in the arc of a circle of which the piv-

ots *a a* are the centers, and when the hinged joints between the buffer-heads and the draw-bars are so arranged as to allow the buffer-heads to move or play laterally upon the draw-bars, as and for the purpose set forth.

2. In combination with the buffer-heads of car-couplings, the lateral arms *c d*, links *f*, rivets *e'*, and draw-bolts *g*, when the arms *c c* of the pairs are so made as that the links shall draw on said arms and against said draw-bolts, as and for the purpose herein described.

JOHN T. WILSON.

Witnesses:

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