J. C. & W. H. STRATTON.

Car-Coupling.

No. 207,992. Patented Sept. 10, 1878.

Fig. 1.

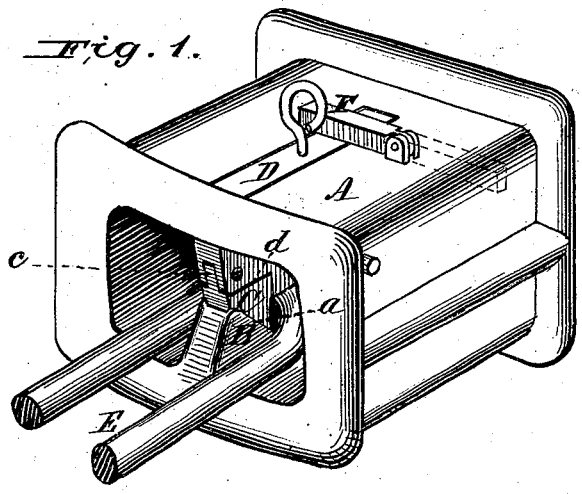


Fig. 2.

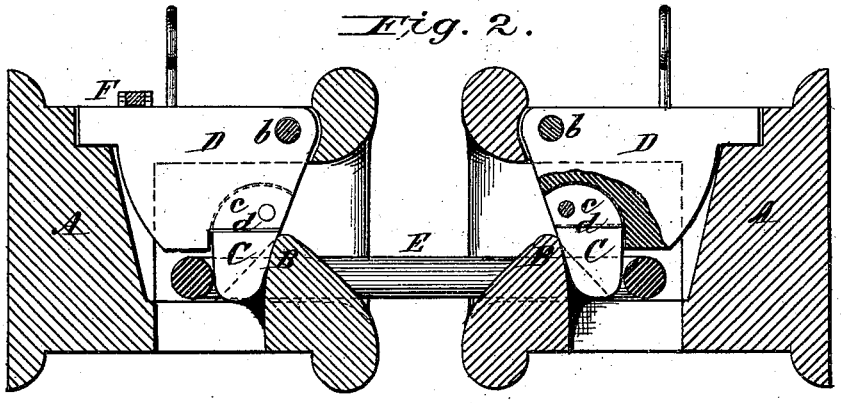
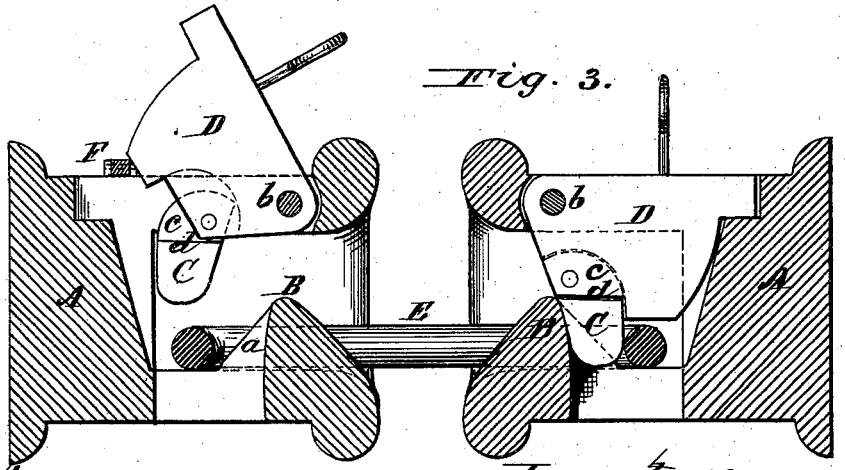


Fig. 3.



Attest:
H. D. Bruce.
Floyd Norris.

Inventors:
John Coombs Stratton
William Harvey Stratton
By Johnson & Johnson Atty's

UNITED STATES PATENT OFFICE.

JOHN C. STRATTON AND WILLIAM H. STRATTON, OF MILLVILLE, N. J.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **207,992**, dated September 10, 1878; application filed July 31, 1878.

To all whom it may concern:

Be it known that we, JOHN COOMBS STRATTON and WM. HARVEY STRATTON, of Millville, in the county of Cumberland and State of New Jersey, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Our improvement relates to that kind of coupling for railway-cars in which a weighted tumbler is used in the draw-head to couple with the link. The tumbler is pivoted at its upper front end to the draw-head, and carries a jointed coupling part at its lower front end of such construction and having such relation and connection to the tumbler-pivot as to cause it to force the tumbler backward and upward upon the entrance of the link in coupling, whereby the weight of the tumbler brings back the jointed piece to effect the coupling and to allow said coupling-piece to be readily released from the binding action of the link, when coupled, by allowing said tumbler to act first independent of its coupling part to draw the latter vertically, and then to carry it up backward in the arc of a circle.

The draw-head has a double inclined abutment, the rear part of which is slotted to receive the jointed coupling part, while the front inclined face of said abutment causes the link, in coupling, to strike and ride over it and against the front inclined side of the weighted tumbler, and not the coupling part, and bear them both backward and upward, as stated.

The coupling part is jointed nearly in line with its front side, and this causes the tumbler to act first slightly independent of the coupling part to open from it and lift it vertically before commencing to carry it upward and backward. The coupling part is jointed to the tumbler in a manner to form shoulders, so as to relieve its pivot-pin of undue strain in the descent of the tumbler and its jointed part against the abutment.

The inclined back of the abutment allows the link to be readily uncoupled, and when the cars are under way the draft is upon the abutment and the coupling part, so that there is no strain either upon the pivot of the weighted tumbler or the pivot of its coupling part. The pivoting of the tumbler and its jointed part, as stated, causes the weight of the tumbler to hold its jointed part down when coupled, and to render it secure. By this construction we can use the ordinary coupling-link and flaring-mouthed draw-heads, and thereby couple cars of different heights by means of the ordinary crooked coupling-link.

A bar is pivoted upon the draw-head, so as to lie over the rear end of the tumbler in a position so that when the latter is raised to uncouple the cars said bar will also be raised and held by the tumbler in position to fall behind it and hold it up. This action of the holding device is automatic.

Referring to the drawings, Figure 1 represents one of the draw-heads with my improved coupler applied thereto. Fig. 2 represents a vertical section of two draw-heads coupled together with our improved coupling; Fig. 3, a similar section with one of the coupling devices uncoupled.

The draw-head A is cast in one piece, as shown, or may be of any suitable construction and secured in any suitable way to the car-frame.

Within the mouth of the draw-head, and centrally located on its bottom, rises an abutment, B, inclining frontward and backward from its top, and provided with a socket or groove, *a*, on its back, to receive and form a support for the jointed part C of a tumbler, D, pivoted centrally at its front upper end, *b*, in the draw-head.

The tumbler is arranged in an opening in the top of the draw-head, and extends back from its pivot a suitable distance to give it the required weight at its rear end to keep it down in place when the cars are in motion. When down its lower jointed part, C, extends within the link E, and fits in the socket or groove of the abutment, so as to couple the link with said abutment. This coupling part C is jointed at its front corner or side to the tumbler, and in a vertical line, or nearly so, with the pivot of said tumbler, so that the draft upon the jointed part is such as to re-

lieve its pivot of all strain, and allow the tumbler to open, as it were, from said jointed part, and to lift it, first vertically a little, and then carry it backward and upward with it, and thereby free it entirely from the link and allow the latter to pass out over the inclined back of the abutment. By this construction of jointed tumbler the uncoupling can be made when the cars are drawing or standing, as the jointed part does not rise in the same arc as the tumbler, but is freed by it from the link. The draft upon the pivoted part does not tend to raise the tumbler, but tends to keep it down and to render the coupling perfectly secure.

The joint of the coupling part may be made in any suitable way. That shown, however, is well adapted for the purpose, and is formed by a fin, *c*, on the jointed part entering a groove in the tumbler, and pivoted therein at the upper front corner, so that when closed with the tumbler and the abutment its pivot will be relieved of strain by shoulders *d* on the jointed part and coinciding bearings of the tumbler. This construction not only relieves the pivot of the draft-strain, but from the effects of the falling of the tumbler and its jointed part against the abutment, while the socket or grooved back of the latter serves also to brace and support the jointed part laterally.

The inclined front and back of the abutment allow of the free entrance and withdrawal of the link in coupling and uncoupling.

In uncoupling it is often necessary to hold up the tumbler until the cars are separated, and for this purpose a bar, F, is pivoted to the top of the draw-head in position to lie across the rear end of the tumbler, so that when the latter is raised the bar will also be lifted and held up against the side of the tumbler in position to fall behind it automatically and hold it up. Any suitable connection may be made for uncoupling the tumbler.

The bottom of the draw-head has a slot or opening back of the abutment-socket and coincident therewith to prevent the possible clogging or choking at this point.

The front edge of the tumbler stands slightly inclined, when coupled, in an opposite direction to the inclined front of the abutment, so that the link, striking the tumbler, will readily force it back and pass beneath its jointed part.

We claim—

In a car-coupling, the combination, with the draw-head, having a double inclined abutment, B, slotted on the back incline, as described, of the weighted tumbler D and its jointed coupling part C *c*, said tumbler being pivoted at its upper front end, *b*, and said coupling part C jointed eccentrically to the lower front corner of said tumbler, all constructed and adapted for use substantially in the manner and for the purpose described.

In testimony that we claim the foregoing we have affixed our signatures in the presence of two witnesses.

JOHN COOMBS STRATTON.
WILLIAM HARVEY STRATTON.

Witnesses:
GEORGE W. HENDERSON,
HENRY BISHOP.