(No Model.)

G. A. KIRKPATRICK.

CAR COUPLING.

No. 296,756. Patented Apr. 15, 1884.

Fig. 1.

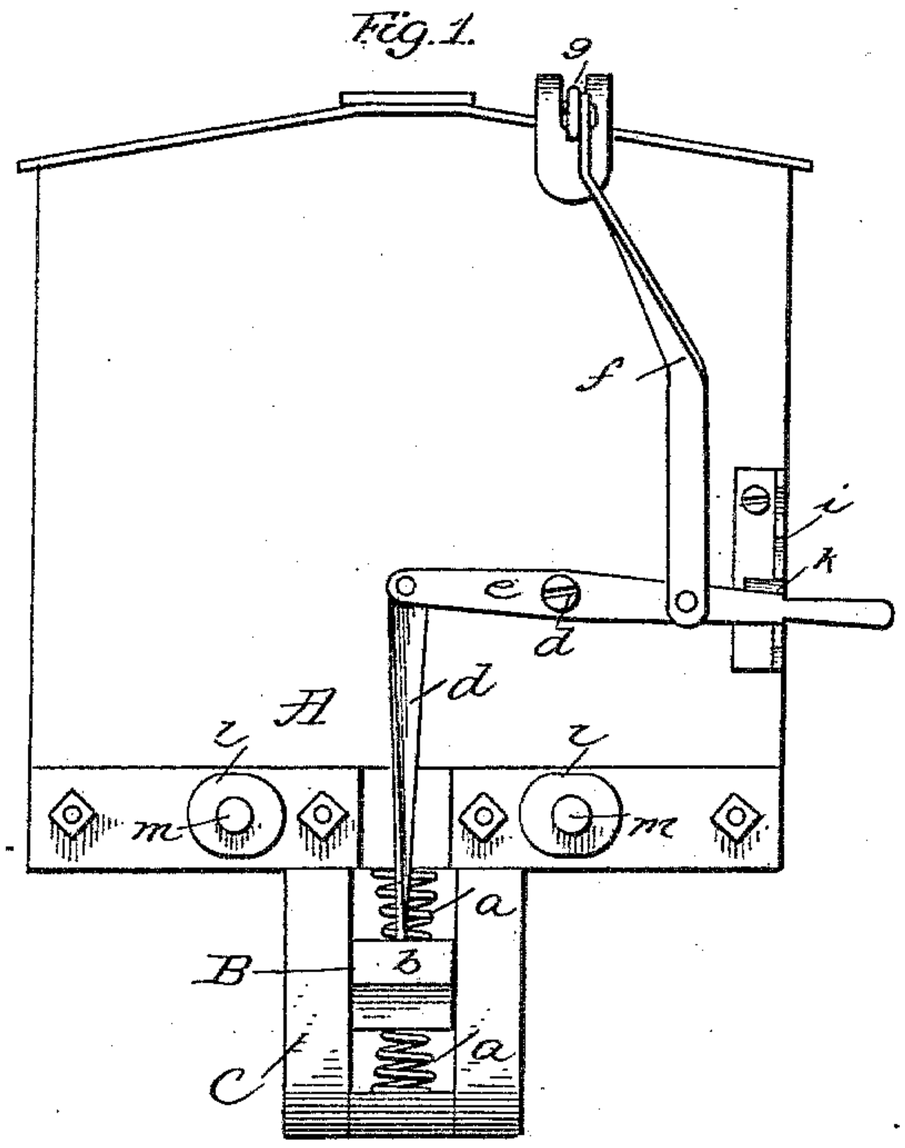
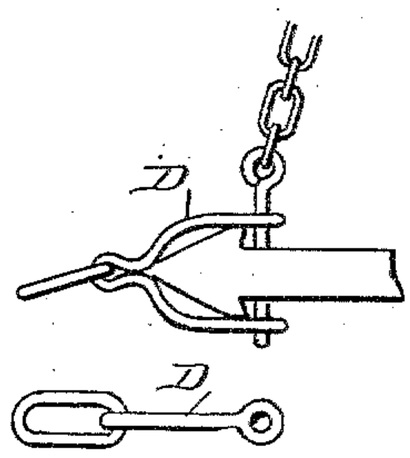


Fig. 2.

Fig. 3.



Attest:
Walter Dwaer
F. L. Middleton

Inventor
G. A. Kirkpatrick
by Joyce & Spear
Attys

UNITED STATES PATENT OFFICE.

GILBERT A. KIRKPATRICK, OF CANTON, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 296,756, dated April 15, 1884.

Application filed June 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, GILBERT A. KIRKPATRICK, of Canton, in the county of Lewis and State of Missouri, 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.

My invention is an improved car-coupling; and it consists in the combination of devices hereinafter described and particularly claimed.

I have represented in the accompanying drawings my coupler as attached to a freight-car, though it will be understood that I do not limit myself in its application to this class of cars, as it is equally applicable to passenger or other cars.

Figure 1 is a front view of a car with my improved coupling in position. Fig. 2 represents a side elevation of the same with the shell inclosing the draw-bar partly broken away to show the interior construction. Fig. 3 represents the mode of connecting a car with my coupler to a car with an ordinary open draw-bar by a link and pin.

The body of the car is marked A. The draw-bar, which will be more fully described hereinafter, is marked B, and is pivoted with an inclosed case or draw-head, C, at the rear thereof, and may extend back as far as may be found convenient. The draw-head is of sufficient size vertically to allow considerable movement of the draw-bar vertically, which is very desirable, and particularly so when it is necessary to couple low and high cars together. In order to keep the draw-bar normally in the center as in its proper position, and at the same time to give a yielding pressure on each side of the draw-bar, whether elevated or depressed, I place upon each side above and below the draw-bar, near the front of the car, spiral springs *a a*, which form a yielding fulcrum for the bar. I have shown the springs as being spiral; but springs of other shapes suitable for the purpose may be used instead. The draw-bar extends beyond the front of the car a suitable distance, and is provided with a locking-head, *b*. (Shown clearly in Fig. 2.) The head is approximately arrow-shaped in longitudinal section, and inclines on its end extend to a broad point in front. The shoulders *c c* on the rear part of the head incline toward the back or rear of draw-bar, and are adapted to clutch and hold the corresponding part of the opposite head. The draw-bar is adapted to be operated either from the side or top of the car by the devices shown in Fig. 1. These consist of a lever, *d*, attached directly to the bar in any suitable manner, and a lever, *e*, connecting with the lever *d*, pivoted upon the car-front at *d'*, and extending beyond the side of the car, where it is provided with a handle, and by depressing or elevating said handle the draw-bar is correspondingly operated. From this lever a second lever, *f*, extends to the top of the car, where it is connected to a handle-lever, *g*, pivoted between ears or otherwise on the car, and by this lever the draw-bar can be easily operated to any desired extent.

In order to couple cars of unequal height, it is only necessary to elevate or depress the draw-bar, as the case may be; and in order to retain the draw-bar in any desired position against the pressure of the springs, I form a clutch, *i*, on the side of the car, and form the lever *e* with a flanged upper edge, *k*, which engages with the teeth of the clutch, and thus holds the draw-bar in the desired position.

In the operation of coupling two cars containing the coupler described, the inclined faces of the draw-bars as they approach and meet will slide one upon the other, the springs on top and bottom of said draw-bar allowing the vertical movement necessary, until the inclines on each are passed, when the shoulders engage and hold the cars together.

In order to prevent the cars from becoming detached while passing round a curve, I provide bumpers *l l*, preferably two on each end of the car, on each side the draw-bar. As these bumpers would be too stiff to abut directly, and cause too much of a shock, I have arranged them with spring center-pieces *m m*, which may have coiled springs or pieces of rubber at their backs to give a yielding pressure.

My coupling is also adapted to be used where the car to which it is to be connected is an ordinary link-and-pin coupler. For this purpose I employ the device shown in Fig. 3. This consists of a V-shaped piece of bar-iron, (marked

D,) with eyebolts or holes at each of the three ends. I bore a hole through my draw-bar just back of the head thereof, and the open part of the V embraces the head of the bar, and is secured in place by a pin passing through the holes in the ends of the V and through the draw-bar. The closed part of the V is provided with an eye, and to this the ordinary link is connected, and this may be inserted in the open draw-head of the opposite car and secured by the ordinary pin.

Having thus described my invention, what I claim is—

Combined with the arrow-head *b*, the auxiliary removable coupling D, secured to such arrow-head by a pin passing through eyes in the part D and through the draw-bar.

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

GILBERT A. KIRKPATRICK.

Witnesses:
JAMES M. MILLER,
WM. H. RICHART.