L. M. DODDRIDGE.

Car Coupling.

No. 87,649. Patented March 9, 1869.

Fig. 5

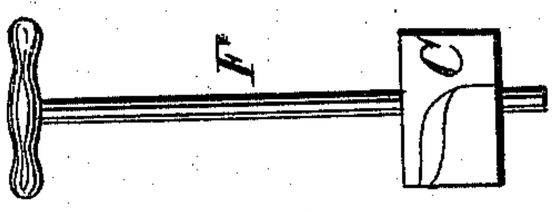


Fig. 3

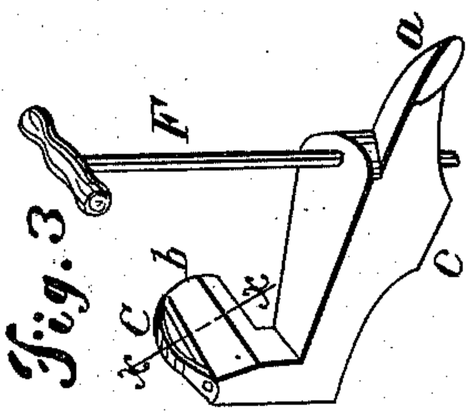


Fig. 4

Fig. 2

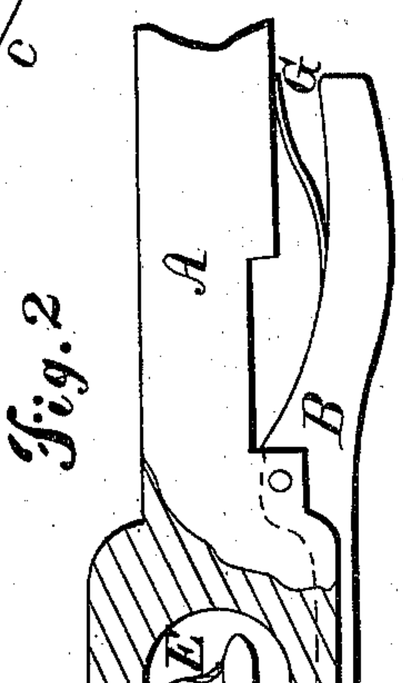


Fig. 6.

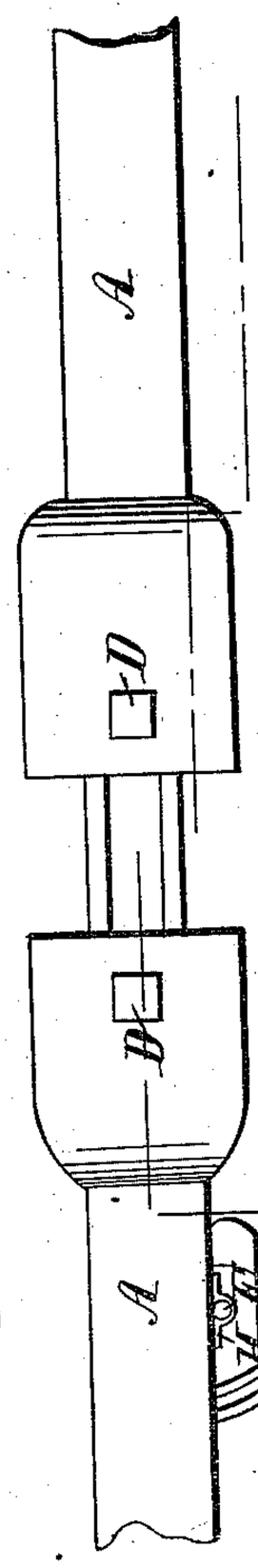
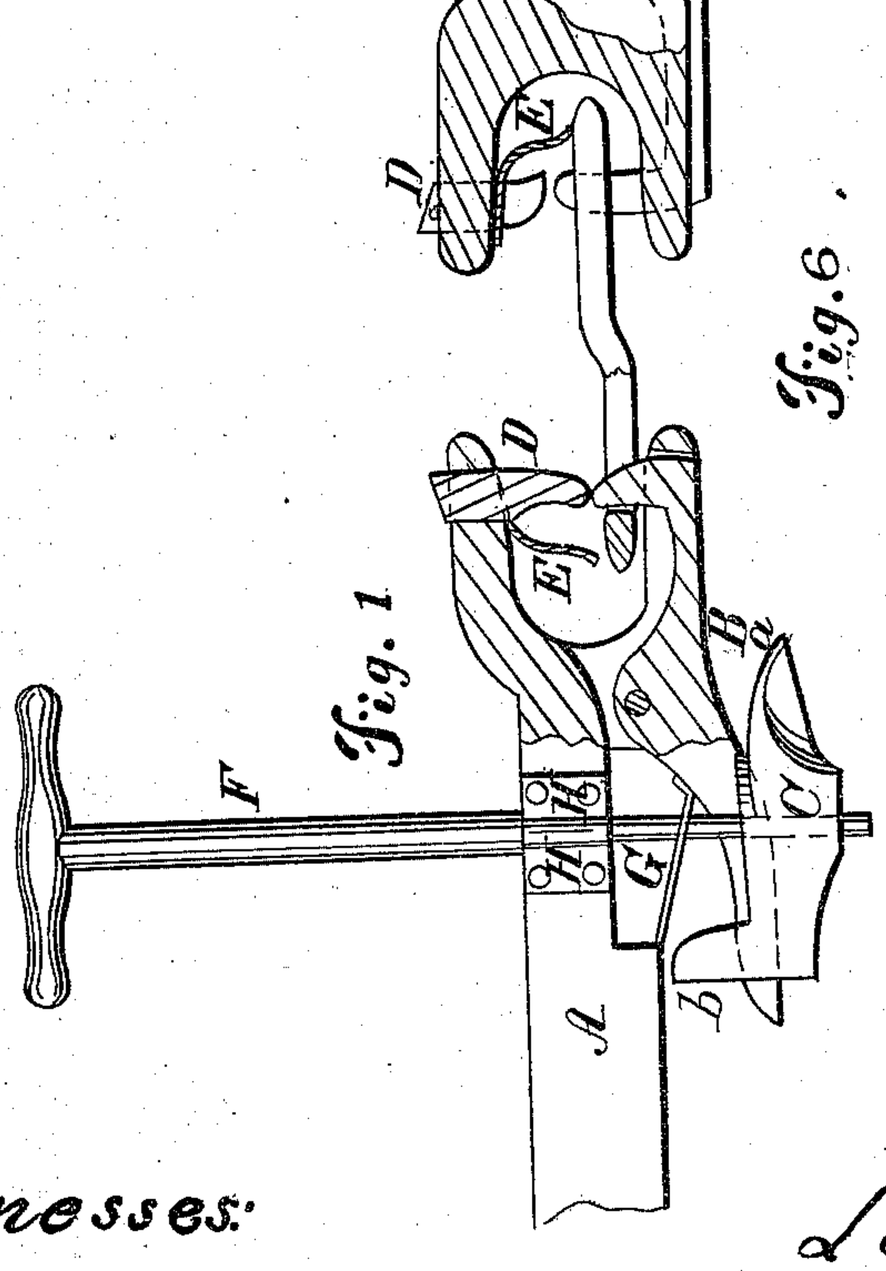


Fig. 1



Witnesses:

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C. F. Clausen

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by

D. P. Holloway & Co.

his attys

United States Patent Office.

LOYAL M. DODDRIDGE, OF PORTLAND, INDIANA, ASSIGNOR TO HIMSELF AND JAMES N. TEMPLER, OF SAME PLACE.

Letters Patent No. 87,649, *dated March* 9, 1869.

IMPROVED RAILWAY-CAR COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, LOYAL M. DODDRIDGE, of Portland, in the county of Jay, and State of Indiana, have invented a new and useful Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is an elevation, partly in section, showing the means of securing the coupling-lever, in both its open and closed position, while the lever is shown in its closed position with the coupling-link attached.

Figure 2 is an elevation, partly in section, of the same, without the locking-device, or the means of operating it, but showing the coupling-link in position.

Figure 3 is a perspective view of the cam or locking-device, showing also the rod and lever, or handle, by which it is operated.

Figure 4 is a sectional elevation of the locking-cam on the line *x–x* of fig. 3.

Figure 5 is an elevation of the same, and

Figure 6 is a top view of two of the buffers, united by means of the coupling-link.

Corresponding letters refer to corresponding parts in the several figures.

This invention relates to that class of car-buffers, or couplers, which are automatic in their operation so far as their coupling or connecting the cars together is concerned; and

It consists in a double cam, which serves the purpose of locking the lever which carries the coupling-pin upon its forward end, in its position when the cars are coupled, while its opposite end serves the purpose of forcing said lever into its open position when it is desired to uncouple the car from its fellow or connecting-car, and in the combination of such cam with the buffer, and other devices, as will be hereinafter described.

A, in the drawings, represents the buffer-head, to which are attached the locking-lever B, the coupling-pin D, guiding-plate E, and vertical cam-shaft F.

This head may be made of cast or wrought-iron, and of any form of construction which will permit the above-enumerated devices to be properly secured thereto.

B is a locking-lever, which is pivoted to the buffer-head, upon its lower side, as clearly shown in figs. 1 and 2 of the drawings.

This lever has, upon its forward end, a projecting pin, which, in connection with the pin or projection D, serves to hold the coupling-link in position, when the cars are coupled together.

The rear end of this lever extends rearward, from its point of connection with the buffer-head, for a distance sufficient to enable it to be operated upon by the locking-cam C, as will be more fully described hereinafter.

C is a disk, or lever, having cam-like projections formed upon it in such a manner, that when it is desired to lock the lever B, in its closed position, for the purpose of preventing the cars from uncoupling, the projection *b* of said lever is passed between the outer end of said lever and the under side of the buffer, where it is retained by means of the small spring G, attached to the upper or outer surface of said projection, but when it becomes necessary to uncouple such cars, the projection *a* of such lever is made to pass upon the under side of lever B, by which means its forward end is thrown down, or its projection removed from contact with projection D, by which means the coupling-link is free to pass out between such projections, thus effectually uncoupling the cars.

The manipulation of the disk, or lever, B, is effected by means of the vertical rod F, and the wheel or handle upon its upper end.

D is a pin which is secured to the upper portion of the throat of the buffer-head, or it may be a projection formed thereon, for the purpose of securing the link in position when the cars are coupled together, or for acting in conjunction with lever B, for that purpose.

E is a shield, or guide, which is secured to the upper side of the throat or aperture in the end of the buffer-head. The guide is made of spring-steel, or any other suitable material, its purpose being to insure the forcing of the coupling-link down upon the projection upon lever B, so as to insure the attachment of the cars as they are brought together.

F is a vertical shaft, or rod, which is attached to the buffer, by means of the cap H, which, together with the buffer, forms its bearing.

This rod or shaft may be of sufficient length to permit the operator to turn it, while sitting or standing upon the tops of the cars, or it may be shortened, and operated while standing upon the platform.

To the lower end of the above-described shaft, the locking-lever is firmly attached, while upon its upper end, a lever or wheel is secured, by which it is turned.

G is a spring, which is attached to the under side of the buffer, so that its outer end bears upon the lever B, near its rear end, for the purpose of throwing its front-end projection into contact with projection D, at the instant when the coupling-link passes between them, and before the locking-cam has been so turned as to secure the lever B in that position.

H is the bearing upon the buffer, for the vertical shaft F, as above described.

The operation of this device is as follows:

When a train of cars has been coupled together, the parts are in the positions shown in figs. 1 and 2, where it will be seen that the projection *b*, upon the cam, or lever, C, is passed in between such lever and the buffer, by which means the forward end of the lever B is

prevented from falling or being forced downward, so as to permit of the coupling-link being drawn out of its place, and thus preventing accidents by the premature uncoupling of trains of cars; but when it is desired to uncouple them, for the purpose of separating them, the cam-lever C is turned by means of the wheel and shaft to which it is secured, so as to bring the projection *a*, on said lever, in contact with the under side of lever B, by which means its forward end is depressed, and the link is made free to pass out of the buffer-head.

Having thus fully described my invention,

What I claim, and desire to secure by Letters Patent, is—

1. The locking-disk, or lever, with its cam-like projections, constructed substantially as shown and described.

2. The combination of the disk, or lever, C, locking-lever B, and buffer A, substantially as and for the purpose described.

3. The arrangement of the guide or spring F, with reference to the buffer A and lever B, substantially as shown and described.

4. The arrangement of the spring G, with reference to the disk, or lever, C, substantially as shown and described.

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

LOYAL M. DODDRIDGE.

Witnesses:

SAMUEL F. HIATT,

WILLIAM G. SUTTON.