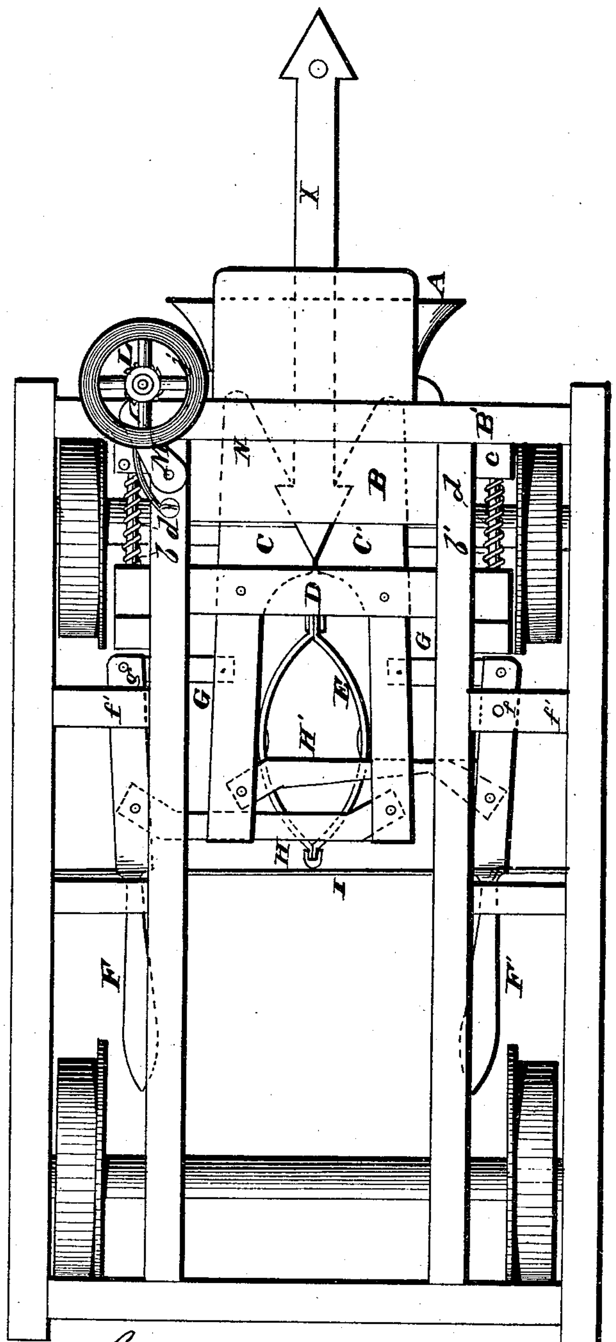
3 Sheets—Sheet 1.

G. W. WILSON.

CAR-COUPLING.

No. 191,214. Patented May 22, 1877.

Fig. 1.



WITNESSES

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3 Sheets—Sheet 2.

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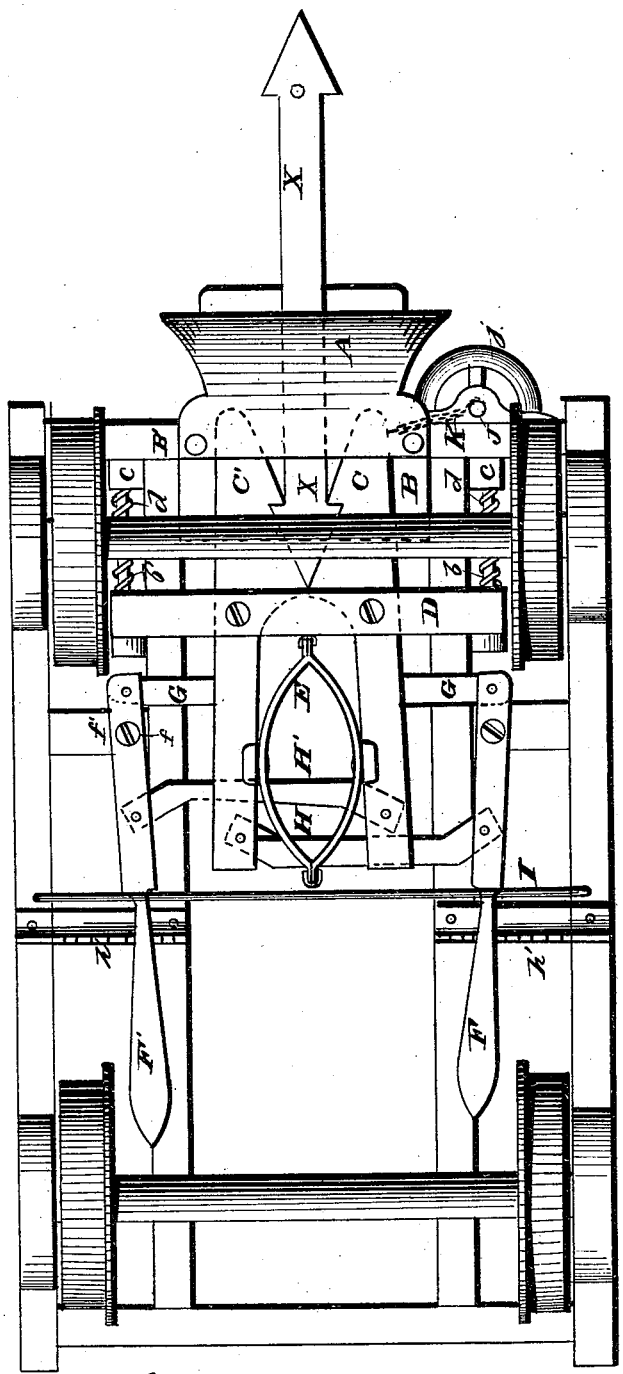

Fig. 2.

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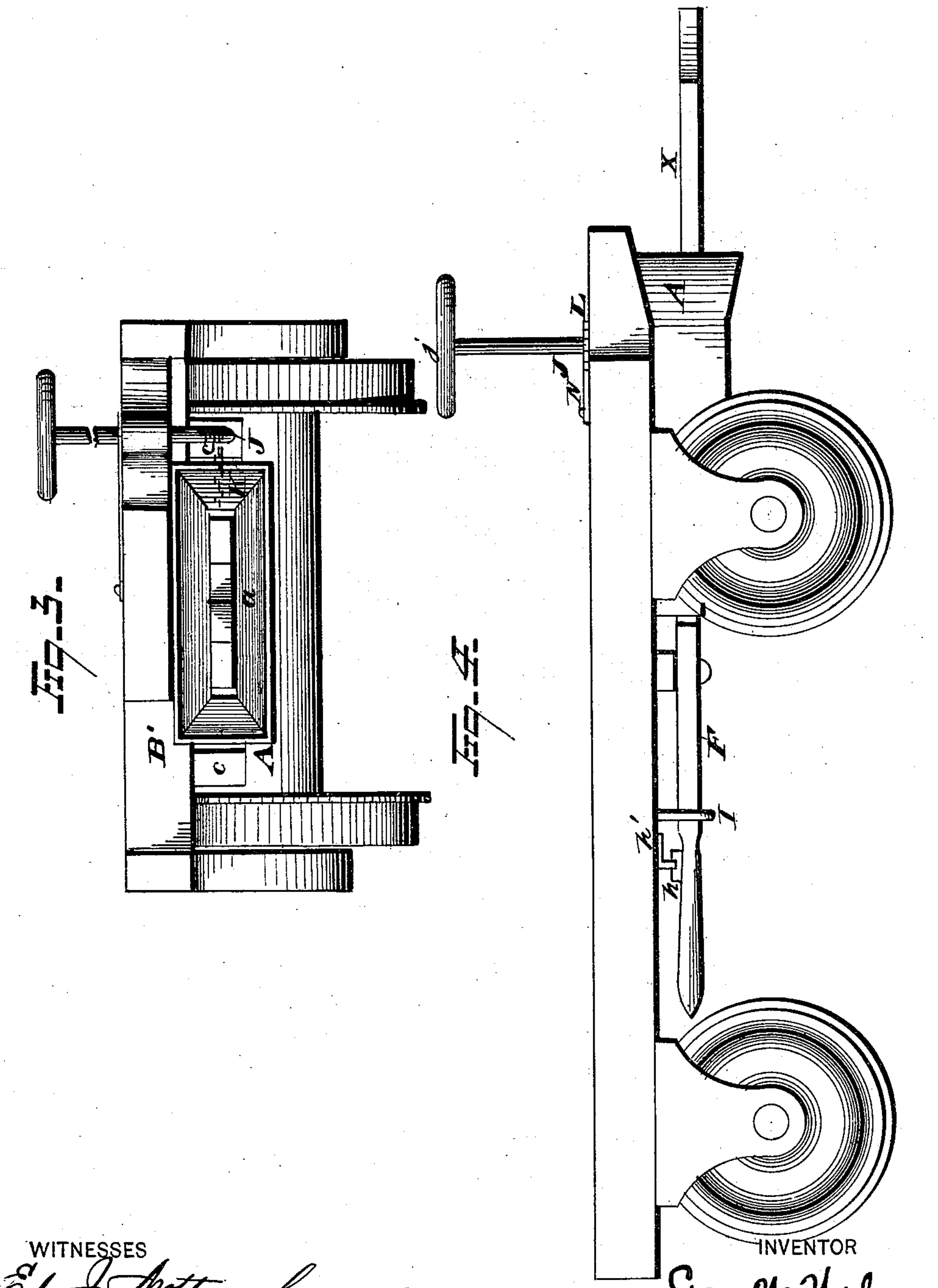

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UNITED STATES PATENT OFFICE.

GEORGE W. WILSON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF HIS RIGHT TO FRANKLIN EMERY, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. 191,214, dated May 22, 1877; application filed April 4, 1877.

To all whom it may concern:

Be it known that I, GEORGE W. WILSON, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Couplers; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in car-couplers, the object of the same being to provide a car-coupler of such construction that cars may be readily coupled or uncoupled without the necessity of the brakesman entering between the cars for such purpose, and thereby avoid many accidents resulting from such operation.

In the drawings, Figure 1 represents a plan view of a truck, provided with my improved car-coupler. Fig, 2 is a bottom view of the truck. Fig. 3 shows the end of the truck-frame and draw-head attached thereto, while Fig. 4 is a side view of the car-truck.

A designates the coupling-link guide, and is constructed with an oblong flaring mouth, *a*, whereby links attached to cars of different heights and widths may be readily entered into the guide, in an automatic manner, when it is desired to couple the cars. The rear portion of guide A is provided with a rearwardly-extending flange, B, which constitutes a firm bearing for the guide, and enables the same to be secured to the cross-beam B′ of the truck. Flange B also serves as an even bearing for the forward ends of the coupling-jaws C C′, which are pivoted to a yielding cross-bar, D. To the under side of the truck-frame guide-rods *b b′* are supported by lugs or pedestals *c*. Spiral or rubber springs *d* are placed on guide-rods *b b′*, between the front of the cross-bar D and lugs *c*, to impart a yielding movement to the cross-bar and coupling-jaws, as strain is exerted on the same. An elliptic, spiral, or any desired form of spring, E, is secured between the rear ends of jaws C C′, and serve to retain the same in a closed position. Hand-levers F F′ are pivoted at *f* to cross-braces *f′* of the truck-frame, the short ends *g* of said levers being connected to the nearest jaw by means of links G, the ends of which are pivoted to the lever and jaw. The long ends of the lever connect with the farthest jaw by links H H′, which latter are also pivoted at their ends to the levers and jaws, to allow of an endwise movement of the jaws. Each lever F F′ is provided with a metallic plate, *h*, which engage with ratchet-bars *h′*, secured to the truck-frames. A retaining-bar, I, serves to support the ends of levers F F′. J represents a chain-shaft, having a hand-wheel, *j*, secured thereto. Shaft J may be of any desired length—as, for instance, when it is desired to furnish passenger or open freight cars with my improved car-coupler shaft J is of the length of the ordinary brake-wheel shaft of passenger-cars; but when box-cars are provided with the improvement in question, the chain-shaft extends to the roof of the car, in order that it may be operated by the brakeman without the necessity on his part for leaving his position on the train when it is desired to uncouple the cars. To the lower end of shaft J is secured one end of a chain or cord, *k*, the other end of which is secured to one of the coupling-jaws. By turning the chain-shaft the chain *k* may be wound thereon, and the jaws separated to allow the link to be released therefrom. L is a ratchet-wheel rigidly secured to shaft J, above the floor of the truck, or if the shaft extends to the roof of the car, the ratchet-wheel is secured above the standing board of the car. Pawl *m* and spring N, in connection with ratchet-wheel L, serve to retain the jaws in an open position.

The operation of my improved car-coupler is as follows: When the cars are to be coupled, the barbed or arrow headed coupling-link X enters the link-guide, and forces the spring-pressed jaws apart until the widest portion of the link has entered between the jaws, when the latter are forced toward each other by the spring, and close around the neck or narrowest part of the head of the link, and thereby prevent the retraction of the same. When it is desired to uncouple the cars, the link may be released either by the chain-shaft or by the hand-lever located on the bottom of

the car frame, on either side of the same, and preferably provided with the chain-shaft attachment, to enable running or flying switches to be executed without difficulty. But the cars may be readily uncoupled without the danger attending the operation incurred in entering between the cars to release the link, by simply pulling outwardly either of the hand-levers F F′, and raising the same sufficiently to engage either lever with one of the ratchet-bars, when the jaws will be forced apart, and allow of the ready release of the coupling-link.

It is evident that one hand-lever, F, may be employed with good and practical results; and, hence, I do not limit myself to the employment of two hand-levers, one in connection with each of the coupling-jaws. Again, a cord may be secured to the ends of the hand-levers, and pass over a pulley journaled in the car-frame, to the top of the car. By pulling on this cord, the coupling-jaws would be forced apart and release the coupling-link; and, hence, such an arrangement of parts would render the coupler adapted for box-cars without the employment of the chain-shaft and its connections.

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

1. The combination, with spring-pressed jaws C C′ and yielding cross-bar D, of the horizontally-arranged levers F, (one or more,) pivoted below the car-frame, and connected to said jaws by links, substantially as and for the purpose set forth.

2. The combination, with spring-pressed jaws C C′ and yielding cross-bar D, of the horizontally-arranged levers F, (one or more,) said levers connected to the long arms of jaws C C′, and ratchet-bars *h h′*, arranged above said levers, substantially as and for the purpose set forth.

3. The combination, with jaws C C′, and yielding cross-bar D, of the horizontally-arranged levers F connected to the long arms of said jaws *c c′*, ratchet-bars above said levers, and a supporting-rod located below the same, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of March, 1877.

GEORGE W. WILSON.

Witnesses:
G. W. LOKER,
B. F. FELCH.