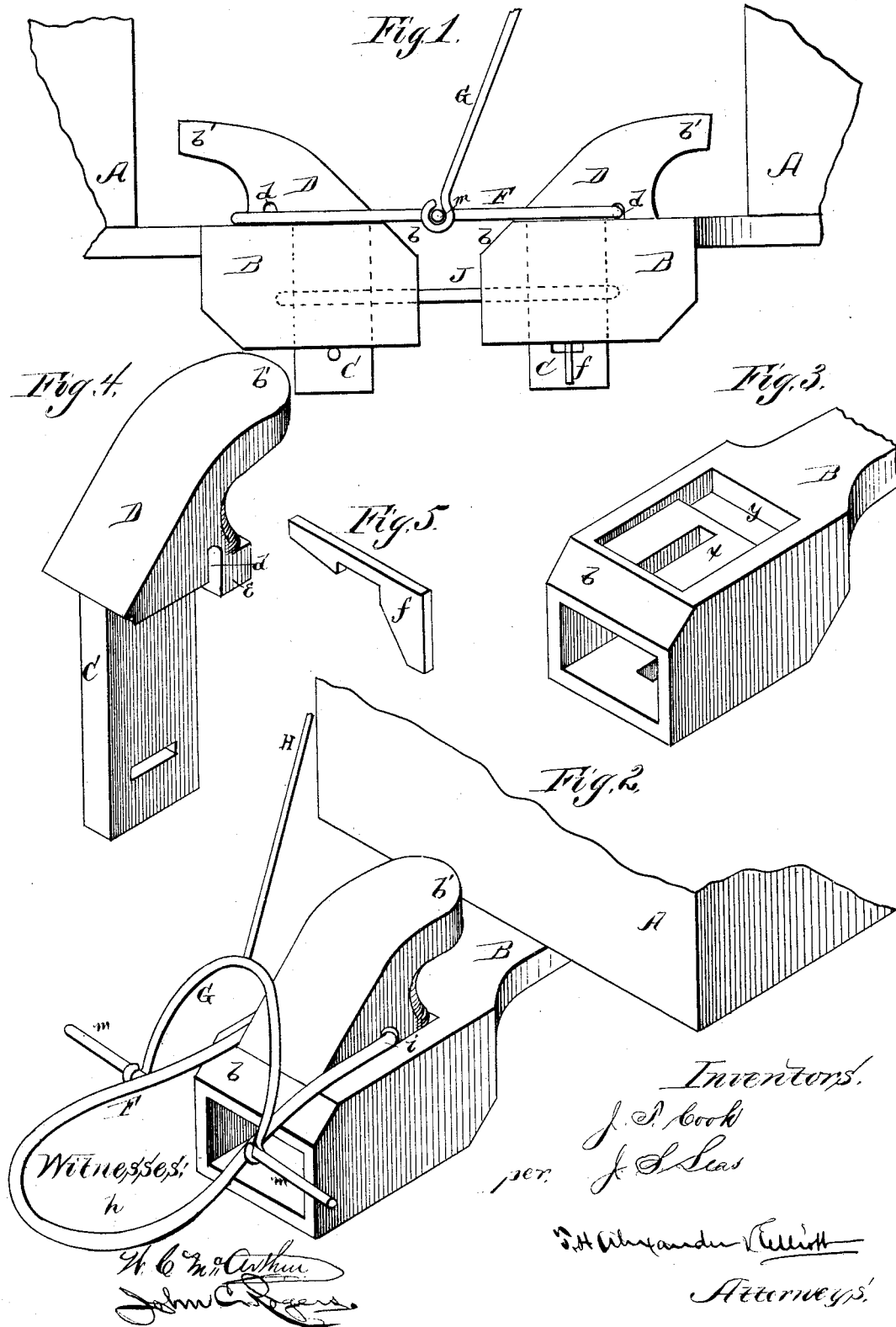


J. T. COOK & J. S. LEAS.  
Car-Coupling.

No. 220,899.

Patented Oct. 21, 1879.



Witnesses:

H. C. McArthur  
John Rogers

Inventors.  
J. T. Cook  
per J. S. Leas

J. H. Alexander & Ellis  
Attorneys.

# UNITED STATES PATENT OFFICE.

JOSEPH T. COOK, OF MOLINE, AND J. SILAS LEAS, OF ROCK ISLAND, ILL.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **220,899**, dated October 21, 1879; application filed August 26, 1879.

*To all whom it may concern:*

Be it known that we, JOSEPH T. COOK, of Moline, and J. SILAS LEAS, of Rock Island, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Car-Couplers; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

Our invention relates to car-couplings; and it consists in certain peculiarities of construction, as will be hereinafter more fully set forth, and pointed out in the claims.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation, and Figs. 2, 3, 4, 5 are details of parts of our invention.

A represents a railroad-car provided with draw-head B. This draw-head is substantially the same as those generally in use, with the exception that the upper front corner is beveled, as shown at *b*, to form a part of the inclined plane up which the link slides. The top of the draw-head is also recessed to receive the head of the coupling-pin, whereby we obtain great strength for the pin to draw on.

The coupling-pin consists of a shank, C, and head D, which latter forms an incline, up which the link slides in coupling, and drops over the hook and couples. The back part of the head D projects back and forms a hook, *b'*, to prevent the link from uncoupling by slipping off over the head of the pin.

On the under side of the head is a slot or recess, *d*, to receive the heel or square end of the link, thus making a hinge to the link and holding it in position, and aiding the parallel sides of the pin-head in guiding the pin as it glides or falls over the opposite pin-head.

The part *e* of the head behind the slot *d* is elongated, or extends farther down, so as to drop into the recess *y* on the top of the draw-head deeper than the recess *x* that receives the main part of the pin-head.

We do not confine ourselves to this exact construction, as the head need not be recessed

deeper in the rear than it is in front, and yet possess strength equal or sufficient. In this case it is not necessary, of course, to have the elongation at *e*.

The pin-shank C is square, and so shouldered as to rest, by its head D, in the recess on top of the draw-head. In the lower end of the shank is a hole for the insertion of a pin or key, *f*, having a pendulous head, to preserve it always in position.

F is the coupling-link, constructed square at one end and oval at the other, as shown, respectively, at *i* and *h*, the link being thus wider at the coupling end than at the hinge end. This construction gives the necessary play around the pin to admit the wobbling of the cars, also to run and couple around curves.

To the sides of the link F, at or near the middle, are attached two handles, *m m*, to serve as hand-holds, by which the brakeman can raise or lower the link, and also to attach a bail, G, with shaft H running up to the top of the car, by which a man can couple or uncouple the car from above, thus obviating the necessity of going between the cars. The handles *m m* are long enough to couple and uncouple from the outside, and the bail and shaft serve as weights to keep the link from bouncing out from the hook by the jolting of the cars.

At the top of the car is a slotted arm, I, to receive the handle or shaft of the bail. This arm extends far enough in toward the opposite car to enable the man to couple or uncouple equally well from either car. This device will couple automatically with the link lying horizontally, or, when standing, leaning up against the end of the car. In the former case the end of the link glides up the inclined plane of the pin-head and drops over the hook. In the latter case, as one car strikes the other, the link is carried forward by its own momentum and falls over the hook.

By using an ordinary link, J, we can couple to any car, as in the old method, the draw-heads being constructed to admit of both methods of coupling, thus enabling us to couple to cars that may not have our coupler, using our pin for one end and the old pin for the other end.

Having thus fully described our invention,

what we claim as new, and desire to secure by Letters Patent, is—

1. The coupling-pin provided with inclined-plane head D, having a slot, *d*, to receive the link, and a hook, *b'*, over which the link drops, substantially as set forth.

2. The coupling-pin having the head D and shank C, in combination with draw-head B, recessed or stepped to receive the base of the head, as and for the purposes herein set forth.

3. The perforated pin - shank C, provided with swinging-headed key *f*, for the purposes set forth.

4. The bail G and shaft H, in combination with the link F and handles *m m*, for the purposes set forth.

5. The pin - head D, formed with parallel sides and provided with the slot *d*, at right

angles to the sides, to give direction to the falling link, as herein set forth.

6. The draw-head B, having its upper front corner, *b*, beveled, in combination with the inclined pin-head D, for the purposes set forth.

7. The draw-head, recessed at its top, in combination with pin having a shouldered head, D, and link F, all as and for the purposes set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

JOSEPH T. COOK.  
J. SILAS LEAS.

Witnesses:

ELLSWORTH MAPES,  
SAML. S. DAVIS.