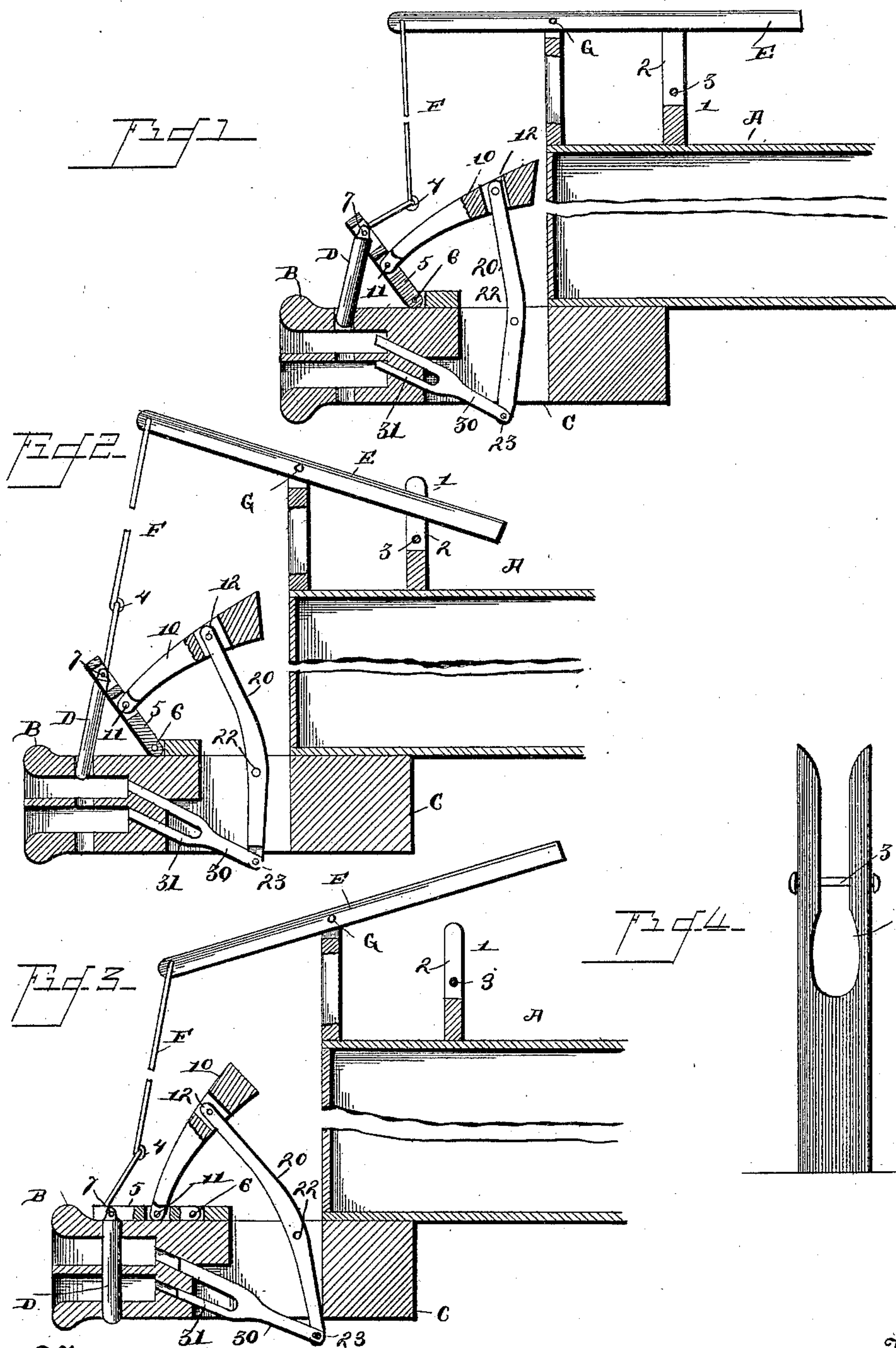


(No Model.)

A. EPPERSON.
CAR COUPLING.

No. 440,626.

Patented Nov. 18, 1890.



Witnesses
Geo. C. Fitch.

Inventor
Alexander Epperson

By *his* Attorneys
A. J. Gollamer. *C. A. Snow & Co.*

UNITED STATES PATENT OFFICE.

ALEXANDER EPPERSON, OF DETROIT, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 440,626, dated November 18, 1890.

Application filed March 27, 1890. Serial No. 345,505. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER EPPERSON, a citizen of the United States, residing at Detroit, in the county of Red River and State of Texas, have invented a new and useful Car-Coupling, of which the following is a specification.

This invention relates to car-couplings, more especially to that class known as "gravity-pin supports;" and the object thereof is to provide improved means for supporting the pin so that it can be operated from the top of the car, or so that it will drop automatically when two cars come together.

To this end the invention consists of the details hereinafter set forth as new, and illustrated in the accompanying drawings, in which—

Figure 1 is a central longitudinal section of my improved car-coupling in an uncoupled position. Fig. 2 is a similar view when the pin is raised by the operating-lever. Fig. 3 is a similar view of it coupled. Fig. 4 is a front elevation of the lever-support.

Referring to the accompanying drawings, the letter A designates the car-body (in this instance a freight-car.) B is the draw-head; C, the draw-bar; D, the pin; E, the operating-lever for the pin; F, the link connecting its front end with the pin; and G its pivot, all as is common in this class of car-couplings.

Coming now to the present invention, 1 is a support carried by the car and provided with a vertical slot 2, by which its upper end is bifurcated. This end is of spring material, and the arms thereof therefore normally remain in the position shown. A connecting rod or bolt 3 may be employed, if desired, although it is not absolutely necessary. Above this bolt the arms permit the rear end of the lever E to enter between them and be clamped therein to sustain the pin in raised position, or this rear end can be moved out of frictional engagement therewith and cause the pin to drop. The link F is jointed, as shown at 4, whereby the pin may be raised beyond the point where the rear end of the lever engages in its friction-support, for a purpose to appear farther on.

The numeral 5 designates an arm pivoted at 6 to the upper side of the draw-head, and

to the upper free end of this arm the upper end of the pin D is pivoted, as at 7.

10 is a weighted arm pivoted at 11 to the arm 5, between its ends, and at 12, near its rear end, to the upper end of a rock-lever 20. When the pin D is raised, the weight of the weighted arm 10 is thrown over the pivot 22 of the rock-lever 20 and a little to the rear thereof, whereby the pin is retained in raised position; but when the weight is lifted by the lever E the weight is not thrown so far back as to pass the center of its support.

20 is the rock-lever above referred to, which is pivoted at 12 to the weight 10, and is supported upon a horizontal pivot 22 through the draw-bar C. To the lower end of this rock-lever, at 23, is pivoted the rear end of a trigger 30, whose body slides in suitable apertures within the draw-bar and head, and whose front end 31 projects into the opening in said draw-head and is struck by the coupling-link of the approaching car in a manner well known in this class of devices. I have illustrated the mouth of the draw-head as provided with two openings, one above the other, and the front end 31 of the trigger as divided and its arms projecting into each of said openings, although it will be understood that this construction is only preferable. The parts being in the position shown in Fig. 1, if the coupling-link of an approaching car passes into the mouth of the draw-head it strikes the front end 31 of the trigger and throws the lower end of the rock-lever 20 rearward. The upper end thereof therefore moves forward and the weight 10 is carried forward of the center of its support. Its own gravity will carry it farther on, and the pin D will therefore be caused to descend through the coupling-link. The pin can be lifted at any time by the operating-lever E. When so lifted and the rear end of said lever is engaged in the bifurcated end 2 of the support 1, the weight 10 is carried only to the position shown in Fig. 2—that is, not to or in rear of its pivotal point of support—and hence the lever E may be operated from its rear end to drop the pin D. However, when the weight 10 is thrown completely back the link F is deflected from a straight line, as shown at 4 in Fig. 2.

The advantages and utility of this inven-

tion are believed to be obvious to those familiar with this class of devices, and are therefore not enlarged upon here.

I claim as the salient points of this invention—

1. In a car-coupling, the combination, with the coupling-pin and a supporting-arm pivotally connected to the draw-head and to the upper end of said pin, of a weight carried by said arm, and means, substantially as described, for supporting said weight and for tripping it, as and for the purpose set forth.

2. In a car-coupling, the combination, with the coupling-pin and a supporting-arm pivotally connected to the draw-head and to the upper end of said pin, of a weight carried by said arm and adapted to pass in rear of its pivotal point of support, and a trigger connected thereto and leading to a position to be struck by the approaching coupling-link, as and for the purpose described.

3. In a car-coupling, the combination, with the coupling-pin and a supporting-arm pivotally connected to the draw-head and to the upper end of said pin, of a weight connected to said arm and adapted to be moved to a point in rear of its pivotal point of support, a trigger connected thereto and leading to a position to be struck by the approaching coupling-link, an operating-lever flexibly connected to said supporting-arm, and means, substantially as described, for frictionally supporting the end of said operating-lever, as and for the purpose set forth.

4. In a car-coupling, the combination, with the coupling-pin and a supporting-arm pivotally connected to the draw-head and to the

upper end of said pin, of a rock-lever pivoted in the draw-bar, a weight pivoted to the upper arm of said rock-lever and to said supporting-arm, and a trigger pivoted to the lower arm of said rock-lever and extending into the interior of the draw-head, as and for the purpose described.

5. In a car-coupling, the combination, with the coupling-pin and a supporting-arm pivotally connected to the draw-head and to the upper end of said pin, of a rock-lever pivoted in the draw-bar, a weight pivoted to the upper arm of said rock-lever and to said supporting-arm, a trigger pivoted to the lower arm of said rock-lever and extending into the interior of the draw-head, an operating-lever pivoted between its ends on the car, a jointed link connecting the front end of said lever with said supporting-arm, and means, substantially as specified, for frictionally supporting the rear end of said lever.

6. In a car-coupling, the combination, with the coupling-pin and a weight connected thereto, of an operating-lever pivoted between its ends to the car, a link connecting its front end to said pin, and a support at the rear of said lever, the upper end of said support being bifurcated and its spring-arms frictionally clamping said lever, as and for the purpose described.

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

ALEXANDER EPPERSON.

Witnesses:

ALLEN LENOX,
RAS STANLEY.