

S. D. LOCKE.

Car Coupling.

No. 49,348.

Patented Aug. 8, 1865.

Fig. 1.

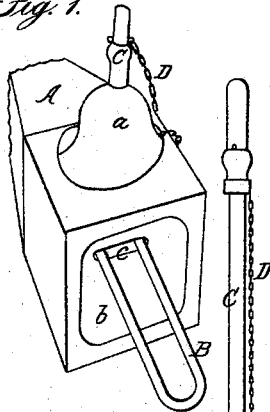


Fig. 2.

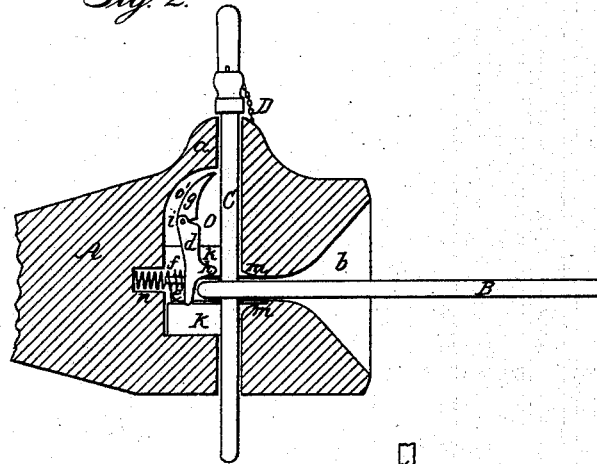


Fig. 3.

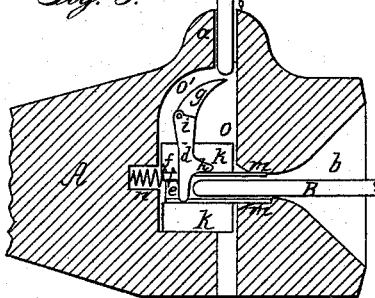


Fig. 4.

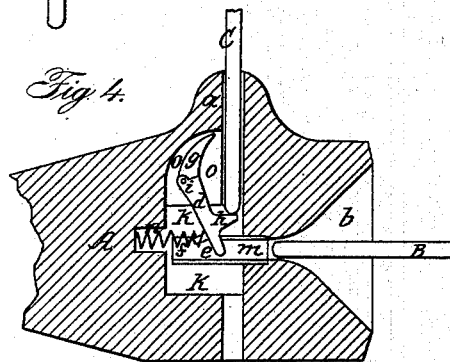


Fig. 5.

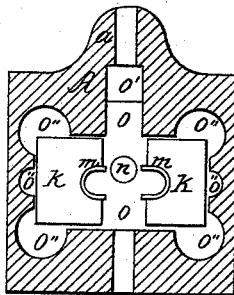
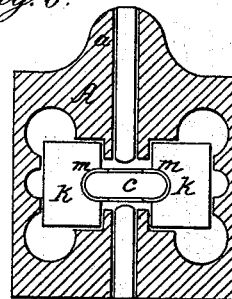


Fig. 6.



Witnesses:

C. E. Church  
K. W. Bonis

Inventor.

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# UNITED STATES PATENT OFFICE.

SYLVANUS D. LOCKE, OF JANESVILLE, WISCONSIN, ASSIGNOR TO GEORGE G. CAMPBELL, OF SAME PLACE.

## IMPROVED CAR-COUPLING.

Specification forming part of Letters Patent No. 49,348, dated August 8, 1865.

*To all whom it may concern:*

Be it known that I, SYLVANUS D. LOCKE, of the city of Janesville, in the county of Rock and State of Wisconsin, have invented a new and improved mode of constructing and operating a machine for coupling railroad-cars; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, like characters referring to like parts in each figure.

The nature of my invention consists, first, in the application to the ordinary link-and-pin coupler on railroad-cars of a metallic case, (into which the link is inserted as the cars are coupled,) that, when the cars are uncoupled, holds the link steadily in a horizontal position, and when the cars are coupled secures sufficient play to the link to allow it to adjust itself to the springing and swaying of the cars, while at the same time the rubber is protected by the metallic case from all wear and abrasion by the link; second, in the application to the same of a swinging table operated by a spring back of it and (above the swing-table) a drop dog or catch, the two hinged together on a common bearing in such a manner that the dog holds the pin after it is raised until the link is withdrawn, when the spring, driving the table forward, withdraws the dog or catch and allows the pin to drop on the table, where it remains until the link again enters and drives back the table, when it (the pin) drops within the link.

To enable others skilled in the mechanical arts to make and use my invention, I will refer to the accompanying drawings, in which—

Figure 1 is a view in perspective of my coupler, with a portion of the "bunter" broken away. Fig. 2 is a longitudinal vertical section of the same, showing the position of the parts when the cars are coupled. Fig. 3 is a longitudinal vertical section of the same, showing the position of the parts after the pin has been raised and before the link is withdrawn. Fig. 4 is a longitudinal vertical section of the same, showing the position of the parts after the cars are separated or the link withdrawn. Fig. 5 is a

transverse vertical section of the same, showing the form and position of that portion of the rubber spring lying back of the pin. Fig. 6 is a transverse vertical section of the same, showing the form and position of that portion of the rubber spring lying forward of the pin.

I construct my coupler in any convenient form, providing it with the ordinary appendages—a bunter, A, link B, pin C, and chain D.

The end *b* of the bunter is made bell-shaped, to more surely guide the link B into the mouth *c*. The chain D prevents the pin C from being entirely withdrawn from the bunter. As the link enters the bunter it passes into a closely-fitting metallic case, *m*, that is supported and embedded in the rubber spring *k*, that holds the link steadily in a horizontal position until it enters the bell-shaped mouth of another coupler, when it (meaning the rubber spring) yields to allow the link to adjust itself to the springing and rocking of the cars.

The metallic case serves to hold the link more steadily than the rubber alone would, and also prevents the rubber from being worn or abraded by the link.

The rubber spring does not press at all points upon the surface of the chamber of the bunter, (as that in a great degree would neutralize its elasticity,) but the latter has open spaces *o*, Figs. 5 and 6, outside of the rubber, into which it (meaning the rubber) is pressed as the link is worked by the springing and swaying of the cars. As the link passes into the case *m* it comes in contact with the foot of the swing-table *d*, Fig. 4, (upon a projection, *h*, of which rests the pin,) driving it backward against the spring *f*, and so withdrawing the projection *h* from underneath the pin, and allowing the pin to drop of its own weight through the link, as shown in Fig. 2, thus coupling the cars.

Hinged to the swing-table *d*, and working on the same bearing, as shown in the drawings, is the dog or catch *g*, that is operated in one direction by the swing-table and in the other by its own weight or a spring.

To uncouple the cars it is only necessary to raise the pin, which may be done on freight-cars by a person on the top or at the side of the car by means of a rope or chain attached

to the head of the pin and running to the top of the car and thence over pulleys to the side. As the pin is raised from the coupling position shown in Fig. 2 it will either be caught by the dog *g* or the projection *h* of the table—results respectively dependent upon whether the link remains in the position therein shown or is withdrawn from the bunter as the pin is raised. If the link is not withdrawn, (which is generally the case in uncoupling,) the dog *g* drops forward underneath the pin and supports it in the position shown in Fig. 3 until the cars' separating withdraws the link, when the spring *f* presses the table *d* forward, which, in turn, through the hinge-joint *i*, removes the dog *g* from underneath the pin and allows the latter to drop down upon the projection *h* of the table, where it remains in the position shown in Fig.

4 until the link enters and drives backward the table as before.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. A car-coupler, when constructed and arranged substantially as and for the purpose set forth.

2. The combination and arrangement of the dog *g* and swing-table *d*, substantially as and for the purpose set forth.

3. The combination and arrangement of the case *m* and spring *k*, substantially as and for the purpose set forth.

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Witnesses:

C. E. CHURCH,  
K. W. BEMIS.