

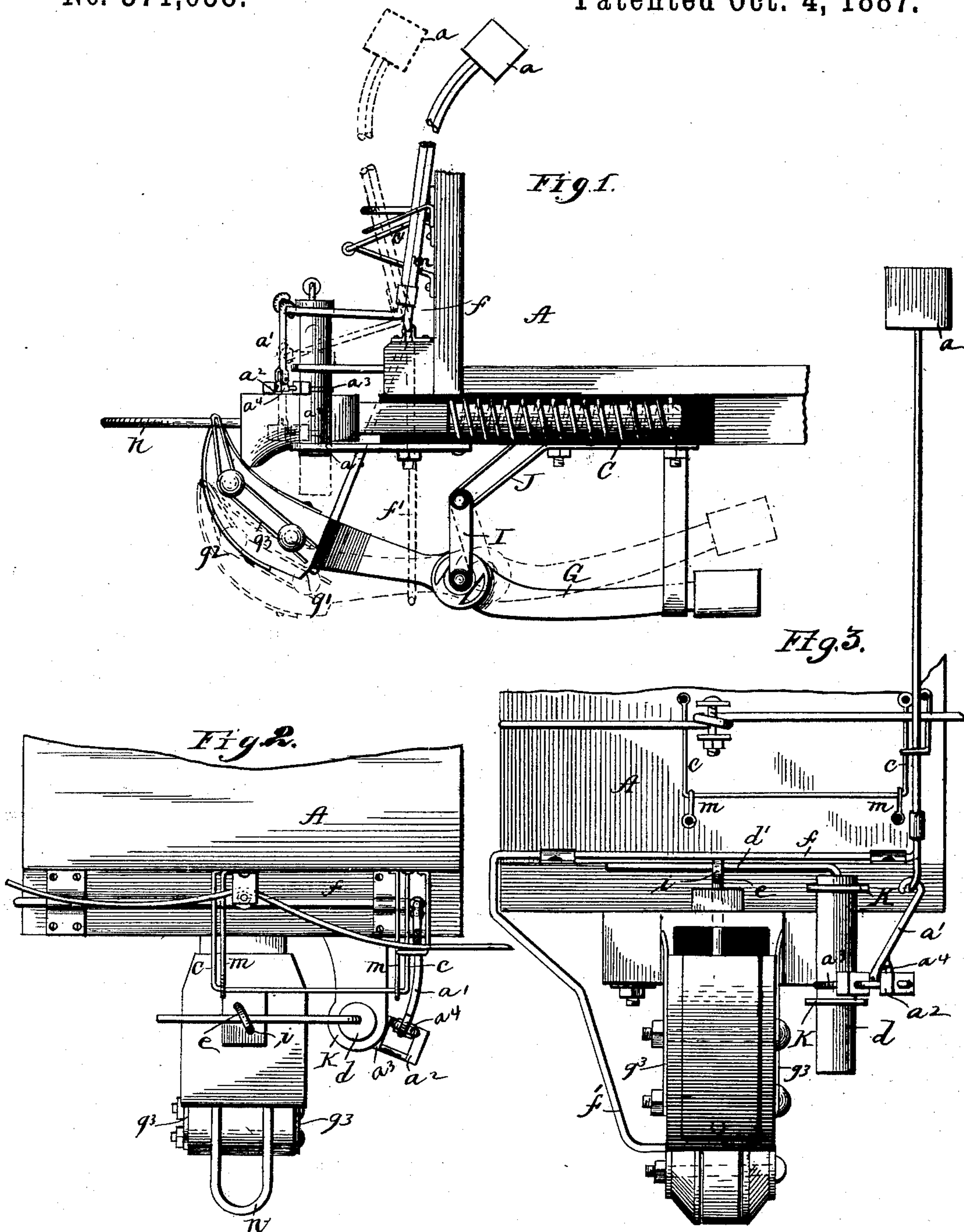
(No Model.)

J. W. GLINES.

CAR COUPLING.

No. 371,058.

Patented Oct. 4, 1887.



Witnesses

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JOHN W. GLINES, OF ALEXANDRIA, MINNESOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 371,058, dated October 4, 1887.

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To all whom it may concern:

Be it known that I, JOHN W. GLINES, a citizen of the United States, residing at Alexandria, in the county of Douglas and State of Minnesota, have invented certain new and useful Improvements in Car-Couplings; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to car-couplings, and has for its object the production of a coupling especially adapted for freight-cars which will be automatic in its operation of coupling when the cars are run together, and which can be uncoupled from the top, sides, or front of the car without the necessity of the brakeman going between the cars.

The improvement consists in the novel and peculiar construction and combination of parts, which will be more fully hereinafter set forth and claimed, and shown in the annexed drawings, in which—

Figure 1 is a side view, parts being broken away, of one end of a car embodying my invention, showing the operation of the coupler by dotted lines; Fig. 2, a plan view, and Fig. 3 a front view, of the coupling.

One or both ends of the car may be provided with my improved coupler; but in practice it is sufficient if only one end of a car be so equipped, the other end being provided with any of the well-known couplers or a simple draw-head and coupling-pin.

To illustrate the application of my invention, one end, A, of a car is shown, which is provided with the usual draw-bar, B, and the longitudinal floor-beams C, between which said draw-bar is mounted. The coupling-pin *e*, having a ring, *i*, at its upper end, is connected with the auxiliary coupling-rod *d*, mounted in brackets K, extended from the car by the arm *d'*, projected at right angles from said rod *d*, and passing loosely through the ring *i*. The rock-shaft *f*, journaled transversely of the car in suitable bearings, is provided at one end with the weighted lever *a* and at the other end

with the operating lever or arm *f'*, which extends downwardly and has its end bent substantially at right angles to be engaged by the combined link-guide and tripping device *g*, 55 for actuating the rock-shaft and permitting the coupling-pin to drop and engage with the link *n*. The weighted lever extends vertically and its lower end curves forwardly and is connected with the vertically-movable auxiliary coupling-rod *d* by the link *a'* and the universal connection *a''* between the lower end of the link and said rod. This connection is formed by extending the ends of the clip *a'''* and loosely mounting on one of said ends a clamp-sleeve, 60 *a''''*, which has its ends pivotally connected with the end of the link. A yoke or keeper prevents the sleeve slipping off said end.

The combined link-guide and tripping device is composed of a bar, G, suspended lengthwise of the car, directly beneath the draw-bar and midway of its ends, by the link *i* and the slotted bracket *j*, bolted to the beams C. The rear end of the bar is weighted and guided in its movements by the bracket I. 75 The front end of the bar curves upwardly in front of the draw-bar, and normally extends within the path of the link to be struck thereby, so the bar will move backward, and a shoulder, *g''*, on its under side, striking 80 against the bent end of the operating lever or arm *f'*, will carry the same back, thereby moving rock-shaft *f*, weighted lever *a*, and auxiliary coupling-rod *d*, which permits the coupling-pin *e* to drop and engage with the 85 link, thereby coupling the cars.

It is preferred to make the bars G of wood, in which case the top and bottom of its forward end will be protected against wear by the metal armor *g''*, and to direct the link centrally over its end the sides of the bar are provided with guides *g'''*, bolted thereto. These guides are composed of wires folded on themselves and slightly curved, as shown. The coupling-pin is held elevated or up out of 95 the way and in position for coupling by the weighted lever, which is thrown back out of a line passing vertically through its pivotal support, and said coupling-pin is held down by its gravity to the gravity of the auxiliary coupling-rod and connections and by the weighted lever, which is thrown forward of 100

said vertical line, as shown by dotted lines in Fig. 1.

A guard composed of the frame *c* and braces *m* is located above the coupling-pin and auxiliary coupling-rod to protect the same from injury when loading or unloading freight from the end of the car.

The double lever pivoted midway of its ends to the end of the car, and extending in opposite directions to the sides of the car, is adapted to be operated from either side of the car for uncoupling the cars.

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

1. The combination, with the draw-bar and the coupling-pin having a ring at its upper end, of the auxiliary coupling-rod mounted on brackets extended from the car and adapted to move vertically, and the arm projected laterally from said rod and passing through the ring of the coupling-pin, substantially as and for the purpose specified.

2. The combination, with the draw-bar, the coupling-pin, and the auxiliary coupling-rod connected with the coupling-pin, of the weighted lever pivotally supported near its lower end and the link connecting the weighted lever with said rod, substantially as specified.

3. In a coupling, the combination, with the coupling-pin and the auxiliary coupling-rod connected with the coupling-pin, of the weighted lever having its lower end curved forward, the link connected at its upper end with the lever, and the universal connection uniting the lower end of the link with the coupling-rod, substantially as set forth.

4. The combination, with the draw bar, the coupling-pin, the combined link-guide and tripping device composed of a bar arranged lengthwise of the car, having its rear end weighted and its forward end curved upwardly in front of the draw-bar, the slotted bracket,

and the link for suspending said link-guide and trip-bar midway its ends from the slotted bracket, of the rock-shaft, the operating-lever at one end of the rock-shaft projected downwardly and having its end bent substantially at right angles to project within the path of a shoulder on said link-guide, and the weighted lever connected with the opposite end of the rock-shaft and with the coupling-pin, substantially as set forth.

5. In a car-coupling, the combination, with the coupling-pin, the auxiliary coupling-rod, the arm connecting the coupling pin and rod, and means for operating said pin and rod, of the guard composed of the frame and braces located above the coupling devices for protecting them from injury while loading and unloading from the end of the car, substantially as described.

6. In a car-coupling, the combination, with the coupling-pin, the weighted lever, and suitable connections between the coupling-pin and said lever, of the double lever pivoted midway of its ends and extended in opposite directions to the sides of the car for actuating said weighted lever, substantially as specified.

7. The combination, with the combined link-guide and tripping device, of the guides secured to its sides, substantially as and for the purpose described.

8. The combination, with the combined link-guide and tripping device made of wood, of the metal armor passed over and secured to the top and bottom of its forward end and the guides secured to the sides of said link-guide, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. GLINES.

Witnesses:

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H. B. CANFIELD.