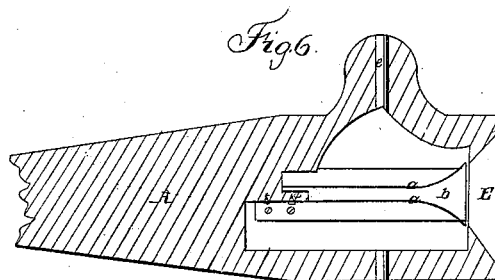
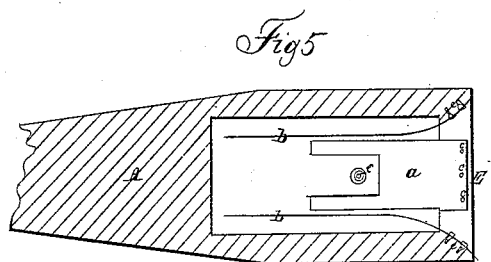
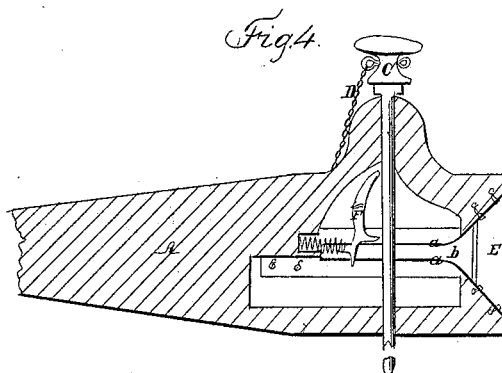
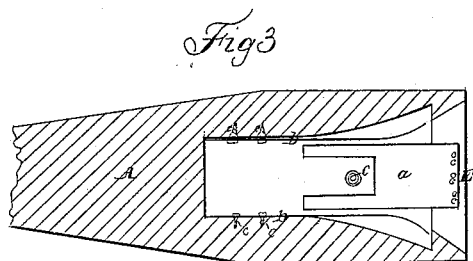
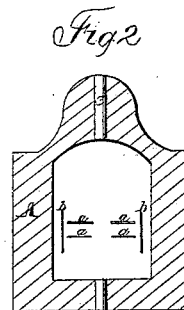
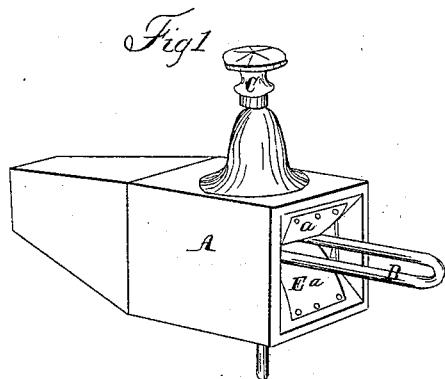


G. G. CAMPBELL.
Car Coupling.

No. 50,559.

Patented Oct. 24, 1865.



Witnesses

Sylvanus D Locke

G H Williston

Inventor

George G Campbell

UNITED STATES PATENT OFFICE.

GEORGE G. CAMPBELL, OF JANESVILLE, WISCONSIN.

IMPROVED CAR-COUPLING.

Specification forming part of Letters Patent No. 50,559, dated October 24, 1865.

To all whom it may concern:

Be it known that I, GEORGE G. CAMPBELL, of the city of Janesville, in the county of Rock and State of Wisconsin, have invented a new and useful Improvement in Car-Couplers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a view in perspective. Fig. 2 is a transverse vertical section. Fig. 3 is a longitudinal horizontal section. Fig. 4 is a longitudinal vertical section, and Figs. 5 and 6 are the same as Figs. 3 and 4, with a modification of the metallic springs *a* and *b*.

To enable others skilled in the mechanical arts to make and use my invention, I will proceed to describe its construction and operation.

I construct my car-coupler in any of the ordinary forms of the link-and-pin self-coupler, providing it with the necessary appendages or parts of the same—namely, a bumper, *A*, link *B*, pin *C*, chain *D*, funnel-shaped mouth *E*, and a device, *F*—for supporting and dropping the pin; but in order to prevent the free end of the link from dropping down or swinging to one side, or, in other words, in order to keep the link directly in line with the bumper, (a position indispensable in self-coupling,) I insert within the bumper a series of metallic springs, *a* and *b*. I place these springs parallel to or in line with the bumper, and secure them thereto by screws *c* or otherwise in such a position as to insure their pressing against the link and holding it, when the cars are uncoupled, firmly in the indispensable position above described. These springs, as I attach them, form a kind of spring or elastic metallic

case, into which the end of the link is inserted, and which allows it to freely adjust to the swinging and rocking of the cars, and which at the same time, when the cars are not coupled, holds it securely in a horizontal position in line with the bumper aforesaid. I attach these springs at either end as shown in Figs. 3, 4, 5, and 6, but prefer to attach them as shown in Figs. 3 and 4.

The advantages of the metallic spring over the rubber spring as heretofore used are apparent.

First, the rubber is not sufficiently yielding or elastic to allow the link to accommodate itself to the vertical and lateral movements of the cars while in motion.

Second, the metallic spring is more readily applied to the couplers in ordinary use on railroads.

The nature of my invention relates to that class of the link-and-pin couplers commonly called "self-couplers;" and it consists in the application thereto of metallic springs to hold the link horizontally or in line with the bumper, so that it may enter the mouth of the opposite bumper-head and self-couple, and yet allow it, at the same time sufficient play to accommodate itself to the swaying and bounding of the cars while in motion.

What I claim as new, and for which I desire Letters Patent of the United States, is—

The application to the link-and-pin self-coupler of the metallic springs *a* and *b*, substantially as and for the purpose set forth.

GEORGE G. CAMPBELL.

Witnesses:

SYLVANUS D. LOCKE,
G. H. WILLISTON.