(No Model.)

2 Sheets—Sheet 1.

D. Y. WILSON.

CAR COUPLING.

No. 372,350. Patented Nov. 1, 1887.

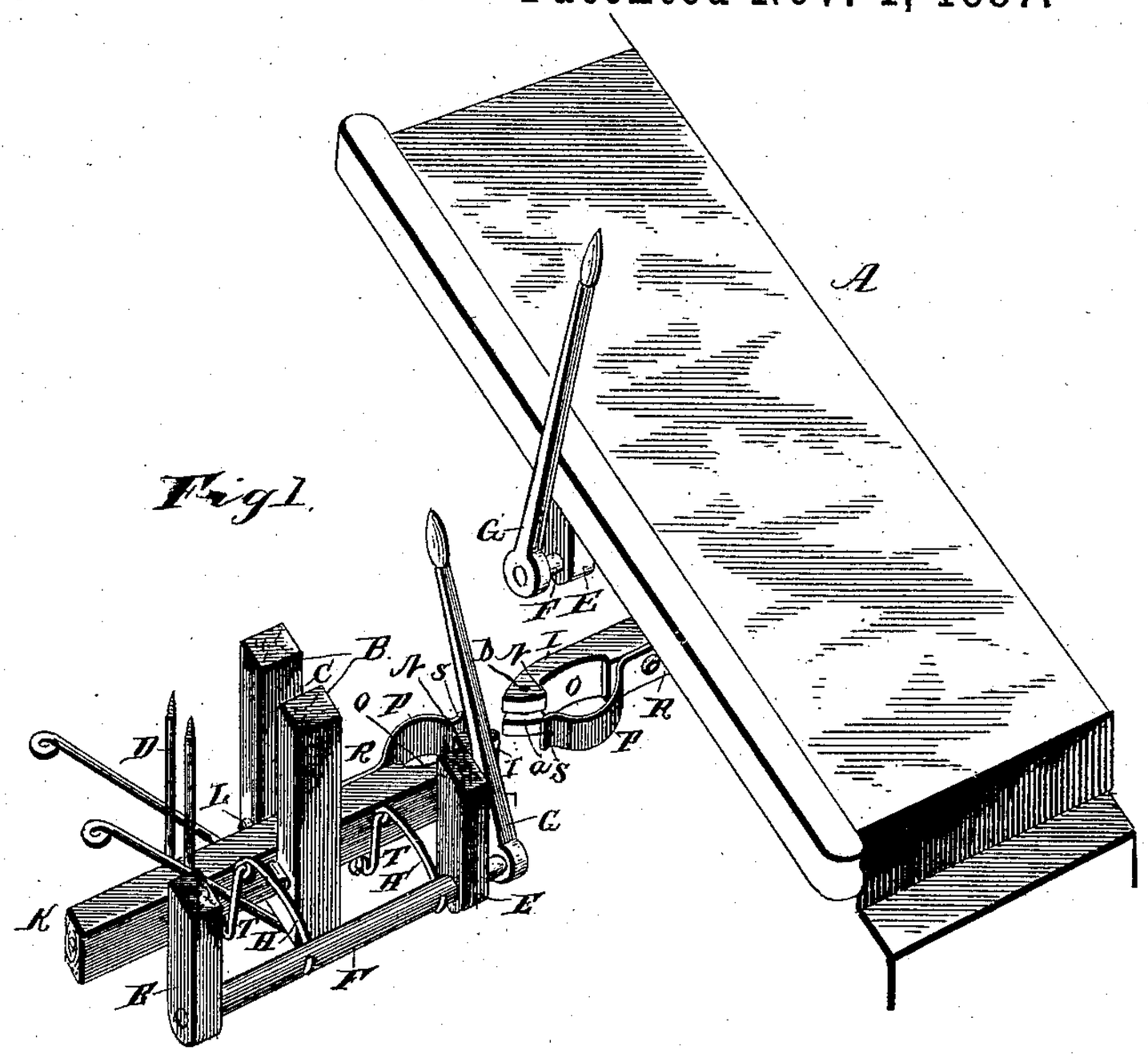

Fig 1.

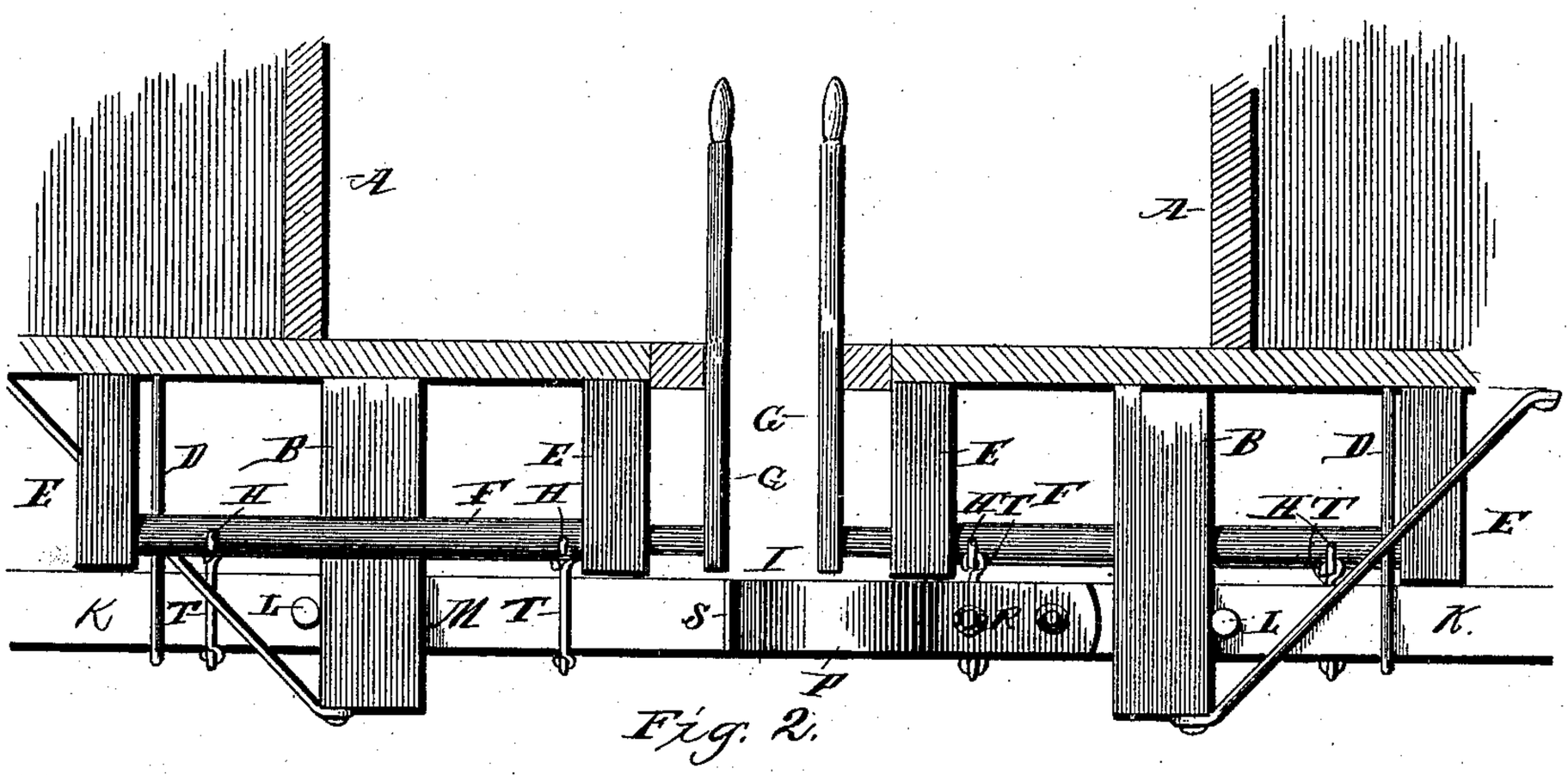

Fig. 2.

Witnesses
Geo. Thorpe.
J. W. Garner

Inventor
David Y. Wilson
by C. A. Snow & Co
Attorneys

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

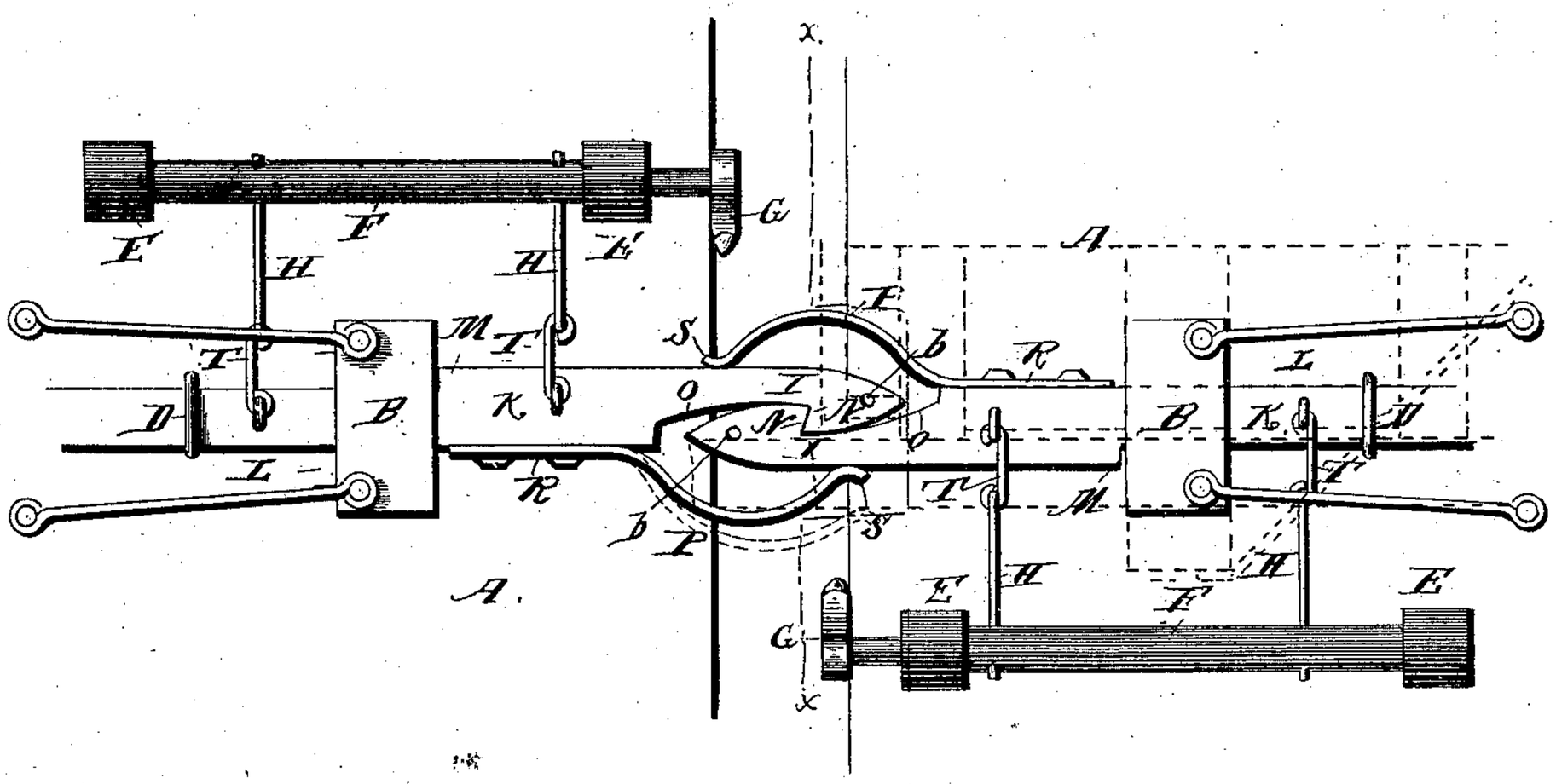
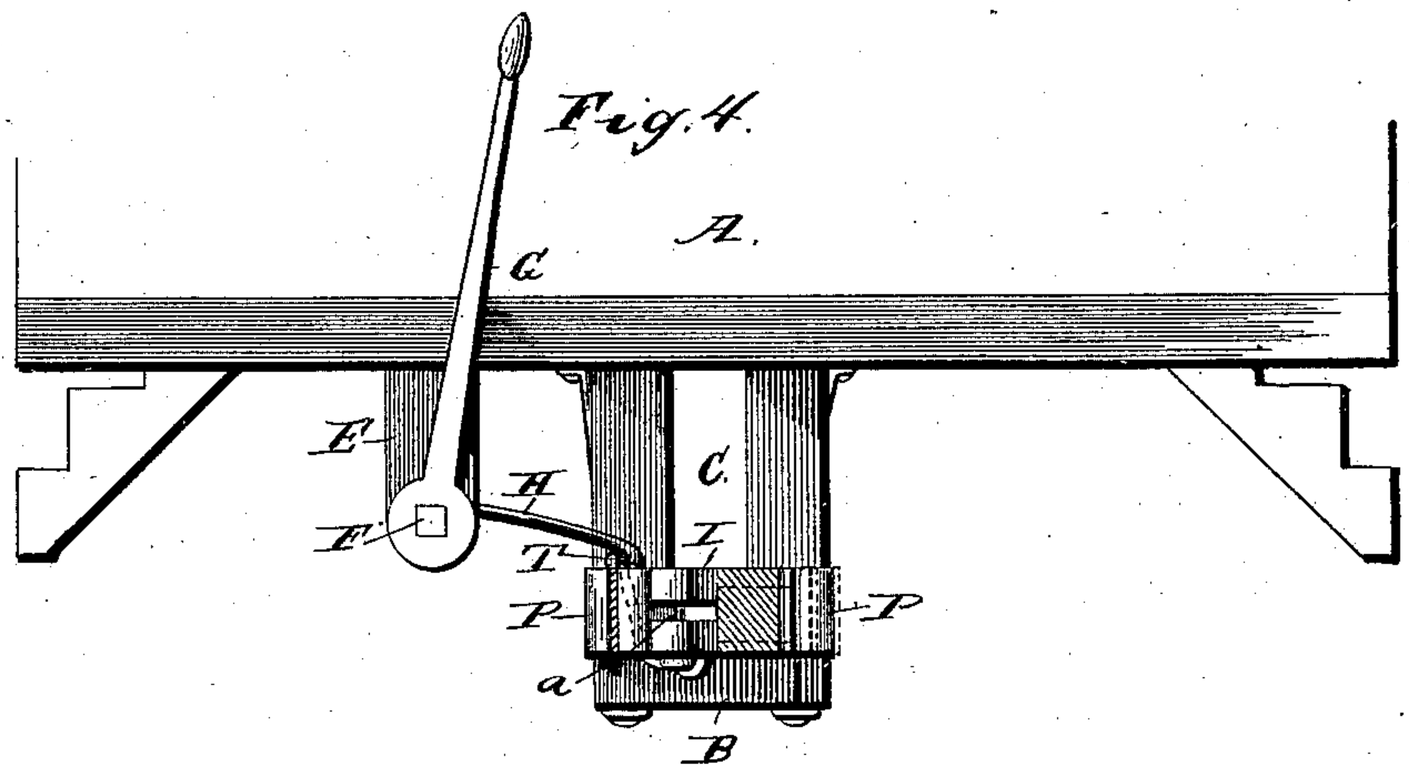


Fig. 4.



Witnesses:
Geo. Sharpe.
J. W. Garner

Inventor
David Y. Wilson
by R. A. Snow & Co
Attorneys

UNITED STATES PATENT OFFICE.

DAVID Y. WILSON, OF GUM TREE, ASSIGNOR OF ONE-FOURTH TO ROBERT L. McCLELLAN AND S. PARK RUTHERFORD, BOTH OF COCHRANSVILLE, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 372,350, dated November 1, 1887.

Application filed August 25, 1887. Serial No. 247,863. (No model.)

To all whom it may concern:

Be it known that I, DAVID Y. WILSON, a citizen of the United States, residing at Gum Tree, in the county of Chester and State of Pennsylvania, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention relates to an improvement in car-couplings; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the car-coupling embodying my improvements, showing one of the draw-heads attached to a car and the other draw-head detached and in position to engage the first draw-head. Fig. 2 is a side elevation of the same. Fig. 3 is an inverted plan view of my improved car-coupling. Fig. 4 is a vertical transverse section of the same, taken on the line *x x* of Fig. 3.

A represents one end of a railway-car of the ordinary construction, which is provided on its under side with a depending vertical standard, B, having a vertical slot, C. At a suitable distance in rear of the standard B is a vertical guiding-yoke, D.

E represents a pair of bearing-blocks, which are arranged on the bottom of the car at one side of the same, and in the said bearing-blocks is journaled a longitudinal rock-shaft, F, which is provided at its front end with an operating-lever, G, that extends upward in front of the car-platform.

H represents a pair of arms, which project from one side of the rock-shaft, near the ends thereof.

I represents the draw-head, which is provided with a rearwardly-extending shank or arm, K, that passes through the slot C of standard B and between the arms of the guiding-yoke D. A pin, L, extends transversely through the shank or arm K at a suitable distance from the rear end thereof and bears against the rear side of standard B, and thereby prevents the draw-head from being drawn forward through the said standard. On one side of the draw-head is an offset or shoulder, M, which bears against the front side of the standard and limits the rearward movement of the draw-head. The draw-head may, if preferred, be provided with the usual buffer-spring. The front end of the draw-head is provided with a hook, N, and in rear of the said hook is a recess, O, made in one side of the draw-head and adapted to receive the opposing hook of the other draw-head when the cars come together.

P represents a curved spring-jaw, which is of the shape shown in the drawings, is arranged opposite the recess O in the draw-head, and has a rearwardly-extending shank, R, which is secured to one side of the draw-head by means of bolts, as shown. The front end of the spring-jaw curves inward to within a suitable distance of the opposing side of the hook N, and is then curved outward therefrom, as at S, to form a guiding lip or flange adapted to direct the hook of the opposing draw-head between the spring-jaw and the hook N when the cars come together, and thereby cause the cars to be automatically coupled, as is very readily understood.

T represents a pair of links, which connect the ends of the arm H through the under side of each draw-head I, and thereby cause the draw-heads to be raised or lowered in the standards B and yokes D when the rock-shaft is turned.

The operation of my invention is as follows: When two cars are to be coupled together, the rock-shafts thereon are turned so as to arrange both of the draw-heads in the same horizontal plane, and when the cars are run together the hook at the front end of each draw-head is caused to pass between the opposing sides of the hook and spring-jaw of the opposing draw-head, thereby causing the said draw-head hooks to pass beyond each other and the barbs or shoulders at their sides to become engaged, as shown in Fig. 3. The spring-jaws keep the said draw-heads in place and prevent them from becoming uncoupled accidentally when going around curves. In order to uncouple the cars, it is only necessary to turn one or both of the rock-shafts so as to arrange the draw-heads in different horizontal planes, as shown in Fig. 2, and thereby disengage their hooked ends from each other.

When the cars are being shifted about on

the track and it is not desired they should become coupled, their draw-heads are arranged at different horizontal planes, so as to avoid coming in contact with each other when the cars come together, thus preventing the cars from being coupled.

The car-coupling thus constructed is adapted to operate automatically when the cars come together, either on a straight track or on curves, and thus cause the cars to become coupled, will not bind or work apart when the cars are passing around curves, and can be adjusted to any height desired, and thereby enable cars of unequal height to be coupled.

In case one of the cars becomes overturned, its draw-head will turn with it until it reaches a point at right angles to the opposing draw-head, as shown in dotted lines in Fig. 4, thereby presenting its straight upper and lower edges to the opposing sides of the hook and spring-jaw of the opposing draw-head, and consequently enable it to slip easily therefrom, and thereby uncouple the car.

I do not desire to limit myself to the means hereinbefore described for raising and lowering the draw-heads, as any suitable mechanism may be employed for this purpose without departing from the spirit of my invention.

In order to adapt a car provided with my improved coupling to be coupled to a car employing the common form of pin-and-link coupling, I make a horizontal open slot, *a*, in the outer end of each draw-head for the reception of the link, and a vertical opening, *b*, intersecting the slot *a*, for the reception of the coupling-pin.

Having thus described my invention, I claim—

1. In a car-coupling, the vertically-movable draw-head having the hook at its front end and the recess O on one side of the draw-head in rear of the hook, and the spring-jaw P, secured to the side of the draw-head, and having the curved portion extending forward and arranged opposite the recess O, substantially as described.

2. The combination of a car having the vertical standard or guide-rails on its under side, the vertically-movable draw-head secured in the said standard or guide-rails, and having the hook at its outer end adapted to engage a similar hook on the opposing draw-head of another car, the rock-shaft connected to the draw-head and adapted to raise and lower the same when the said shaft is turned, and the lever to turn the rock-shaft, substantially as described.

3. A car-coupling device comprising the vertically-movable draw-head having the hook N, formed at its outer end, and the recess O, formed at one side of the draw-head in rear of the hook N, and the curved spring-jaw secured to the side of the draw-head and extending forward and arranged opposite the recess O, the front end of the said spring-jaw being curved inward toward the opposing side of the hook, and then curved outward to form the guiding flange or lip S, adapted to direct the hook of an opposing draw-head between the hook N and the spring-jaw, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

DAVID Y. WILSON.

Witnesses:
JOHN H. SIGGERS,
WM. NELSON MOORE.