(No Model.)

M. N. GEORGE.

CAR COUPLING.

No. 458,896. Patented Sept. 1, 1891.

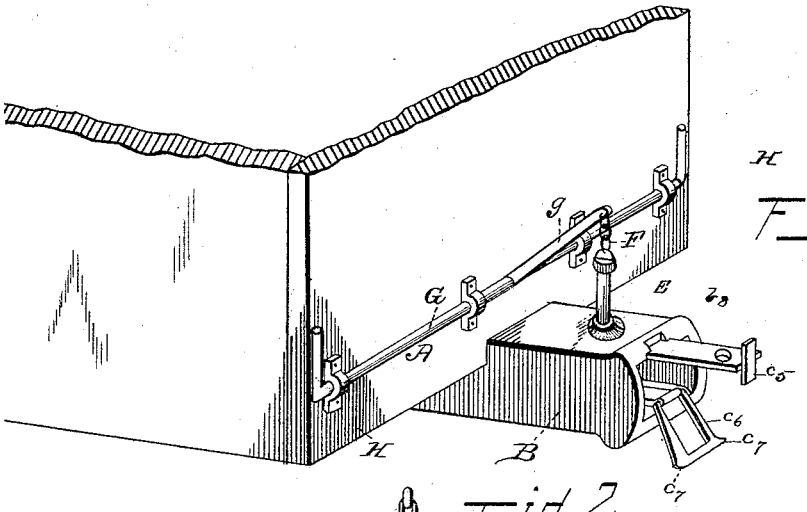


Fig. 1.

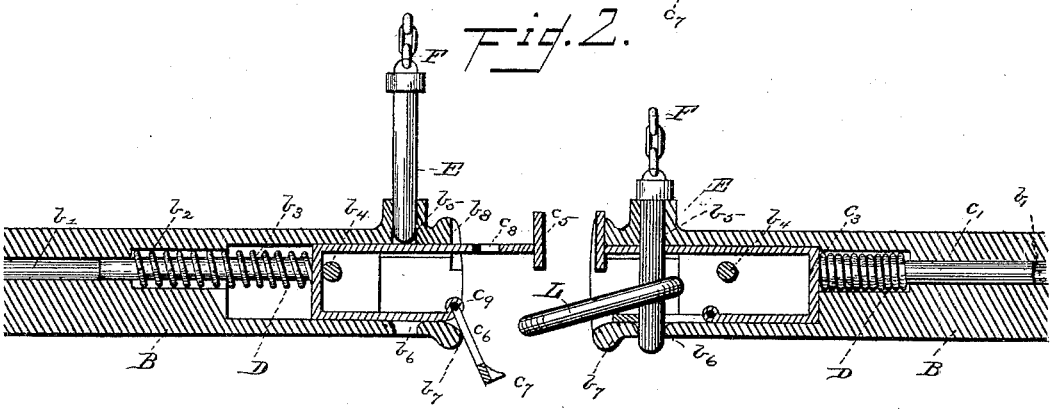
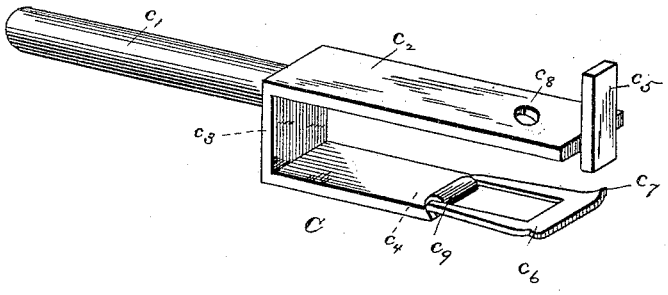


Fig. 2.

Fig. 3.



Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MARION N. GEORGE, OF BIRMINGHAM, ALABAMA, ASSIGNOR TO THE GEORGE CAR COUPLER COMPANY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 458,896, dated September 1, 1891.

Application filed March 7, 1891. Serial No. 384,101. (No model.)

To all whom it may concern:

Be it known that I, MARION N. GEORGE, a citizen of the United States, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to link-and-pin couplings; and it has for its object to provide a safe method of automatically centering the link and dropping the pin and a sure method of coupling when one car is higher than the other or when the coupling is done on a curve in the track.

Reference is had to the accompanying drawings, where in all the figures the same parts are indicated by the same letters.

Figure 1 represents a perspective view of a portion of a freight-car body provided with my improved coupler. Fig. 2 represents a longitudinal vertical section of two of my couplers coming together. Fig. 3 represents a perspective view of my link-centering and pin-dropping device.

A represents the car-body.

B is the draw-bar secured to the car in the usual way. This draw-bar has cylindrical cavities b' and b^2 and a rectangular cavity b^3 in the outer end or draw-head.

b^5 and b^6 are the pin-holes.

The upper lip of the draw-head is slotted at b^8 to receive the plate c^5, while the lower lip b^7 is rounded, as shown.

b^4 is a stud set in the draw-head from one side thereof.

C represents my link-centering and pin-dropping device. It consists of a spring-plunger c', pushed out by the spring D, a rear wall c^3, and two horizontal walls c^2 and c^4. The upper wall c^2 has a hole c^8 for the link-pin and carries a small buffer c^5. The lower wall c^4 has hinged thereto at c^9 the slotted plate c^6. This plate has edges c^7, flaring upward somewhat in order to center the link. The stud b^4 engages the wall c^3, and so prevents the device C from being forced out too far by the spring D.

E is the coupling-pin, which should be provided with suitable guides for keeping it vertical when it is up. The pin is lifted by the chain F and the arm g on the lifting-bar G. H H are the handles to the said bar.

Any of the ordinary forms of lifting device for "gravity-pins" would answer the purpose of the lifting device herein shown.

The operation of my device is as shown in Fig. 2, where the two couplers are represented as about to come together for coupling. The right-hand draw-head will first strike the protruding buffer c^5 and will force it in against the spring D. At the same time, the hinge c^9 being forced backward, the inclined face b^7 will throw the plate c^6 under the link L, which will be centered by the central slot in c^6 and by the points c^7, flaring upward. Just before the rear face of the wall c^3 strikes the rear face of the rectangular chamber b^3 the two draw-heads will come together and the buffing strain will be taken up by the usual springs in the rear of the draw-bars, (not shown,) while at the same time the hole c^8 will be pushed under the hole b^5 and pin E, and the said pin will fall through the holes b^5, c^8, and b^6 and the slot in c^6 will engage the link L.

It will be evident from Fig. 2 that if the right-hand coupler is higher than the left, due to inequality in the height of the cars or to any other causes, the link, naturally inclined downward, will enter the lower draw-head direct; but if the right-hand draw-head be lower than the left then the upper face of the said right-hand draw-head will strike the lower part of the buffer c^5, forcing it in. This will immediately raise the link L upon the plate c^6 and guide the said link into the opposite draw-head. The buffer c^5 is made with considerable height, in order to strike draw-heads of varying height from the track. Moreover, by making the mouth of the draw-head and the guide-plate c^6 wide in proportion to the depth of the said aperture cars may be coupled together on sharp curves. This is specially important in coupling on freight-cars standing on switches or in freight-yards. It will also be readily seen that by placing a spiral spring immediately in rear of the wall c^3 the plunger c' and cavity b' may be dispensed with. Moreover, there are many possible modifications which would readily sug-

gest themselves to a skilled mechanic, which could be used without departing from the spirit of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a link-and-pin car-coupling, the combination, with the hollow draw-head A, having chambers b', b^2, and b^3, lug b^4, and inclined lip b^7, of the spring D and the device C, having plunger c', walls c^2, c^3, and c^4, hole c^8, buffer c^5, and slotted guide-plate c^6, hinged to the lower arm of said device, substantially as described.

2. In a link-and-pin car-coupling, the combination, with a lifting device attached to the car, of the hollow draw-head B, having pin-holes b^5 and b^6, chambers b', b^2, and b^3, stop b^4, inclined lip b^7, and slot b^8, the spring D, and the device C, sliding in the said draw-head and having the guide-rod or plunger c', engaging in the chamber b', the rectangular walls c^2, c^3, and c^4, engaging in the chamber b^3, the wall c^3, bringing up against the stop b^4, the buffer c^5, attached to the upper arm of said device and engaging the opposite draw-head, and the guide-plate c^6, hinged to the lower arm of said device and engaging the inclined lip b^7 and link L, all substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

MARION N. GEORGE.

Witnesses:

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VAN L. THOMPSON.