A. V. ANDERSON.

Car-Coupling.

No. 162,877. Patented May 4, 1875.

Fig. 1

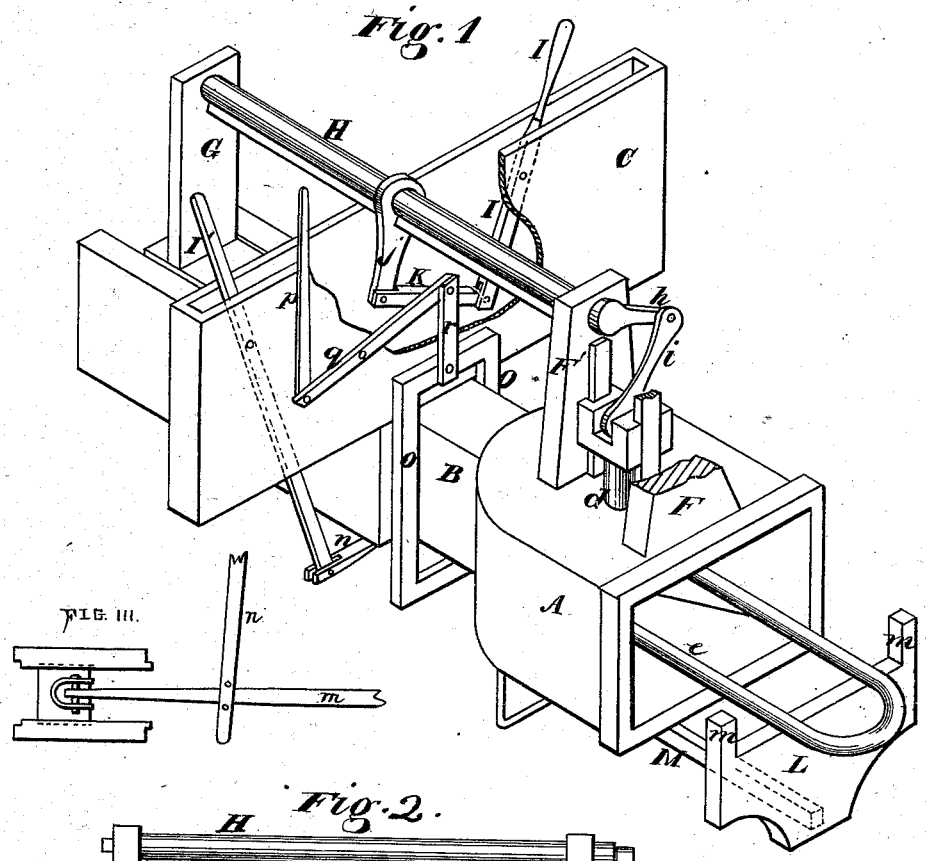
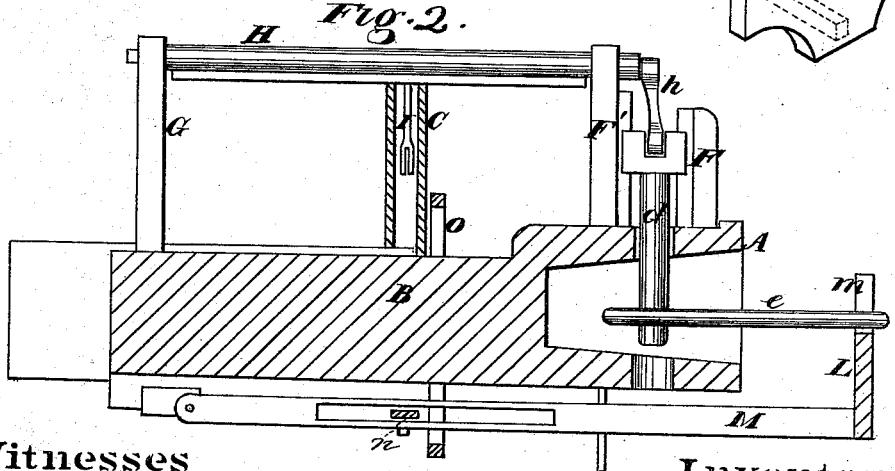


FIG. III.

Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

ADOLPH V. ANDERSON, OF VIRGINIA CITY, NEVADA, ASSIGNOR OF ONE-HALF HIS RIGHT TO MANUEL ASCHEIM, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **162,877**, dated May 4, 1875; application filed February 10, 1875.

To all whom it may concern:

Be it known that I, ADOLPH V. ANDERSON, of Virginia city, Storey county, State of Nevada, have invented Improvements in Car-Couplings; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

My invention relates to certain improved attachments to be applied to the ordinary link-and-pin coupling which is used for connecting two cars of a railway-train together; and the object of my attachment is to provide for automatically handling the link and pin from the roof of the car, so as to obviate the necessity of persons going between the cars to guide the link and drop the pin.

In order to more fully illustrate and describe my invention, reference is had to the accompanying drawings forming a part of this specification, in which—

Figure 1 is a perspective view of my coupling. Fig. 2 is a longitudinal section. Fig. 3 shows manner of pivoting the bar M.

A is the bumper, and B the draw-bar of an ordinary car-coupling, such as is used with the link-and-pin connections. Let C represent the end of the car to which the coupling is attached. The upper end of the coupling-pin *d*, which secures the link *e* in the draw-head, is enlarged, and is guided in ways between two upright standards, F F′, which extend upward upon opposite sides of the pin-hole. The rear standard F′ is higher than the forward standard, and another standard, G, which is equal in height to the standard F′, is secured to the rear end of the draw-bar, as shown. A horizontal shaft, H, has its opposite ends supported in the upper ends of the standards F′ and G, passing through the end C of the car. On the outer end of this shaft H I secure a crank-arm, *h*, and the end of this crank-arm I connect with the upper end of the pin *d* by a short pitman, *i*, so that by partially rotating the shaft in one direction the pin *d* will be raised by the crank-arm and pitman, so as to free the link, and by turning it in the opposite direction the pin will be forced down through the draw-head, so as to secure the link. In order to provide for conveniently operating this shaft H, I secure a depending arm, *j*, to the shaft, close to the end of the car, and between the shaft and one side of the car I provide a lever, I, which is pivoted to the car near its middle, so that its upper end will project above the top of the car. The lower end of this lever is connected with the lower end of the arm *j* by a rod, *k*, so that by simply moving the upper end of the lever back and forth the shaft will be partially rotated and the pin moved up or down, according to the direction in which the upper end of the lever is moved. As the standards F′ and G are secured to the draw-bar, and as the draw-bar has an end movement when the cars come together, the arm *j*, which must be stationary, is secured upon the shaft H on a feather, so that the shaft can move endwise without disturbing the arm. To provide for shifting the link *e* sidewise, so that it will enter the draw-head of the approaching car when the cars are on a curve, I employ a plate, L, just below and in front of the bumper, and which is just as long as the bumper is wide. This plate has an ear or projection, *m*, at each upper corner, as shown, and is supported at the outer end of a bar, M. This bar passes along under the draw-bar, to which its rear end is pivoted, as shown in Fig. 3. Between the shaft H and side of the car, on the side opposite the lever I, I secure another upright lever, I′, which is also pivoted at or near its middle to the end of the car. The lower end of this lever extends down far enough to be opposite the bar M, to which it is connected by a connecting-bar, *n*. As the upper edge of the plate L is on a level with the lower edge of the opening in the bumper the link will rest upon it, and by moving the upper end of the lever I′ back or forth the link will be moved by the projections or ears to the right or left angle, as required, to meet and enter the approaching bumper. To raise and lower the outer end of the link in order to connect it with a light car whose bumper stands higher than the one in which the link is held, I construct a four-sided frame, O, which encircles

the draw-bar close to the end of the car, its lower end timber passing beneath the bar or lever M, which carries the adjusting-plate L. A system of levers, *p q r*, is pivoted to the end of the car, and connected to the upper end timber of the frame O, so that by pressing down upon the upright *p*, which projects above the roof of the car similar to the levers I and I′, the frame O will be raised vertically, and thus lift the outer end of the bar M, consequently lifting the plate L and the outer end of the link.

It will thus be seen that I provide an arrangement by which both the link and pin of an ordinary car-coupling can be handled and directed in every way required for connecting cars together in the same manner that they are usually handled by the hand of the person who stands between the cars at the risk of his life and attends to the coupling.

By my arrangement the coupling is operated entirely by a person standing on the roof of the car and entirely out of the way of harm.

In the present instance I have represented the end of the cars as being made double, so as to provide a space between them for the levers to work in. Although this would be a convenient arrangement, it is not necessary, as the levers can be simply secured to the end of the car.

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

1. The coupling-pin *e*, guided between the standards F F′, to be operated by the shaft H, with its crank-arm *h* and pitman *i*, in combination with the depending arm *j*, lever I, and connecting-rod *k*, substantially as and for the purpose described.

2. The devices for shifting the horizontal direction of the link, consisting of the bar M, having one end pivoted to the rear end of the draw-head, and carrying the plate L, with its ears *m m* in front of the bumper, in combination with the lever I′ and the connecting-rod *n*, all to operate substantially as and for the purpose described.

3. In combination with the device for shifting the link *e* sidewise, the frame O and system of levers *p q r*, constructed and applied substantially as and for the purpose specified.

In witness whereof I hereunto set my hand and seal.

ADOLPH V. ANDERSON. [L. S.]

Witnesses:
M. ASCHEIM,
JNO. L. BOONE.