J. W. VAN HOUTEN.

Car Coupling.

No. 29,022. Patented July 3, 1860.

Fig. 1.

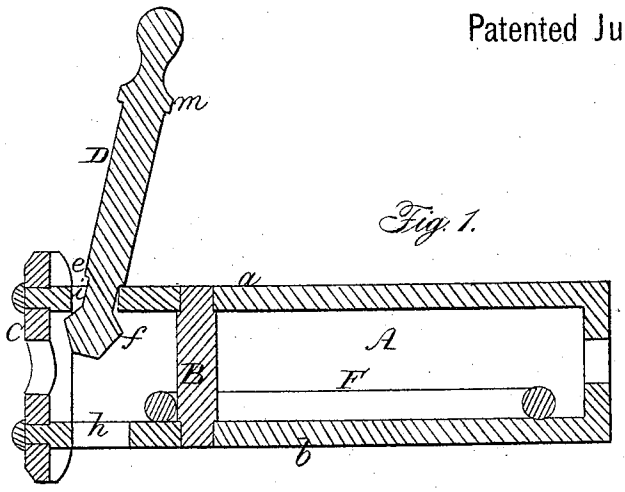


Fig. 2.

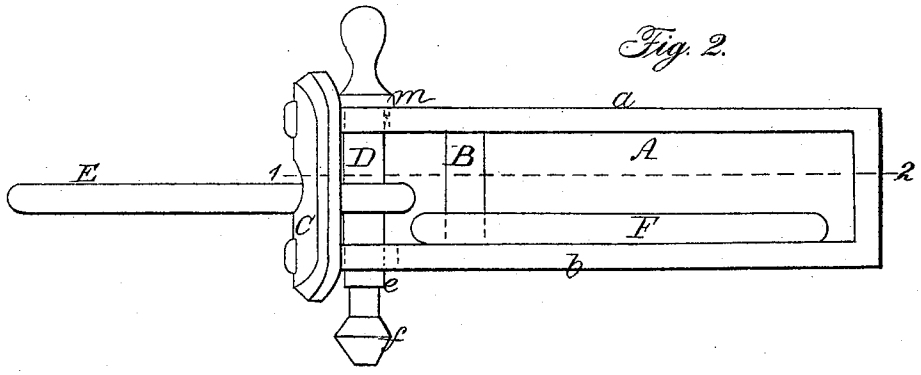
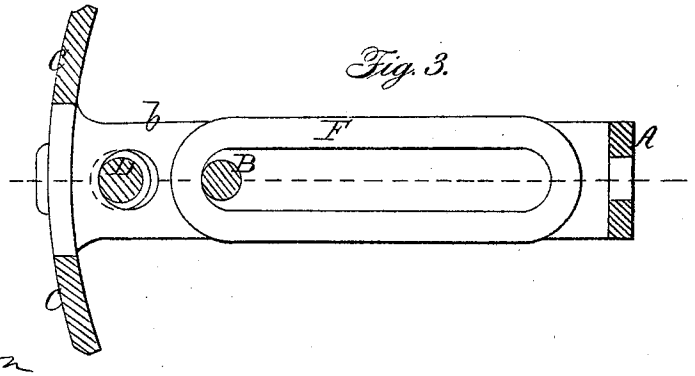


Fig. 3.



Witnesses:

Henry Houston

Charles E Foster

Inventor:

J. W. van Houten

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

ISAAC W. VAN HOUTEN, OF PHILADELPHIA, PENNSYLVANIA.

CAR-COUPLER.

Specification of Letters Patent No. 29,022, dated July 3, 1860.

To all whom it may concern:

Be it known that I, I. W. VAN HOUTEN, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Railroad-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 and to the letters of reference marked thereon.

My invention relates to improvements in the construction of the pins of railroad car couplings, and my improvements consist in reducing the pin in diameter near the lower end and forming a collar on the same, the part thus reduced and the collar being so proportioned in respect to the upper opening of the buffer piece that the pin may be self retaining in an elevated position within the said opening and may drop into its place when the buffer pieces of two cars meet each other; also in forming at the lower end of the pin an enlargement with an upper and lower bevel, so arranged in respect to the upper and lower openings of the buffer piece that the pin cannot be passed through the upper opening but may be readily withdrawn from the lower one without any preparatory adjustment, the lower bevel of the enlargement being such as to guide the falling pin through the lower opening.

In order to enable others skilled in the art to make and use my invention I will now proceed to describe its construction and operation.

On reference to the accompanying drawing which forms a part of this specification Figure 1, is a sectional view of the buffer piece with my improved coupling pin; Fig. 2, a side view of the same, and Fig. 3, a sectional plan on the line 1, 2 Fig. 2.

Similar letters refer to similar parts throughout the several views.

A is the buffer piece the upper portion *a* of which is connected to the lower portion *b* by a pin B, passing through the link F, and at the end by the plate C, the buffer piece being of the ordinary form and being connected to the railway car in the usual manner.

D is the coupling pin the main body of which is of such a diameter as to fit somewhat loosely into the opening *i* of the upper portion *a* of the buffer piece. Toward the lower end the coupling pin is reduced in diameter so as to form a collar *e* below which is formed an enlargement beveled from the point F, where it has the largest diameter to the reduced portion of the pin, and beveled in a contrary direction from the same point F to the lower termination of the pin, as shown in Figs. 1 and 2. The diameter of this enlargement at F is larger than the opening *i* in the upper portion *a* of the buffer piece, but small enough to pass through the opening *h* in the lower portion *b*. The two orifices *h* and *i* are so arranged in respect to each other than when the pin is down and is drawn tight against the sides of the openings by the link E of the buffer piece of the adjacent car, the said pin will assume the vertical position shown in Fig. 2.

It will be understood that the buffer piece of the adjacent car to which the link E is connected, is constructed in precisely the same manner as that above described, and has a coupling pin of the same peculiar form.

It is desirable that the pin D should be retained in an elevated position without any assistance during the operation of coupling the cars together, hence the use of the reduced portion of the pin and the collar *e* by means of which the pin is rendered self retaining in the position shown in Fig. 1.

As the two cars approach each other the link E of the adjacent car passes into the opening of the plate *c*, and the buffer pieces of the two cars coming in contact with each other, such a sudden jerk is imparted to the pin as to raise it from its inclined position, when it at once drops, its beveled enlargement passing through the link E as well as through the opening *h* in the lower portion of the buffer piece. It will be evident that as the pin drops, the lower bevel of its enlargement will guide it through the lower opening *h*.

I am aware that a coupling pin has been constructed with a projection or enlargement at the lower end, so arranged in respect to two openings in the buffer piece that the enlargement can be withdrawn from the lower opening but not from the upper opening thus preventing the loss of the pin, as in the patent granted G. W. Doolittle Jan. 26th, 1858, in which case it is necessary to turn the pin around until a projection at the lower end coincides with an opening in the lower portion of the buffer piece, when the pin can be elevated; this causes con-

siderable delay which is avoided in my improvement by the upper bevel of the enlargement which allows the pin to be at once withdrawn without any preparatory adjustment, the enlargement at the same time preventing the withdrawal of the pin through the upper opening *i*. I therefore do not claim broadly so forming a coupling pin that it can be withdrawn from the lower opening but not from the upper opening of the buffer piece; but

I claim as my invention and desire to secure by Letters Patent—

1. Reducing the lower end of the coupling pin D and forming a collar *e* on the same, the part reduced and the collar being so arranged in respect to the upper opening *i* of the buffer piece that the pin is rendered self retaining in an elevated position in the said opening as set forth.

2. Forming on the pin an enlargement with upper and lower bevels the said enlargement beieng arranged in respect to the larger lower opening and smaller upper opening of the buffer block as and for the purpose herein set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

I. W. VAN HOUTEN.

Witnesses:
HENRY HOWTON,
CHARLES E. FOSTER.