(Model.)

G. T. ARNOLD.

CAR COUPLING.

No. 260,149. Patented June 27, 1882.

Fig. 1.

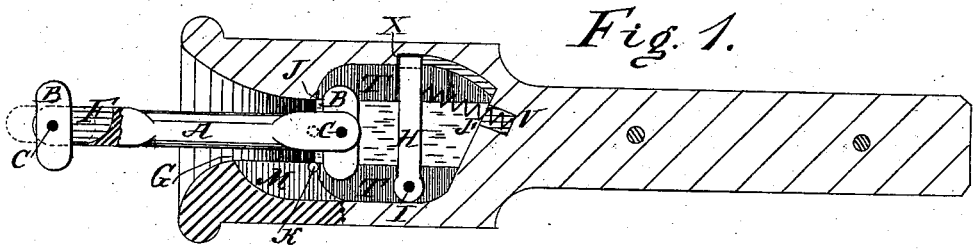


Fig. 2.

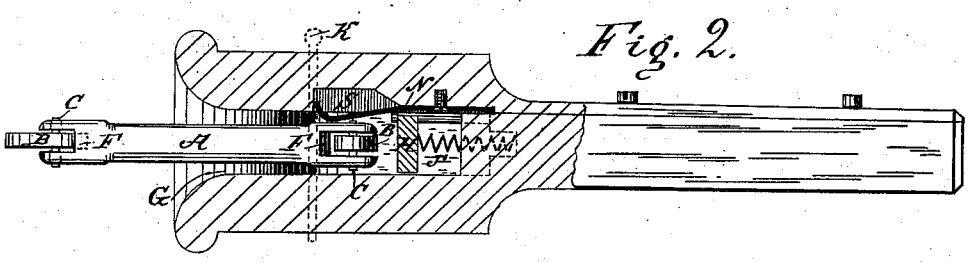


Fig. 3.

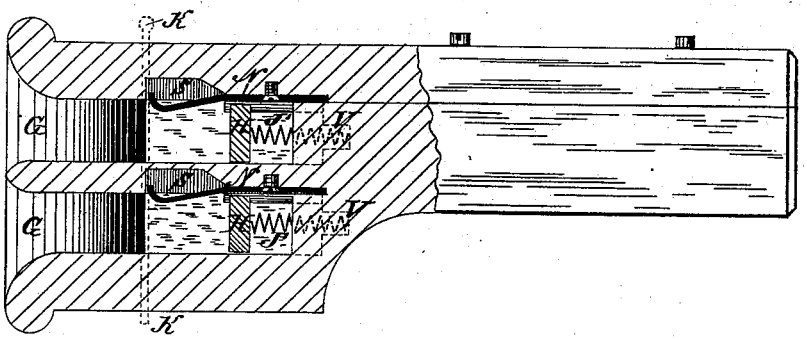


Fig. 4.

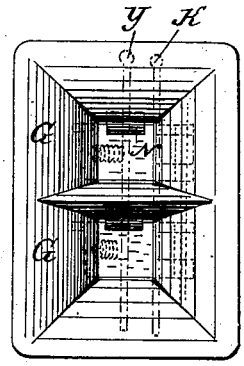


Fig. 5.

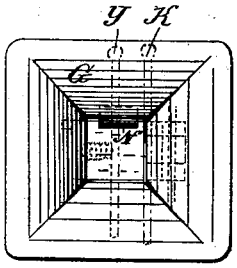
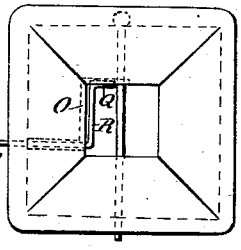


Fig. 6.



WITNESSES:

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INVENTOR:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE T. ARNOLD, OF LANCASTER, KENTUCKY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 260,149, dated June 27, 1882.

Application filed April 22, 1882. (Model.)

To all whom it may concern:

Be it known that I, GEORGE T. ARNOLD, of Lancaster, in the county of Garrard and State of Kentucky, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

In this improved car-coupling a coupling-bar is used that has a T-bar pivoted in a slot in each end, and so arranged that when the bar is set for coupling the T will project longitudinally from the end of the bar, so as to enter the link-socket of the draw-bar properly. The link-socket is provided with a pin one side and a shoulder the other side of the socket, against which the T is turned, so as to draw thereon, by a spring board or plate in the bottom of the socket. The T swings back to uncouple, when the pin is pulled out by drawing against the shoulder only. A spring in the link-socket bears upon the upper side of the coupling-bar to hold it up for self-coupling. There is a setting device for holding the pin up for self-coupling by the ordinary link, which is tripped by the link when it enters the socket and allows the pin to drop through the link, and there is a double-link socket contrivance to enable cars of different heights to be coupled, as hereinafter described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a horizontal section of a draw-bar with my improved coupling device. Fig. 2 is a vertical sectional elevation of Fig. 1. Fig. 3 is a vertical sectional elevation of a draw-bar provided with two link-sockets, one above another, which I propose to use for coupling cars of different heights, as a loaded car with a light one. Fig. 4 is a front elevation of Fig. 3. Fig. 5 is a front elevation of Fig. 1, with coupling-bar reversed. Fig. 6 is a front elevation of a draw-bar with my improved setting device for holding the coupling-pin up and tripping it by the link for self-coupling.

A represents a coupling-bar to be used instead of the common link, in each end of which a bar, B, is pivoted at C in a slot, F. The slots are arranged for the bars B to lie in the line of the coupler for entering the draw-bar sockets G. Inside of the sockets these bars B encounter a spring-plate, H, pivoted at I, and held across the path of the bars B against a shoulder, X, by springs J′, so as to be struck by the bars, and thereby to turn them around on their pivots C transversely to the link to draw against the shoulder J and the pin K. When the pin K is pulled out for uncoupling, the bars are turned back into the line of the coupling-bar by drawing against the shoulder J only, the other side being slotted at M to allow the end of the bar B on that side to swing and close in the slot F of the coupling-bar, and thus withdraw from the link-socket.

N is a broad flat spring bearing on the top of the coupler-bar to hold the outwardly-projecting end up level for properly entering the socket of the car to be coupled.

For coupling cars differing in height, as is the case with loaded and light cars, I propose to provide the draw-bars with two link-sockets G, one above another, as represented in Figs. 3 and 4.

It will be seen that although I locate the coupling-pin K a little to one side of the center of the link-socket for coupling with bar A, the ordinary car-link can be coupled by a pin, Y, located in the center, the same as for the ordinary link; and in order to make it self-coupling for such links also, I provide the sliding setting device consisting of the bent rod O, fixed in the draw-bar head, so that by pushing on the end P the end Q will slide under the end of pin Y and hold it up until the link enters, when rod O will be pushed back by the link, which will strike it at R and shift it, letting pin Y fall.

I propose to construct the draw-bars with widely-flaring mouths G to facilitate the entry of the coupling links or bars as much as circumstances will allow. The draw-bars will be cast in one piece with the link-socket G, also chamber S for spring N, chambers T for heads B, and spring-plate H, also socket V for spring J′, and also slot M for head B, all cored out in the mold.

The spring-plate H and spring J′ can be fitted in through the mouth of the link-socket.

It will be seen that by inserting the pins K again immediately after uncoupling the cars, they will always be set for self-coupling, and

that the exposure of the brakemen to the danger of being crushed between the cars will never be required.

It is believed that besides being less dangerous to life, this improved coupler will be more certain to couple satisfactorily, also more reliable in use, and that the construction is simple and cheap.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a coupling-bar, A, having T-bars B, pivoted in the ends, as described, with the draw-bar having shoulder J and pin K, substantially as specified.

2. The combination of a spring-plate, H, with coupler A, having T-bars B, substantially as described.

3. A draw-head having the shoulders X J, the pivoted spring-plate H, the pin K, and the slot M, whereby it may be used in connection with bars B, as described.

4. The combination, with the draw-head, of the slide-rod O, bent at right angles in reverse directions, and forming the part O to support the pin, part R to be struck by the link, and the part P extended out to one side of the draw-head, as and for the purpose specified.

GEORGE T. ARNOLD.

Witnesses:

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