D. B. SNYDER.

Car Coupling.

No. 57,397. Patented Aug. 21, 1866.

Fig. 1.

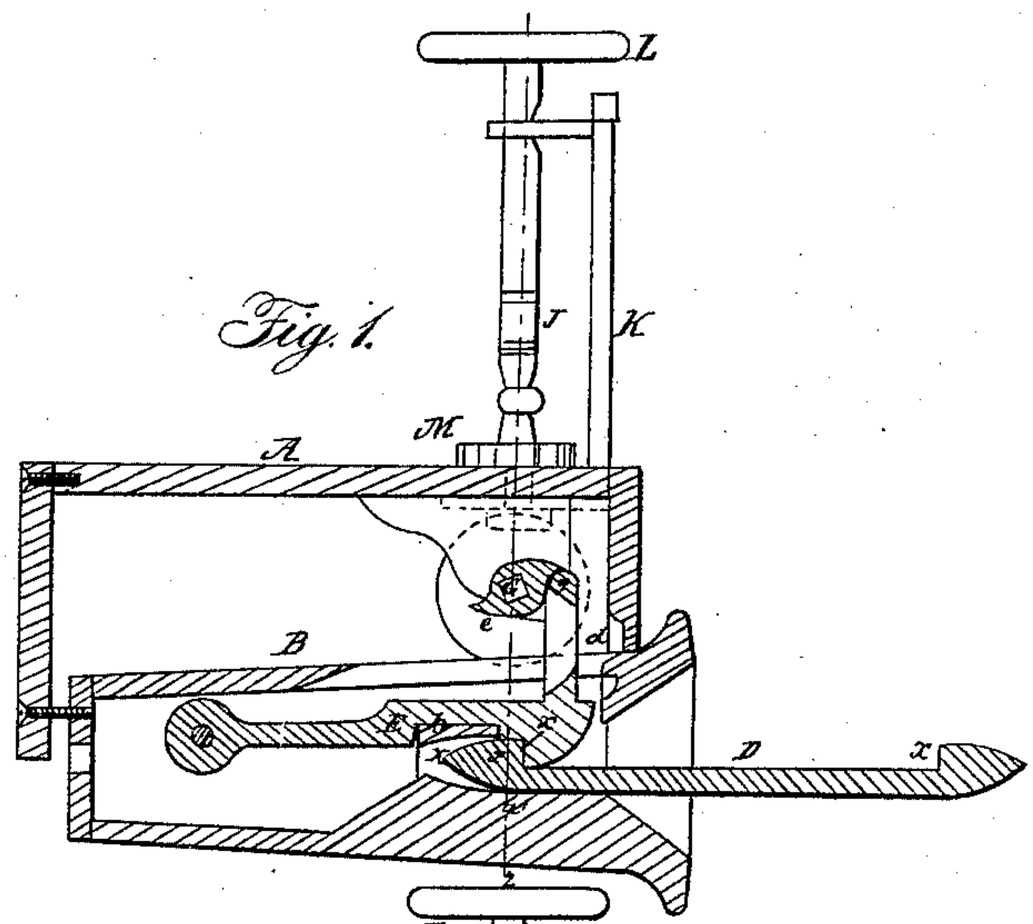


Fig. 2.

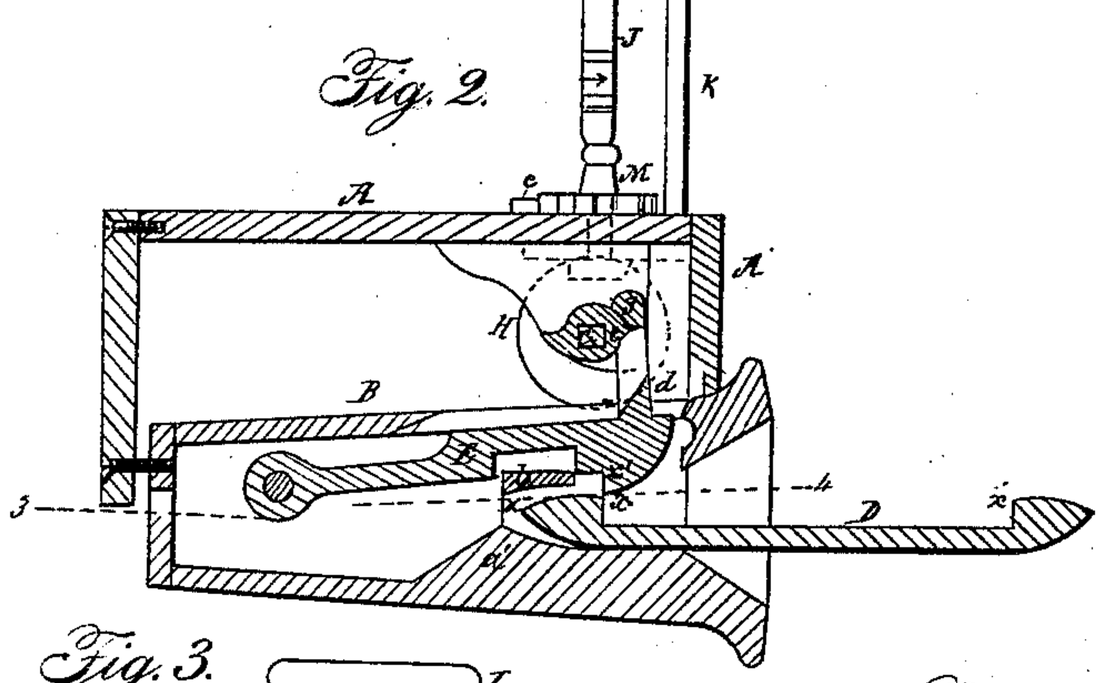


Fig. 3.

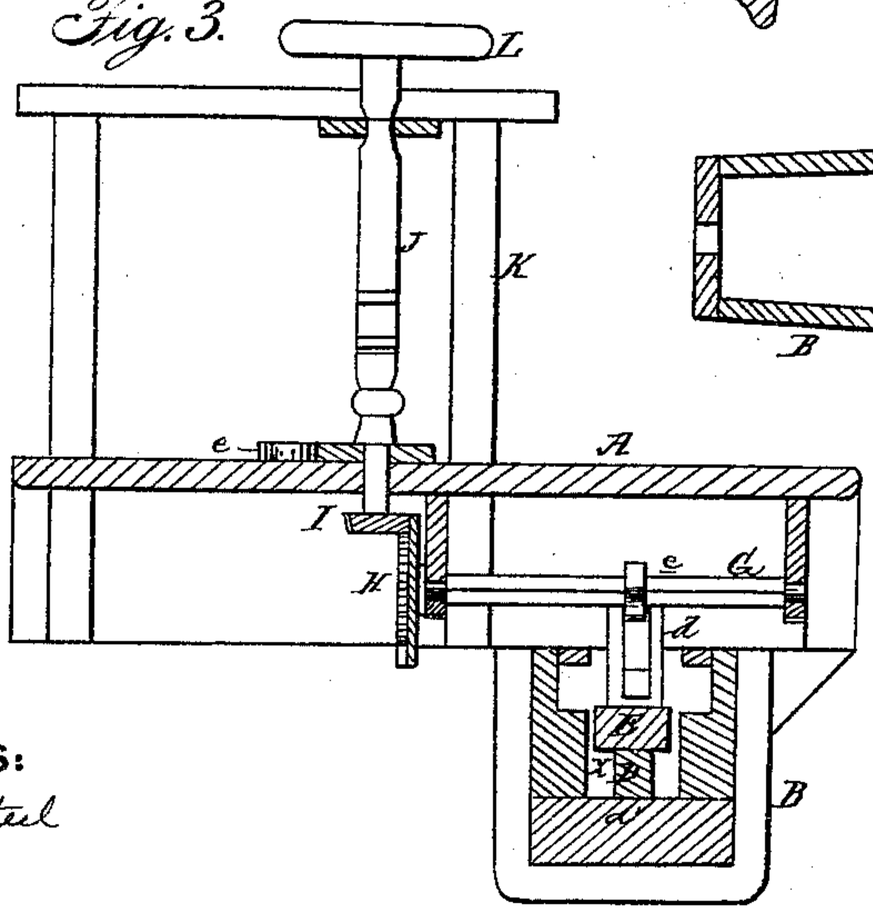
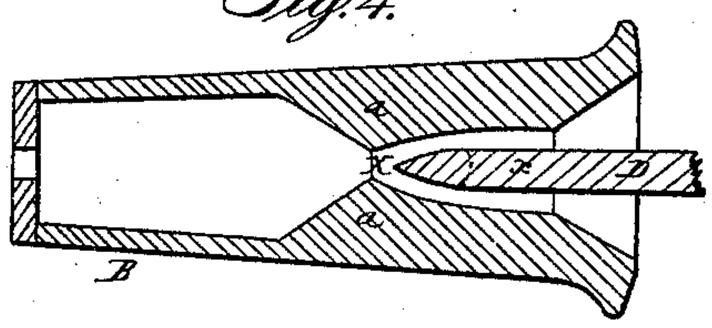


Fig. 4.



Witnesses:

Wm Albert Steel

John Parker

Inventor:

D B Snyder
By his attorney
Henry Howson

UNITED STATES PATENT OFFICE.

D. B. SNYDER, OF MILLVILLE, NEW JERSEY.

IMPROVED CAR-COUPLING.

Specification forming part of Letters Patent No. **57,397**, dated August 21, 1866.

To all whom it may concern:

Be it known that I, D. B. SNYDER, of Millville, Cumberland county, New Jersey, have invented certain Improvements in 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 drawings, and to the letters of reference marked thereon.

My invention consists of certain devices, fully described hereinafter, whereby railway-cars can be quickly connected to and detached from each other without the annoying and sometimes dangerous delays which occur when the ordinary couplings are employed.

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 drawings, which form a part of this specification, Figures 1 and 2 are sectional elevations, showing one of the platforms of a railway-car with my improved coupling device. Fig. 3 is a section on the line 1 2, Fig. 1; and Fig. 4, a section on the line 3 4, Fig. 2.

A represents a portion of the front platform of a railroad-car, beneath which is suspended a buffer, B. In the interior of the buffer, near the front end of the same, are projections *a a' a'* and a cross-piece, *b*, the adjacent sides of which are so shaped as to form a chamber or socket, X, gradually contracting in diameter toward the rear end, and adapted for the reception of one end of a coupling-bar, D. The coupling-bar D is sharpened at each end, and is so cut away as to form two shoulders, *x x*, for a purpose described hereinafter.

Within the buffer is hung a lever, E, which has an inclined outer end and a shoulder, *x'*, the end of the lever, when the latter is at the limit of its downward motion, projecting into the socket X.

In brackets at the under side of the platform A turns a shaft, G, to which is secured a double cam, *c*, and at the upper edge of the lever E is a slotted projection, *d*, with the cross-piece *g*, at the upper end of which engage the arms of the cam *c*, for a purpose described hereinafter.

At one end of the shaft G is a cog-wheel, H, to the teeth of which are adapted those of a pinion, I, on a vertical shaft, J, the latter turning in the platform A and in a bracket secured to the usual railing K, and being provided at its upper end with a hand-wheel, L. Near the lower end of the shaft is secured a ratchet-wheel, M, to the teeth of which is adapted the end of a pawl, *e*, hung to a pin projecting from the upper side of the platform.

One end of the bar D is introduced into one of the buffers, its inclined end striking the inclined end of the lever E, and raising the latter until the shoulder *x* of the bar passes the shoulder *x'* of the lever, when the latter will fall to the position shown in Fig. 1, the shoulders *x x'* being in contact, and the withdrawal of the bar being thus prevented.

When two cars are brought together the end of the bar projecting from one buffer will be introduced into the buffer in the opposite car until its shoulder *x* is brought in contact with the shoulder *x'* of the lever in a manner similar to that above described, when the two cars will be securely coupled together.

In order to prevent the lever E from being thrown upward out of contact with the bar by the jolting of the car, the attendant turns the shaft J in the direction of its arrow, so as to bring one of the arms of the double cam *c* against the upper side of the cross-piece *g* of the projection *d*. The pawl *e* is now brought into contact with the ratchet-wheel M, so that the shafts and lever are prevented from moving from their position.

When it is desired to uncouple the cars the attendant turns the shaft J, so that one of the arms of the cam *c* is brought against the under side of the cross-piece *g* of the projection *d*, the front end of the lever E being thus elevated to the position shown in Fig. 2, when the bar may be readily withdrawn.

By the use of the above-described devices the cars can be coupled and disconnected without the annoying and sometimes dangerous delays which occur when the usual couplings are employed, while the labor of several attendants is dispensed with.

Although I have described a bar, D, as be-

ing used with this device, it will be apparent that an ordinary link may be substituted for the same.

It will also be apparent that other means than those described may be employed for raising the lever E without departing from the main features of my invention.

Without confining myself to the precise construction and arrangement of parts herein described, I claim as my invention and desire to secure by Letters Patent—

1. The buffer B, with its socket X and lever E, constructed and adapted for the reception and retention of the bar D, substantially as described.

2. The shaft G, with its cam *c*, combined with the lever E and with the within-described operating devices, or their equivalents, substantially as and for the purpose described.

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

D. B. SNYDER.

Witnesses:

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