

J. J. VINSON.
Car-Couplings.

No. 154,773.

Patented Sept. 8, 1874.

FIG. 1.

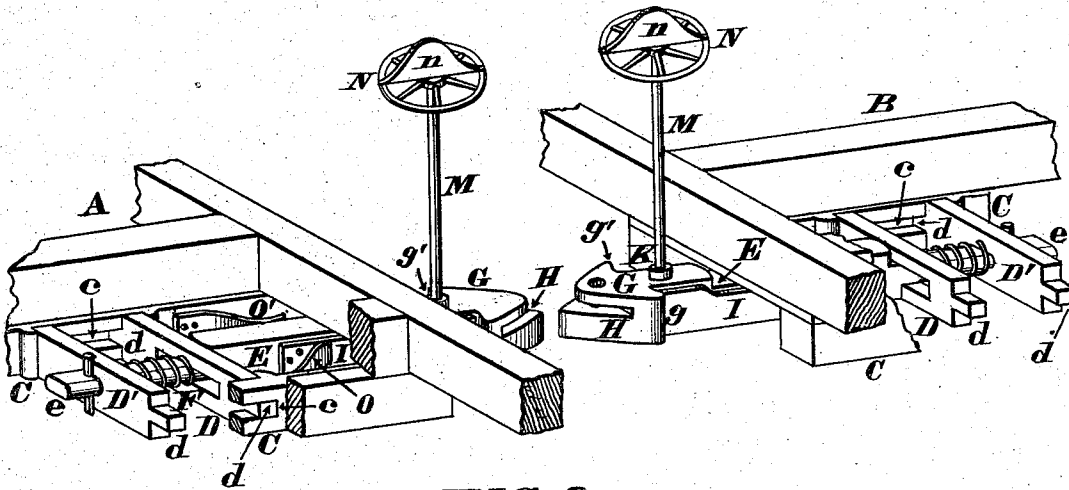


FIG. 2.

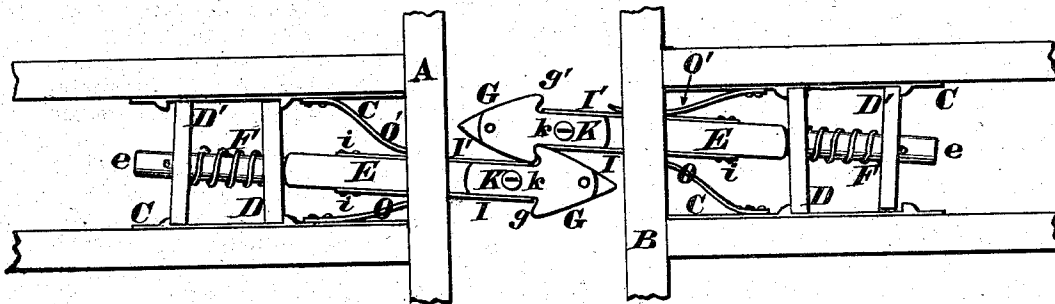


FIG. 3.

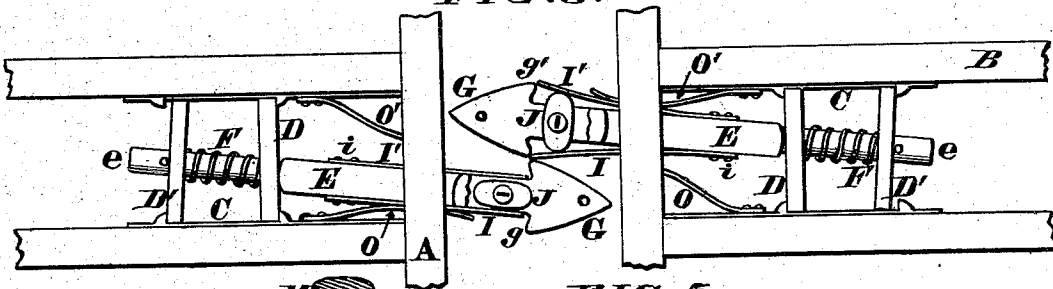


FIG. 4.

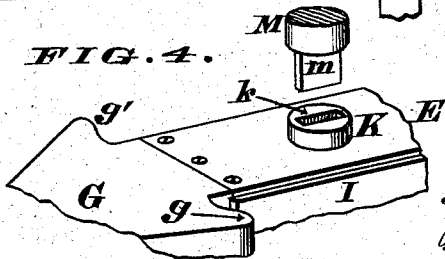
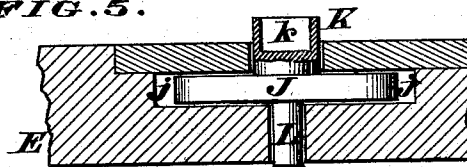


FIG. 5.



Attest.

J. H. Layman,
Henry Tanner

Jonah J. Vinson
By Huighett Att'ys.

UNITED STATES PATENT OFFICE.

JONAH J. VINSON, OF WAVELAND, INDIANA, ASSIGNOR TO HIMSELF AND
ELI A. PHILLIPS, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 154,773, dated September 8, 1874; application filed
July 20, 1874.

To all whom it may concern:

Be it known that I, JONAH J. VINSON, of Waveland, Montgomery county, Indiana, have invented a new and useful Car-Coupling, of which the following is a specification:

My invention relates to an improved coupling for rapidly attaching cars in a secure manner, so that they are not liable to become accidentally detached while remaining on the track, the details of the invention being hereinafter fully described.

Figure 1 is a perspective view of a portion of the platforms of two railroad-cars provided with my improved coupling, the latter being shown in condition for engagement. Fig. 2 is a plan, showing the cars coupled by the engagement of the draw-bars. Fig. 3 is a horizontal section through the draw-bars, showing the coupling devices in the act of being disengaged. Fig. 4 is an enlarged perspective view of a portion of one of the draw-bars and its operating-key, and Fig. 5 is an enlarged vertical section through the disengaging-cam and its accessories.

A and B represent a portion of the platforms of two railroad-cars, said platform being provided with longitudinal frames C for supporting the draw-bars in the following manner: Said frames are slotted at *c* to receive the tenons *d* of two transverse bars, D D', within which are fitted the shanks *e* of the draw-bars E, springs F being fitted around said shanks, and bearing against bars D, as represented. The exposed ends of draw-bars E have the represented lance or arrow head shape G, this head being united to the bar proper by shoulders *g g'*. The head is recessed at H, to receive and retain an ordinary coupling-link, when desired. Secured by bolts *i* to the sides of bars E, and near the inner ends of the same, are spring-blades I I', which extend outwardly almost to the shoulders *g g'*. The tendency of these blades is to hug the sides of said draw-bars, except when they are sprung away from the same by the action of cams J, of which one is fitted in each draw-bar, and immediately behind the heads G.

These cams are adapted to vibrate horizon-

tally within suitable recesses *j* in the draw-bar, and they are provided with stems K and shafts L, the stems having an oblong pocket, *k*, in them, for the reception of the flat shank *m* of a key, M, which is rotated by a hand-wheel, N, having a target, *n*, applied to it. The pocket *k* is disposed longitudinally of cam J, in order that the target *n* may be in line with the draw-bars E whenever the latter are in proper position for coupling.

Secured to the frame C are springs O O', whose free ends bear against the blades I I' in such a manner as to cause the latter to fit snugly up to the sides of the draw-bars E.

The conjoint action of these two opposing springs tends to maintain the draw-bars in a central position with reference to the cars, as clearly shown in Fig. 1.

My car-coupling operates in the following manner: When the various parts of the device are in the position shown in Fig. 1, the target *n* is disposed longitudinally of the track, and thereby indicates that the couplings are in proper condition for engaging with each other, which act is instantly and automatically accomplished as soon as the cars are brought in sufficient proximity with each other. As the cars approach, the arrow-headed terminations G come in contact with each other, thereby deflecting one of the draw-bars to the right, and the other to the left, until the shoulders *g g'* interlock, when the stress of springs O O' act to force the heads toward each other, and, in so doing, causes the aforesaid shoulders to engage in the manner shown in Fig. 2. This is all that is necessary to be done in coupling the cars, and they will remain securely united as long as they are subjected to ordinary jars and vibrations; but when an unusual lateral surge occurs—as by one of the cars running off the track—the shoulders of the heads will instantly disengage from each other, thereby separating the cars, and preventing destruction of the entire train.

To uncouple the cars, the brakeman has only to rotate the hand-wheel N until its target *n* stands at right angles to its previous position, or transversely of the track, which act causes a corresponding revolution of cam J, as shown in Fig. 3. The ends of the cam are, by such

rotation, brought in contact with the blades I I', whose free ends are pressed outwardly with sufficient force to separate the heads far enough to disengage the shoulders *g g'*, and thus uncouple the car.

When the strain of the car is on the shoulders *g g'* of the draw-bars, the beams D can play within the grooves *c* as far as may be necessary; but when the heads G come in contact with the platform, the other beams D will give enough to compensate for the same, and thereby prevent any injurious jar.

I claim as my invention—

1. A car-coupling consisting, essentially, of the laterally-vibrating draw-bars E, having

lance-heads G, shoulders *g g'*, elastic blades I I' *i*, and horizontally-rotating cam J, pivoted in the draw-bar, all combined as and for the purpose stated.

2. In combination with the draw-bar E, rotating cam J, blades I I', and slotted stem K *k*, the target-key M *m* N *n*, as and for the object set forth.

In testimony of which invention I hereunto set my hand.

JONAH J. VINSON.

Attest:

GEO. H. KNIGHT,
O. P. CAYLOR.