J. DAVIS.

Car Coupling.

No. 40,331. Patented Oct. 20, 1863.

Fig. 1.

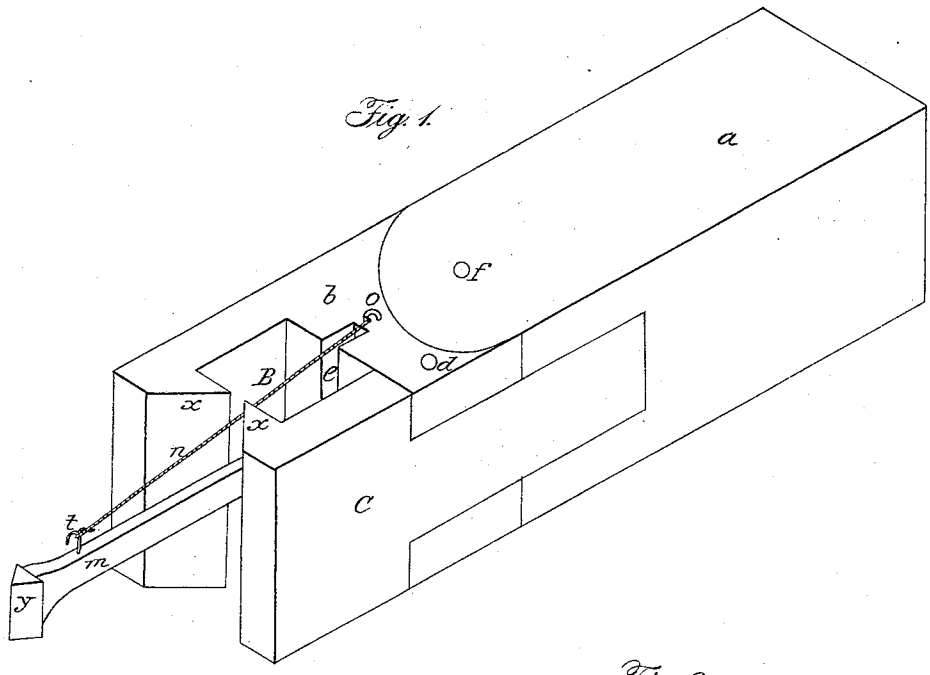


Fig. 2.

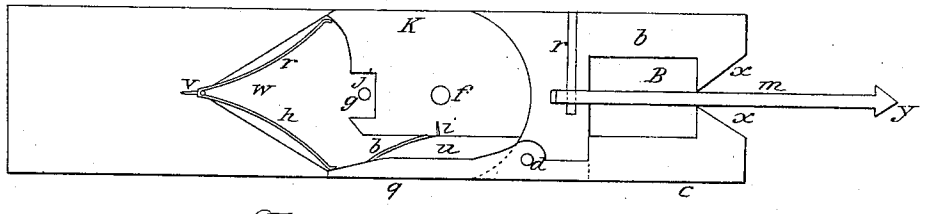


Fig. 4.

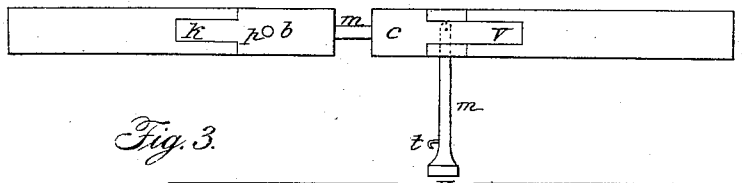
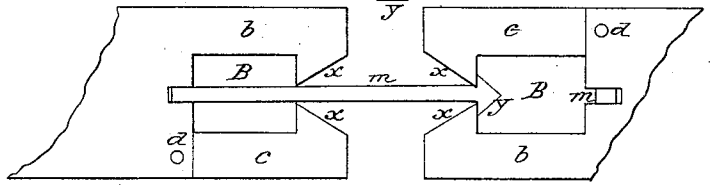


Fig. 3.



Witnesses:

James F. Johnston

Alexander Hays

Inventor:

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

UNITED STATES PATENT OFFICE.

JOHN DAVIS, OF ALLEGHENY CITY, PENNSYLVANIA.

IMPROVEMENT IN RAILROAD-CAR COUPLINGS.

Specification forming part of Letters Patent No. **40,331**, dated October 20, 1863.

To all whom it may concern:

Be it known that I, JOHN DAVIS, of the city of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Railroad-Car Couplings; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in an arrangement of springs, spring-chambers, flexible jaws, stop, and coupling-tongue, the whole being constructed, arranged, and operating in the manner hereinafer described.

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

In the accompanying drawings, Figure 1 is a perspective view of the coupling. Fig. 2 is a longitudinal section of the coupling. Fig. 3 is a top view representing two couplings coupled together. Fig. 4 is a side view representing two couplings coupled together.

a represents the back part of the coupling, which is attached to the truck of the car in the usual manner.

b and *c* represent the flexible jaws.

f represents the pivot-bolt of the jaw *b*, in the tongue *k* of which is a recess, *j*, in which is placed a stop-pin, *g*, which is secured to the body or back part, *a*, of the coupling. This stop-pin *g* is used for preventing the jaws from turning beyond a given point, and for the purpose of avoiding an overstrain on the springs.

w and *u* represent spring-chambers.

h, *l*, and *r* represent springs.

i and *v* represent bolts or screws, which are used for securing the springs in their proper position.

d represents the pivot-bolt of the jaw *c*, which has its bearing in the jaw *b*.

x represents the beveled part of the jaws, which bevel corresponds to the beveled or spear-pointed coupling-tongue *m*, which is secured in the recess *e* by means of bolt *p*.

B represents a chamber for the point of the coupling-tongue. This chamber should be made large enough to allow room for the jostling action of the tongue, caused by the motion of the cars.

It will be observed that I form a male or female coupling by simply changing the position of the coupling-tongue. When the tongue is in the position represented in Fig. 1, it then becomes the male, but when the tongue is in the position represented in Fig. 4, (hanging down,) it then becomes the female coupling. This arrangement enables me to couple the cars at either end without the necessity of turning the cars to suit the coupling. The tongue is held in the desired position by means of the cord *n*, hook *t*, and staple *o*.

The operation of my improvement is as follows: The point *y* of the tongue enters the space formed by the beveled parts *x*, and, forcing sidewise the jaw *c*, enters the chamber B. The spring *l* will then force back the jaw into its proper position, and thus close the jaws on the tongue, as represented in Fig. 3, which completes the coupling of the cars. The uncoupling of the cars is effected by simply unhooking the cord off from the hook *t* and dropping the tongue. The jaws *b* and *c* turn on the pivot-bolt *f* for the purpose of accommodating the action of the jaws and tongue to the jostling motion of the cars, and for relieving the truck from the strain that would otherwise be thrown on it. When the jaws *b* and *c* are turned on the pivot-bolt *f* toward the left, then the springs *r* and *l* work in harmony with each other for the purpose of forcing the jaws back to a line parallel with the back part of the coupling; but when the jaws are turned toward the right, then the springs *h* and *l* work in harmony for like purpose.

The advantages of my improvement are as follows: First, I can couple the cars without turning them; second, all danger is avoided in coupling, it never being necessary to go between the cars to couple them; third, in case of accident by cars jumping off the track, the coupling will become unshipped; fourth, the strain caused by the side-jostling of the cars is taken off the truck by means of the jaws turning on the pivot-bolt *f*.

Having thus described the nature, construction, and operation of my improvement, what I claim as of my invention is—

The arrangement of the flexible jaws *b* and *c*, coupling-tongue *m*, recess *j*, stop *g*, springs *h*, *l*, and *r*, and chambers B, *u*, and *w*, the whole being arranged, constructed, and operating substantially as herein described, and for the purpose set forth.

JOHN DAVIS.

Witnesses:

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