DEVOL & PEADRO.

Car Coupling.

No. 106,471. Patented Aug. 16, 1870.

Fig. 1.

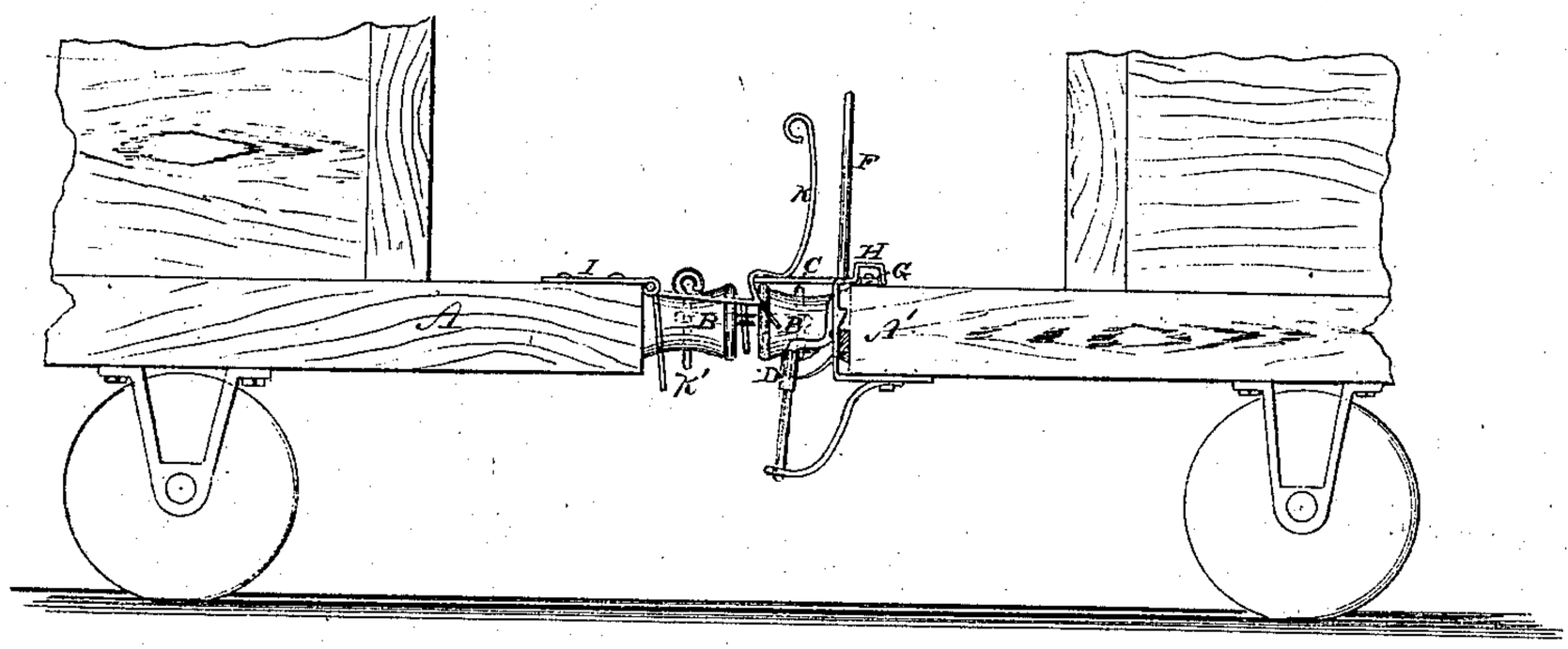


Fig. 2.

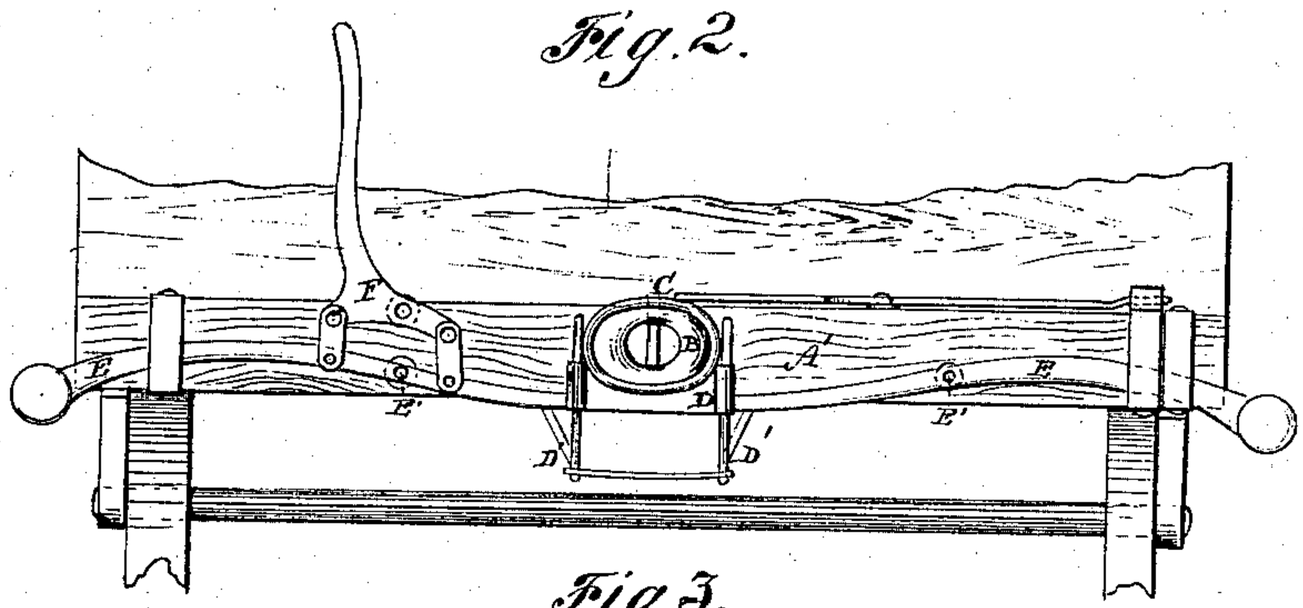
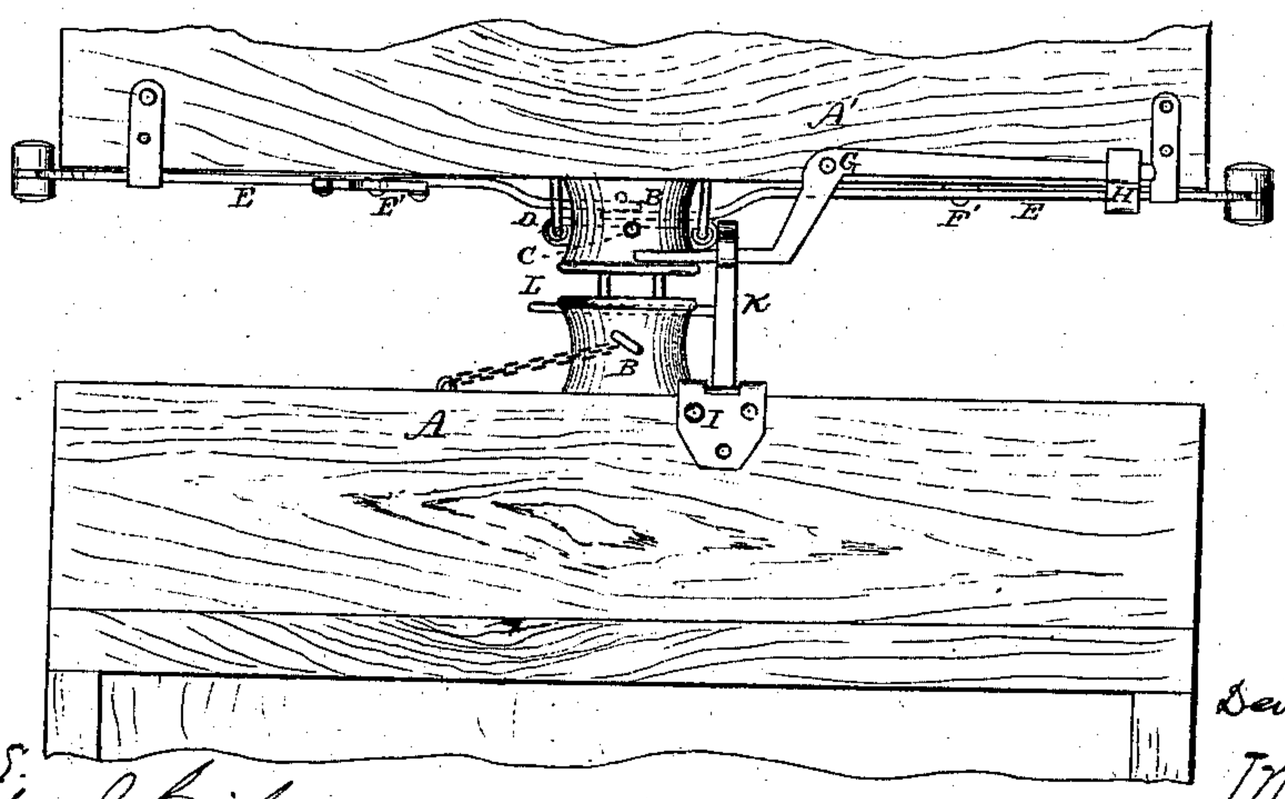


Fig. 3.



Witnesses.
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JONATHAN L. DEVOL AND ATWELL L. PEADRO, OF PARKERSBURG, WEST VIRGINIA.

Letters Patent No. 106,471, *dated August* 16, 1870; *antedated August* 4, 1870.

IMPROVED RAILWAY CAR-COUPLING.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, JONATHAN L. DEVOL and ATWELL L. PEADRO, both of Parkersburg, in the county of Wood and State of West Virginia, have invented certain Improvements in Car-Couplings; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings making part of this specification, in which—

Figure 1 is a sectional elevation of two cars, having our improved coupling device attached thereto.

Figure 2 is an end view, showing the coupling-pin in the position which it occupies when the cars are coupled together, and the position that the other parts assume when the pin is in the position alluded to.

Figure 3 is a plan or top view of a section of two platforms of cars, coupled together by my improved coupling device.

Corresponding letters denote corresponding parts in the several figures.

In self or automatic coupling devices for cars, as heretofore constructed, serious objections have been found to exist, from the fact that, when it became necessary to couple two cars of varying heights together, the links would not enter the apertures in the buffer-heads; and, as a consequence, the person whose business it is to couple the cars has been compelled to place himself between such cars when they are approaching each other, and thus, at times, endangering his life, and often preventing him from accomplishing his object, that of entering the link into the aperture in the buffer-head of the car which was not provided with a link.

This invention is designed to obviate the objections above alluded to; and to this end,

It consists in the combination and arrangement of devices, to be hereinafter described, for the purpose of producing a cheap, safe, and sure self-coupler for cars, which shall insure the raising of the link, when it is necessary to do so, in order to insure its entrance into a buffer-head upon the car, with which it is desirable to connect the one in which the link is already fixed.

A A′ in the drawings refer to the platforms of two cars, which are coupled together. They may be made of any desired form of construction, and may be of equal or of different heights.

B B refer to buffer-heads, one of which is to be secured to a platform of one of the cars, and the other to the other in any approved manner.

These parts constitute no part of our invention, and consequently need not be more particularly described here.

C refers to the coupling-pin, which is attached to one of the cars permanently, and which, with the parts hereafter to be described, constitute our invention.

This pin is attached at its lower end to a cross-head, D, which moves vertically upon two rods of iron, its ends being made to embrace such rods in such a manner that they furnish guides for the same.

These rods D′ D′ are secured to the platform of the car, and are to extend downward for a distance sufficient to permit the cross-head to move a distance equal to that which it may be necessary to have the coupling-pin travel, when the lower ends may be secured together by a cross-bar, as shown in fig. 2, and to the platform of the car by braces, as shown in the same figure.

E E refer to two levers, which are to be pivoted to the platform at E′ E′, the outer weighted ends working in guides fastened to the platform, and, being sufficiently heavy to carry up their inner ends with the cross-head and coupling-pin, they being attached to such cross-head by means of slots in their inner ends, which work on a pin on the rear side thereof, or in any other suitable manner.

F refers to a lever, which is to have its fulcrum upon a bolt, which is to be secured to the platform, while its lower end or ends are connected, by links or other suitable connections, to one of the levers E, it being for the purpose of enabling the operator to raise and lower the coupling-pin; but especially to enable him to lower such pin after it has been thrust up by the weights upon the outer ends of the levers E E, the form and arrangement of which are clearly shown in figs. 2 and 3.

G refers to a bent lever, which is to be pivoted to the upper surface of the platform, its outer end extending outward and passing through a guide, while its inner end extends toward and terminates near the center of the buffer-head, as shown in fig. 2.

The office of this lever is to assist in raising the coupling-link, so that it may enter the buffer-head, the arrangement of which, and the devices upon which it acts to effect said result, being clearly shown in fig. 3.

H refers to a spring, which is to be attached to the platform of the car, in front of which it works, it being provided with a projection upon its inner surface, as shown in fig. 1, so that, when the levers E E are in position to cause the coupling-pin to be raised up to its full height, the outer end of one of them may rest upon such projections, and thus prevent the weight upon their outer ends from carrying them down, until they are released by means which will hereinafter be described.

The upper end of this spring is to be provided with a loop, through which the outer end of the lever G passes, for the purpose of carrying it away from the lever E, when it is desirable to have the outer end thereof fall, for the purpose of raising the coupling-pin.

All of the above-described parts of our device are to

be attached to one car, while those yet to be referred to are to be secured to another one, or to the opposite end of the same.

I refers to a plate of metal, which is to be attached to the upper surface of the platform, its outer end projecting over the edge of the same, and being so constructed as to allow an arm or bent lever to be hinged thereto.

K refers to an arm or lever, which is to be hinged to the plate I, from which point its lower arm extends downward, at a right angle, to about the bottom of the platform.

The upper portion of this lever extends outward in a horizontal direction for some distance, when it is to be bent into a form similar to that shown in fig. 1, to enable it to embrace the end of lever G, and carry it inward, with reference to the car upon which it is located.

To the horizontal portion of this lever K there is to be secured an arm, L, which extends downward for some distance, when it is bent or turned into a horizontal position, and passes under the coupling-link, so that, as the upper end of the lever or arm K comes in contact with the inner end of lever G, the link will be raised, and guided into the aperture in the buffer-head.

We have described the lever K and arm L as for use in connection only with the parts attached to another car; but it may be used to advantage for coupling cars of usual construction, it being operated by hand for that purpose. Or such a car may be provided with such a lever upon each of its ends, so that, as the cars come together, they shall come in contact, and thus raise the links.

Having thus described our invention,

What we claim, and desire to secure by Letters Patent, is—

1. In combination with the coupling-pin C D, the weighted-levers E, spring H, lever G, and lever K, with arm L, substantially as set forth, the parts being so arranged as to constitute an automatic coupling, which is capable of raising the coupling-link and guiding the same into the aperture in the buffer-head.

2. The combination of the hinged lever K, having attached to it an arm, L, and lever or bar G, arranged to operate substantially as and for the purpose set forth.

3. The combination and arrangement of the levers E E F and G, cross-head D, coupling-pin C, and buffer-head B, substantially as and for the purpose set forth.

4. The combination and arrangement of the levers G and K, and spring H, substantially as and for the purpose set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

J. L. DEVOL.
A. L. PEADRO.

Witnesses:
GEORGE LOOMIS,
W. S. DEVOL