W. M. WISWELL.

Car-Couplings.

No. 144,008. Patented Oct. 28, 1873.

Fig. 1.

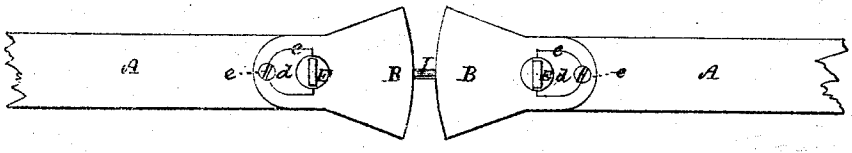


Fig. 2.

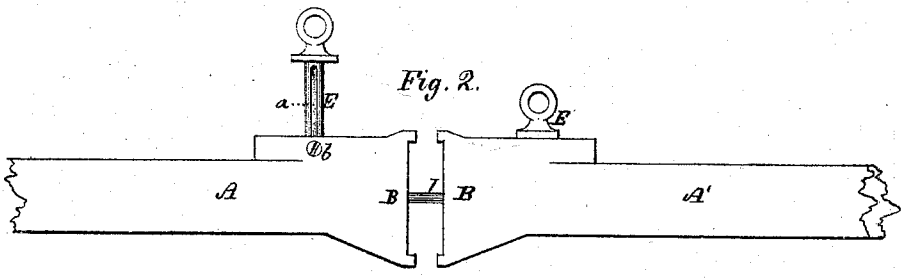


Fig. 3.

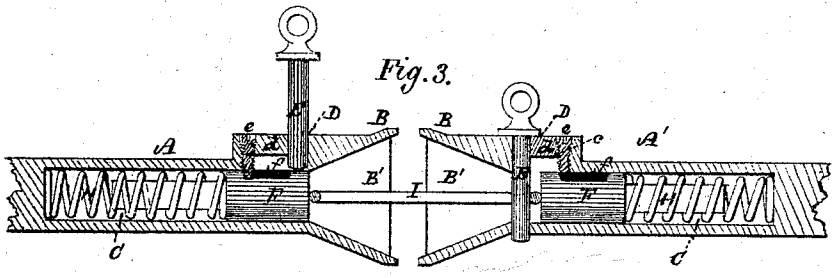
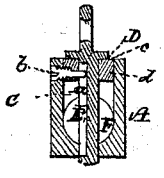


Fig. 4.



Witnesses.

J. M. Whitmarsh

W. E. Boardman

Inventor.

Wm. M. Wiswell

UNITED STATES PATENT OFFICE.

WILLIAM M. WISWELL, OF PORTLAND, MAINE.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **144,008**, dated October 28, 1873; application filed May 1, 1873.

To all whom it may concern:

Be it known that I, WILLIAM M. WISWELL, of Portland, Cumberland county, Maine, have invented certain Improvements in Car-Couplings, of which the following is a specification:

The drawings accompanying this specification represent, in Figure 1, a plan; in Fig. 2, a side elevation; in Fig. 3, a vertical central and longitudinal section; and, in Fig. 4, a vertical and transverse section of a railway-car coupling containing my improvements.

In these drawings, A A′ denote the outer ends of the draw-bars of two adjacent railway-cars, each being formed alike, with a trumpet-shaped or flaring head, B, the interior B′ of which constitutes the link-chamber, and an axial recess or bore, C, extending rearward from such chamber, as well as with a vertical hole or orifice, D, created in its upper part, which intercepts the chamber C at the base of the flaring mouth B, a pin, E, being placed in such hole, and, at times, resting upon the forward end of the bolt within the bore, and, at other times, extending through the head and through the coupling-link within the head.

The bolt above named may be cylindrical or polygonal, and is shown in the drawings at F as inserted within the bore C, a spring being placed behind the bolt, as shown at H, in order to advance the latter with some force. The outer end of the bolt F, when the latter is in its extreme forward position, terminates at the base of the mouth B, and, when in this position, serves as a shelf or stop to maintain the pin E above and out of the bore C, as shown in Fig. 3 of the drawings.

When the link, which is shown at I in the drawings, is in place within the chamber B′, as shown in Fig. 3, the pin E extends through the head B, and through the link, and the pressure of the bolt F serves to clamp the link between it and the pin with such force as to maintain the link at any desired angle in order to accommodate the height of an approaching draw-bar when two cars are to be coupled together.

In order to secure the pin E to the draw-bar, and prevent its misplacement or loss, I create a longitudinal groove, *a*, in one side of such pin, and I screw through the head B a screw, *b*, which intercepts and takes into this groove, as shown in Fig. 4 of the drawings.

As the pin E may, from accident, become so bent, and thus invalidate the automatic action of coupling, a way should be provided by which a pin, when thus bent, may be easily removed from the head B; and, to enable this to be done, I open, through the upper part of the said head, an opening, *c*, surrounding the coupling-pin E, and of considerably larger area, and within this opening I place a plate, *d*, which tightly fills it, the hole D, for reception of the said pin E, being formed in this plate, the removal of which leaves an opening sufficiently large to allow of the withdrawal of the pin in whatever shape it may assume. The plate *d* is secured in place by a screw, *e*, which is screwed partially into it, and partially into the head B; and the point of this screw enters a longitudinal channel, *f*, made in the upper part of the bolt F, as shown in Fig. 3 of the drawings, and serves to stop the advance of such bolt at the point shown in said Fig. 3.

As a link carried by one draw-bar, as shown at A′ in Fig. 3, approaches a draw-bar which contains no link, as shown at A in Fig. 3, the end of the link enters the mouth B′, and, abutting against the outer end of the bolt F, pushes the latter back to such a point that it affords no support to the pin E, and the latter drops, by its own weight, through such pin, and locks the latter to the draw-bar.

I thus obtain a strong, durable, and effective coupling for railway-cars, which is automatic in its action, and whose peculiarities are such that I am able to easily and cheaply convert other draw-bars to the same system.

It may be desirable to operate the coupling-pin from the ground, or from the platform of the car, without touching it with the hands. This may be done by pivoting to some convenient part of the car-platform a bent lever, one handle of which extends horizontally toward the outside of the car, and the other rises to an upright position at the end of the platform, the base of the lever operating with the pin to elevate it; or, still further, a cord may be at-

tached to the pin passing upward over a pulley, and leading to the interior of the car, in order that the passengers may, upon signal of danger, remove the pin, and free the car from the one preceding it.

I claim—

1. A draw-bar of a railway-car, constructed and provided with the axial or central bore C and bolt F and spring H, and the pin E, with the plate *d*, for permitting the removal of a bent pin, substantially as and for the purposes stated.

2. The pin E, with its channel or groove *a*, in combination with the plate *d*, draw-bar A, and spring-bolt F, substantially as and for the purposes stated.

WM. M. WISWELL.

Witnesses:
H. B. PITMAN,
W. E. BOARDMAN.