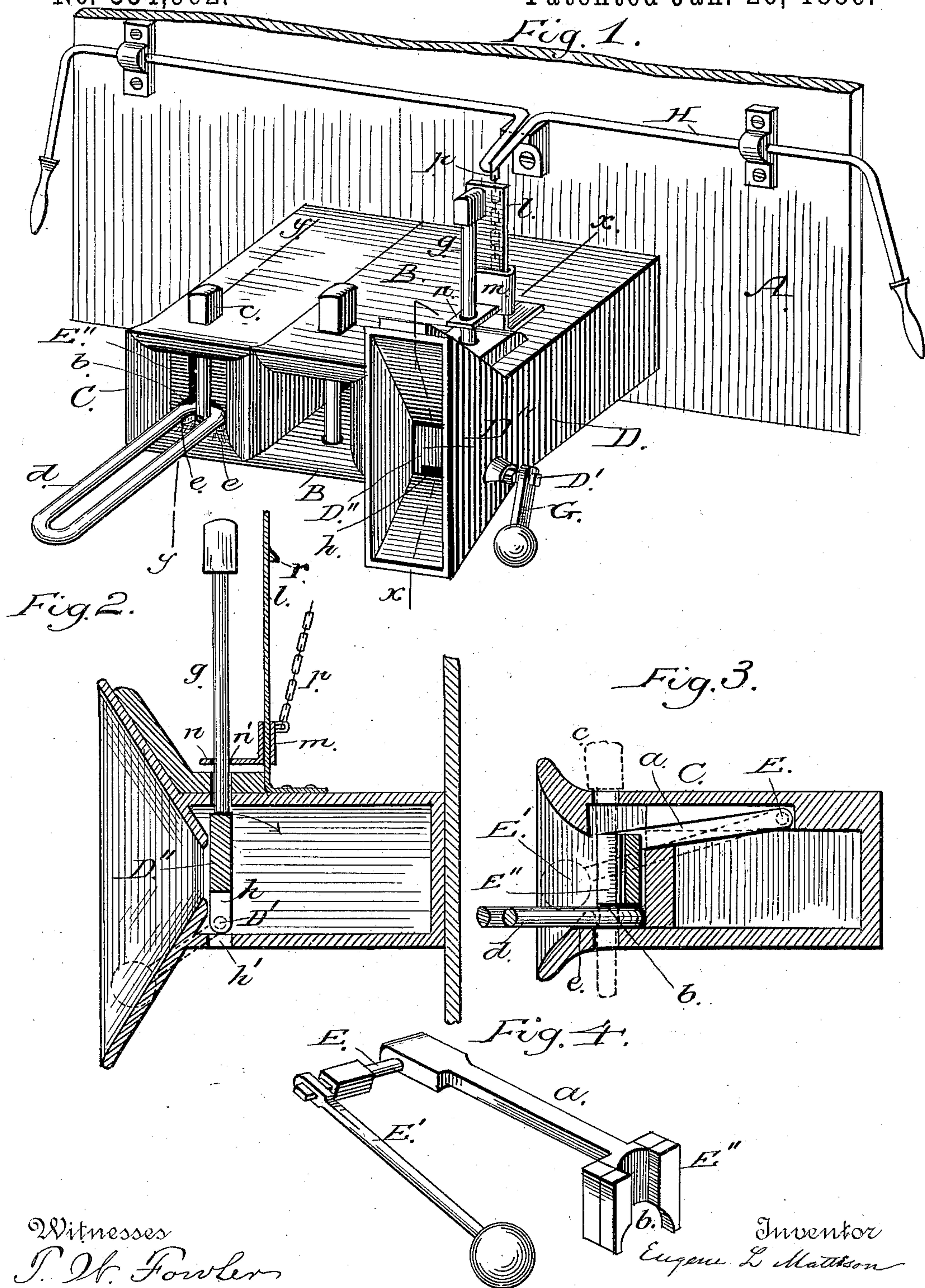


(No Model.)

E. L. MATTESON.  
CAR COUPLING.

No. 334,962.

Patented Jan. 26, 1886.



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# UNITED STATES PATENT OFFICE.

EUGENE L. MATTESON, OF WEVER, ASSIGNOR OF ONE-HALF TO ROBERT W. CURTIS AND JAMES B. DIVER, BOTH OF KEOKUK, IOWA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 334,962, dated January 26, 1886.

Application filed November 20, 1885. Serial No. 183,385. (No model.)

*To all whom it may concern:*

Be it known that I, EUGENE L. MATTESON, a citizen of the United States, residing at Wever, in the county of Lee and State of Iowa, have invented certain new and useful Improvements in Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a perspective view of a car-coupling embodying my improvements. Fig. 2 is a sectional view through the line *x x* of Fig. 1. Fig. 3 is a similar view through the line *y y* of Fig. 1. Fig. 4 is a detail of the holding-jaw *E''* and its connections.

My invention relates to car-couplings adapted to automatically couple the cars coming together, and to be uncoupled without passing between the cars; and my invention consists in the construction and combination of devices, which will be hereinafter fully described and claimed.

To enable others skilled in the art to make and use my invention, I will proceed to describe the exact manner in which I have carried it out.

In the said drawings, *A* represents the body of a railway-car, and *B* the ordinary form of draw-head provided with the usual coupling-pin. Upon each side of this draw-head *B*, and secured thereto, or forming a part of the same, if desired, are supplemental draw-heads *C* and *D*, one of which, *D*, has a flaring mouth for the reception and guidance of a coupling-link held within the draw-head *C* of the approaching car. This latter draw-head *C* is provided with a coupling pin, *c*, a shaft, *E*, which passes transversely through the rear of the same, and has attached to its outer end a weighted lever, *E'*, the purpose of which will be hereinafter explained.

The pivoted holding-jaw *E''* of the draw-head *C* is of peculiar construction, and has projecting from its rear an arm, *a*, which is rigidly secured to the shaft *E*, while the front portion terminates in a jaw, *b*, whose lower face is grooved or cut away to correspond to the configuration of the link *d*, which is held in an approximately horizontal position be-

tween the jaw and the front portion of the draw-head by means of the weighted lever before described. The lower face of the draw-head *C* may also be provided with grooves *e*, for more securely holding the link in its normal position, it being retained in the draw-head by the usual coupling-pin, as shown.

The draw-head *D*, as before stated, has a wide flaring mouth to receive the link *d* in a draw-head similar to *C*, attached to the car to be coupled. A transverse shaft, *D'*, passes through that portion of the draw-head just beyond the flaring mouth, and is secured to and operates a suitable gate, *D''*, which sustains upon its top edge a coupling-pin, *g*, which, when the gate is pressed downward by the link *d* on the approaching car, immediately releases said pin *g* and permits it to drop through a perforation, *h*, in the gate and into the opening *h'*, usually found in draw-heads, thereby securing the link and coupling the cars together.

The shaft *D'* has upon its outer end a weighted lever, *G*, which, when the pin *g* is withdrawn from its position in the draw-head and the coupling-link removed, draws the gate upward, when the pin *g* is permitted to rest upon the top edge of the same and be held in that position until another link forces the gate from its normal position and enables the supported pin to drop to secure the link.

The means operated from the outside of the car for releasing the pin *g* and guiding it until it finds its seat upon the edge of the gate consist, essentially, of a bar, *l*, secured to and projecting from the upper surface of the draw-head, and a sliding plate, *m*, provided with an arm, *n*. It will be observed the coupling-pin *g* passes through a perforation, *n'*, in the arm *n*, and the said arm is attached to a chain, *p*, or equivalent means, whose other end is secured to a shaft, *H*, mounted in bearings on the car-body, and projecting beyond the sides of the latter terminates in handles, which furnish ready means for operating the pin and releasing the link. To prevent the sliding plate from having too great play or movement, a stop, *r*, is formed on the bar and prevents the pin from being entirely withdrawn from its draw-head.



From the foregoing description it is evident in the employment of my improvements that when the cars containing my triple draw-heads are brought together the link attached to the draw-heads C of one car enters the draw-heads D of the other, and thereby connects both draw-heads and securely couples the cars.

If a car containing my improvement is to be coupled to a car having a draw-head in which only the usual link and pin are used, the central draw-head, B, only would be used, and the manner of coupling would be similar to that now practiced, except that I may attach the bar and sliding plate and their operating mechanism to the draw-head, and thereby make the coupling and uncoupling much safer than if the brakeman had to pass between the cars to accomplish the desired object.

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

1. In a car-coupling, the draw-head C and coupling-pin *c*, in combination with a jaw, *E'*, for holding the link, and a weighted lever for keeping the jaw against the link, substantially as herein described.

2. In a car-coupling, the draw-head C and the coupling link and pin, in combination with a holding-jaw, *E'*, provided with an arm, *a*, a transverse shaft, *E*, and a weighted lever, *E'*, substantially as herein described.

3. In a car-coupling, the draw-head D, provided with an opening, *h'*, and the coupling-pin *g*, in combination with a gate, *D'*, for supporting the pin, and having an opening, *h*, through which said pin passes when released, a shaft, *D'*, upon which the gate is mounted, and a weighted lever on the end of the shaft for returning the gate to its normal position when the pin is withdrawn, substantially as herein described.

4. In a car-coupling, the combination, with a draw-head having an automatically-operating gate, of a coupling-pin supported upon said gate, a sliding plate attached to the pin, and a connection operated from the side of the car for withdrawing the pin, substantially as herein described.

5. In a car-coupling, the draw-head, the pivoted gate, and the coupling-pin, in combination with a bar secured to the draw-head, a plate moving upon said bar and engaging the pin, an operating-shaft, and a connection between the plate and shaft, whereby the pin is permitted to engage or be withdrawn from the link, substantially as herein described.

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Witnesses:

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