

(No Model.)

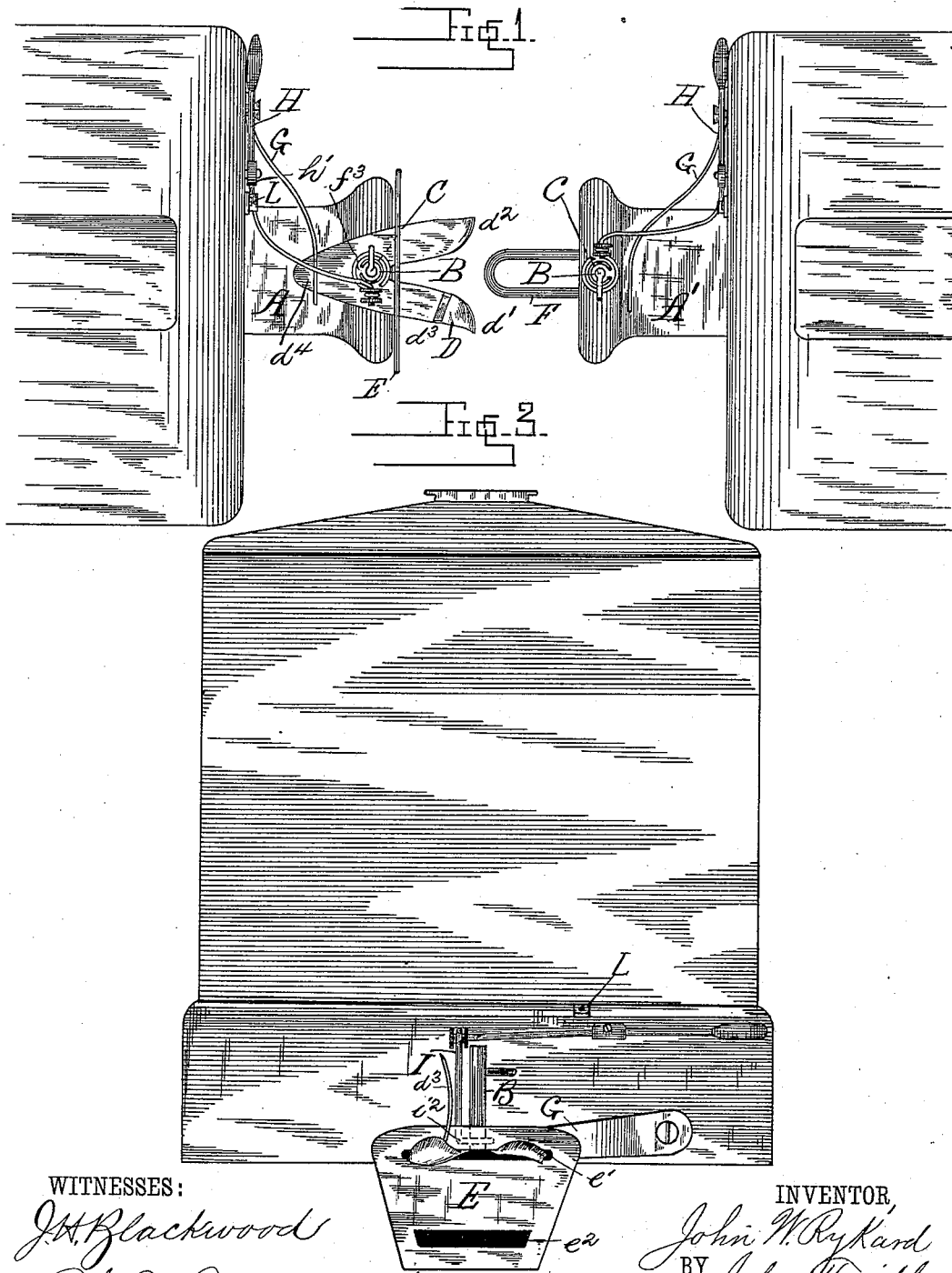
2 Sheets—Sheet 1.

J. W. RYKARD.

CAR COUPLING.

No. 340,525.

Patented Apr. 20, 1886.



WITNESSES:

J. H. Blackwood
A. S. Du Bois

INVENTOR,

John W. Rykard
BY *John Trimble*
W. M. Doolittle
ATTORNEYS

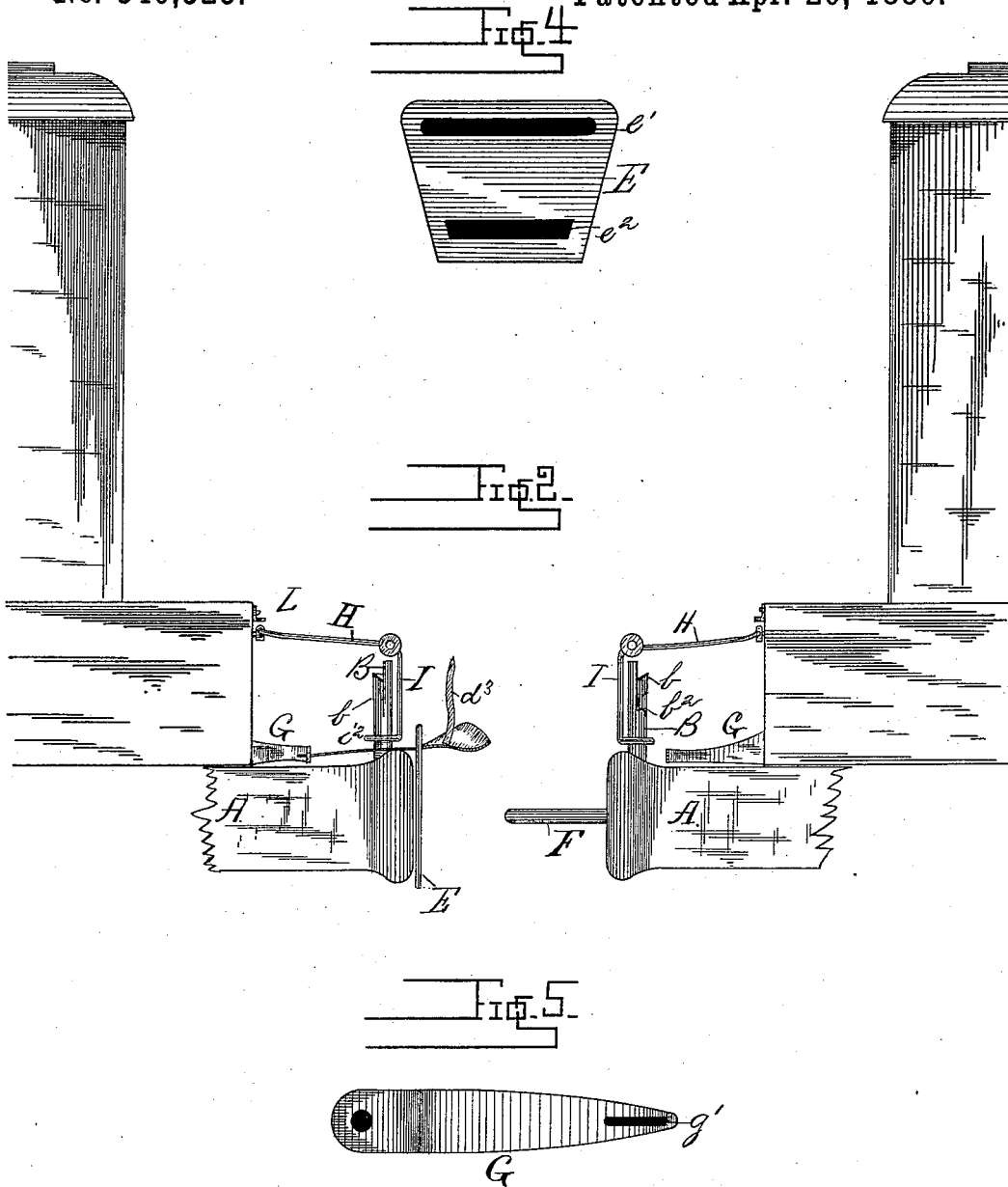
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UNITED STATES PATENT OFFICE.

JOHN WESLEY RYKARD, OF ABBEVILLE, SOUTH CAROLINA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 340,525, dated April 20, 1886.

Application filed October 1, 1884. Renewed October 10, 1885. Serial No. 179,568. (No model.)

To all whom it may concern:

Be it known that I, JOHN WESLEY RYKARD, a citizen of the United States, residing at Abbeville, in the county of Abbeville and State of South Carolina, have invented certain new and useful Improvements in Car-Couplings; 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 appertains to make and use the same.

My invention relates to that class of automatic car-couplings in which a pin and link are employed; and it consists, chiefly, of efficient means for holding the link in position, insuring the entrance of the link in the opposite draw-head, and for holding the pin in position for coupling, and automatically dropping it into the link when the cars come together, and, in connection therewith, means for meeting the shock of the cars when they collide, and thus preventing injury to the parts.

My invention is illustrated in the accompanying drawings, in which Figure 1 is a top view; Fig. 2, a side elevation; Fig. 3, a front view of draw-head and coupling attachments, and Figs. 4 and 5 detached views of separate parts.

In the drawings, A A' are draw-heads of the usual pattern, provided with flaring mouths for the reception of the link.

B is a hollow slotted tube or cylinder, rigidly secured to the fore part of each draw-head, its passage extending into the mouth of the draw-head. This tube is provided with two notches, *b*, an upper one, and *b*², a lower one, which notches are for the purposes of holding the coupling-pin, as hereinafter described.

C is a coupling-pin, the upper part of which is bent so that it will rest in the notches, as shown.

D is a thin metal forked plate, embracing the tube B, and its outer ends, *d* and *d*², curved upwardly, to enable it to rise over the opposite draw-head. One of the curved ends, *d*, is provided with an upright guard, *d*³, the function of which is to strike and release the coupling-pin from the notch in the cylinder in which it rests, as will be shortly described.

E is a thin metal plate, provided with slots *e* and *e*², hanging on the plate D over the front end of the draw-head. The plate D is passed

through the upper slot, *e*, of the plate E, and the lower slot, *e*², is for the passage of a link, F.

G is a spring-bar secured to the platform or frame-work of the car, and provided at its outer end with a slot, *g*, through which is passed and in which rests the pointed end *d*⁴ of the plate D.

H is a lever pivoted to the car at the point *h*, or at any other suitable part, and provided at its outer end with a downwardly-hanging arm, I. This arm I at its lower end is provided with a ring, *i*², on which may be a hook, passing over the tube B and adapted to engage with the bent end of the coupling-pin when the lever is raised.

L is a button or stop, secured to the end of the car above each lever, to arrest the upward action of the lever and prevent the pin from being entirely drawn out of the cylinder and to act as a stop.

The parts are put together by inserting end *d*⁴ of plate D through the upper slot of the loosely-hanging plate E, then putting the plate D over the upright cylinder B, then inserting the narrow end of plate D into the slot of spring-bar G. The lever is then lowered so that ring *i*² may pass down over the cylinder B, and the coupling-pin is then placed in the cylinder with its head resting in the lower notch, *b*². The link is placed in the draw-head through the lower slot of the hanging plate E.

In operation, when the parts are in the position shown in Fig. 1, the coupling-pin rests in the lower notch, *b*², of the cylinder. Upon the cars coming together, the link enters the mouth of the opposite draw-head and the upright guard *d*³ comes in contact with the bent end of the coupling-pin extending out beyond the notch *b*². This notch should be simply a slight recess sufficient to hold the pin up, but not deep enough to prevent the pin from being easily pushed out by contact with the guard. Upon being pushed out of the recess *b*² the pin falls down the slot *b*³ of the cylinder, its lower end passing through the link and into a hole or slot in the bottom of the draw-head, thus coupling the cars. If it is desired to hold the pin so that the cars may be buffed without coupling, the pin is placed in the upper notch, *b*, of the cylinder B.

It will be seen that both the plates D and E

are self-adjustable, so that when a car having my attachments meets a higher car the curved ends d' and d'' , riding up the opposite draw-head, will lift both plates D and E, and thereby carry the link forward into that draw-head, or, if a somewhat lower car is met, the link, striking the upper lip of the mouth of the opposite draw-head, will throw the plates D and E downward, the plate E having sufficient play in the slot of the spring-arm g for that purpose; or, the spring-arm g may be pivotally secured to the car so as to admit of an up and down motion to a certain extent.

As shown in the drawings, only one car is provided with the adjusting-plates D and E; but all cars should be provided with the lever and slotted cylinder, and also the spring-bar, so that the plates D and E could be applied to any car. It will also be seen that by the action of the spring-bar all strain and shock on the connecting parts is taken up and their dislocation and other injuries due to shock thus obviated.

Having thus described my invention, what I claim is—

1. In a car-coupling, the self-adjusting link mechanism, consisting of the slotted plate to hold the link, in combination with the plate having the curved outer ends, and the spring-bar, substantially as described.

2. The combination of the link-holding slotted plate E, the plate D, provided with the outer curved ends and the upright guard d'' , substantially as and for the purpose described.

3. An automatic car-coupling comprising, in combination with the draw-head, the lever and arm, the slotted and notched cylinder, the spring-bar, the plate provided with the curved outer ends and upright guard, and the link-supporting plate, substantially as described.

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

JOHN WESLEY RYKARD.

Witnesses:

J. F. C. DU PRÉ,
I. M. WHITE.