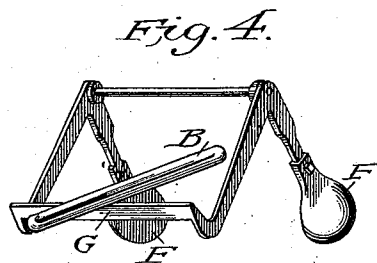
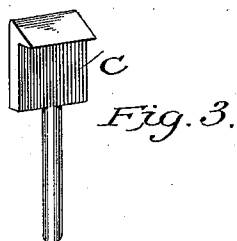
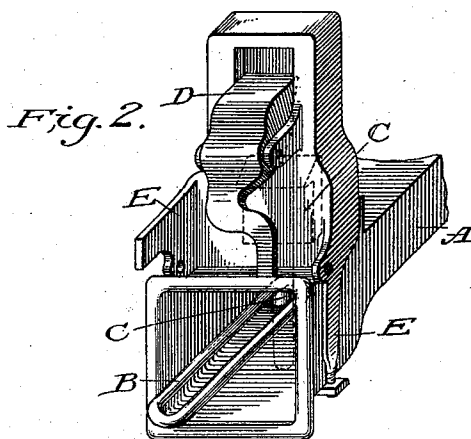
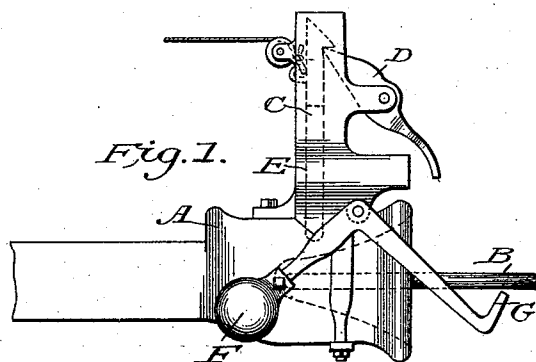


(No Model.)

A. I. WORTHINGTON.
CAR COUPLING.

No. 531,492.

Patented Dec. 25, 1894.



Witnesses.

John Moffitt
A. H. Simms

Inventor.

Alfred I. Worthington

UNITED STATES PATENT OFFICE.

ALBERT I. WORTHINGTON, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE
WORTHINGTON CAR COUPLER COMPANY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 531,492, dated December 25, 1894.

Application filed July 27, 1893. Serial No. 481,671. (No model.)

To all whom it may concern:

Be it known that I, ALBERT I. WORTHINGTON, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Couplings for Railway-Cars, of which the following is a complete specification, reference being had to the accompanying drawings, forming a part hereof, like letters representing like parts in the drawings.

My invention relates to the coupling together of railway cars, the principal object being to supply the present link and pin coupling with a device for handling said link and pin without the use of the human hand. In order to accomplish this object it is necessary to hold the loose end of the link suspended at any desired height. I accomplish this by furnishing a gravity supporting rest for the link as shown.

Figure 1. is a side view of the draw-bar with the entire mechanism attached. The dotted lines are to represent the pin in its proper position when the cars are uncoupled. Fig. 2 is a cross, and also a longitudinal section of the draw-bar with the automatic triplate which holds the pin suspended when the cars are uncoupled, also the frame work surrounding the head of the draw-bar in which the pin mechanism is located. It also shows the pin engaging the link. Fig. 3 shows the exact shape of the pin. Fig. 4 is to show the gravity link support, the link, also the pivotal rod on which the link support operates, all detached from the draw-bar.

"A" is the draw-bar.

"B" is the link.

"C" is the pin.

"D" is the automatic trip for the purpose of suspending the pin.

"E" is the frame work surrounding the draw-bar.

"F" is the gravity weight to counterbalance the weight of the link.

"G" is the suspending bar on which rests the loose end of the link.

Pin "C" is surrounded by a slide-way in which it operates vertically with sufficient room to permit it to fall without obstruction as soon as the bumpers come together and

trip the latch "D." Said latch "D" is heavy at the upper end and being pivoted to framework "E" at an angle so as to always keep it in position to engage the pin and hold it suspended when it is raised sufficiently high to permit said latch to engage the notch in the upper end of the pin as shown in Fig. 1.

The device for suspending the link as shown in Fig. 4 is pivoted to the front of the framework "E" and extends beyond the sides of the drawbar "A" the pivotal point being at the junction of counterbalancing weight "E" and link support "G." Framework "E" is of comparatively light construction, the front plate being one solid piece encircling the top and the two sides of draw-bar "A" with a strap across the bottom of draw-bar "A" with holes therein in line with the sides of draw-bar "A" to receive the lower ends of framework "E" which is supplied with nuts and tightly fastened thus forming a solid connection with the head of the draw-bar "A." The slide in which the pin operates is bolted firmly to the back part of framework "E" which slide may be bolted to the draw-bar also if found necessary, as shown in Fig. 1.

When all the parts are assembled, the operation of my device is as follows: When it is desired to couple two cars together, one car having a link in the draw-bar thereof, the other without a link, which should always be the case, the bumpers approach each other. The link, being supported by the counterbalancing device as shown in Fig. 4, enters the opposite draw-bar sufficiently far to pass the downward path of the suspended pin, and as the bumpers continue to close on each other the suspension rod "G" comes in contact with the approaching bumper which has the effect of swinging it back. The bumpers still approach each other until the plate "E" comes in contact with the lower end of the gravity latch "D." This act it is obvious will relieve the pin from its suspended position when it will drop into the link, and thus complete the act of coupling the cars together. Trips or latches "D" at their lower ends extend beyond the ends of the bumpers, so as to come in contact with framework "E" before the bumpers reach each other, but are arranged in their positions, leaving space so

that when the bumpers meet the latches cannot be crushed. These latches or automatic trips are pivoted to and at the perpendicular center of frame work "E" and their lower ends are carried across to the side of the draw-bar as shown in Fig. 2 and alternated on the drawbar right and left. The pin is raised to its suspended position by a strong chain or other appliance which may be operated on the top or on the side of the car, thereby avoiding the danger of going between the cars for the purpose of coupling them together.

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

1. In railway car couplings the combination with, a frame work, surrounding the draw-head thereof, said frame work containing a vertical slide way in which the pin thereof operates vertically of a gravity latch to suspend said pin when the cars are uncoupled, and a swinging gravity link support to keep the link uplifted as set forth.

2. In railway car couplings the combination with an ordinary draw-bar supplied with a frame-work surrounding said draw-bar, a short distance from the front end thereof, said framework containing a pin situated in a vertical slideway of a latch pivoted to said frame work, said latch being operated by contact with the said framework as the bumpers approach each other, and a counterbalancing link support pivoted to said frame work to prevent said link from dropping down at the loose end thereof substantially as and for the purpose set forth.

3. In couplings for railway cars the combination with pin "C" the upper part thereof being made broad and supplied with a hooked device to engage latch "D" of frame work "E" drawbar "A" balancing weight "F" supporting bar "G" and link "B" substantially as and for the purpose set forth.

ALBERT I. WORTHINGTON.

Witnesses:

B. H. BOWER,
JOHN MORFITT.