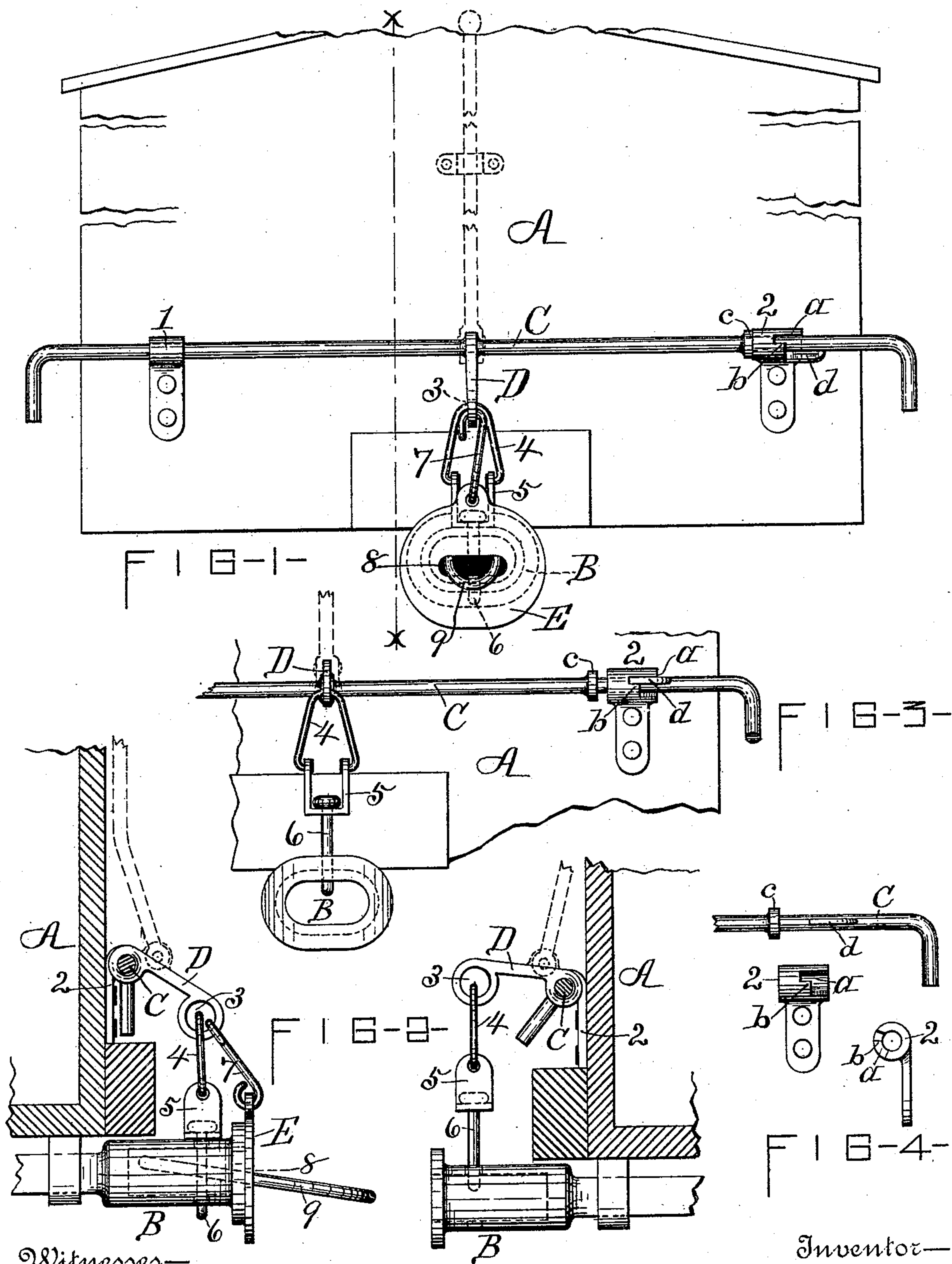


(No Model.)

S. B. FYLER.
CAR COUPLING.

No. 395,823.

Patented Jan. 8, 1889.



Witnesses—
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UNITED STATES PATENT OFFICE.

SILAS B. FYLER, OF EAST SYRACUSE, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 395,823, dated January 8, 1889.

Application filed April 5, 1888. Serial No. 269,740. (No model.)

To all whom it may concern:

Be it known that I, SILAS B. FYLER, of East Syracuse, county of Onondaga, in the State of New York, a citizen of the United States, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of the end of a car with the coupling devices attached thereto; Fig. 2, a sectional side elevation taken on line *x x*, Fig. 1, showing the two draw-heads opposite each other; Fig. 3, a partial front elevation showing the pin sustained in an elevated position; and Fig. 4 represents details.

Similar letters and figures of reference indicate corresponding parts throughout the several views.

My invention relates, broadly, to that class of car-couplings using the ordinary style of draw-head and a link and pin, the link entering the end of the draw-head substantially horizontally and the pin passing down through the draw-head and link in the ordinary manner; and it relates, specifically, to that subdivision of car-couplers in which the coupling devices are operated from the outside of the cars by appliances or mechanisms to guide the link and to insert or remove the pin.

My invention consists in the several novel features of construction and operation hereinafter described, and specifically enumerated in the several clauses of claim hereunto annexed.

It is constructed as follows:

A is the body of the car, mounted upon wheels in the ordinary manner, and provided with boxes, axles, and the other necessary accompaniments of any preferred form of construction.

B is the draw-head, of any ordinary form, and provided with the usual link-cavity in its head and with pin-holes, and is mounted upon the car in the customary manner.

C is a horizontal operating-rod, having curved handle portions at its ends, used by a person standing at the side of the car, mounted loosely in and supported by the guide-brackets 1 2, which are secured to the end of the car.

I rigidly secure to the operating-rod C, at

substantially midway its length, an arm, D, projecting laterally therefrom, as shown, whereby whenever the operating-rod is partially rotated the arm D is swung either upward or downward, according to the direction of rotation of said rod. The outer end of the arm D, I provide with a hole or opening, 3. In the aforesaid hole I secure one end of the triangular hook 4, the other end of which is pivotally connected to the pin-holder 5, which consists of a piece of metal formed with ears at either side and provided with a hole for the body of the pin 6 through the bottom, the head of the pin lying upon the base of the holder. I also detachably secure in the hole 3 one end of the hook 7, the other end of which is connected to the link-guide E, which consists of a plate of metal provided with the link-slot 8. This plate being suspended from the arm D, it hangs against the front end of the draw-head, and the link 9 lies loosely in the slot 8 thereof.

The upward rotation of the horizontal rod C by a person grasping one of its handles and manipulating it raises the outer end of the laterally-projecting arm D and the plate or link guide E without disturbing the pin-holder and its pin 6, the reason being that the hook 4 is, when the arm D is in its depressed position, of sufficient length to admit of a certain degree of vertical play in the hole 3, and the hook 7, attached to the link-guide, having no longitudinal play, and, moreover, being secured at the forward portion of the arm, must necessarily raise the link-guide first, as illustrated in Fig. 1 and at the left hand of Fig. 2. This movement vertically of the link-guide raises or depresses the outer end of the link to the desired height to properly enter the opposite draw-head when that is higher than the one carrying the link, or when it is lower, as the case may be.

In the guide-bracket 2, at its face portion, I form a longitudinal slot, *a*, extending about midway the length of the bracket and provided with an internal shoulder, *b*, substantially as shown, and the operating-rod C, I provide with a flange or collar, *c*, in proximity to the guide-bracket 2. Upon this rod I also form a short longitudinal rib, *d*, which normally rests upon the lower face of the slot *a* and in meeting contact with the vertical face

of the shouldered portion *b*. The function of the flange *c* is to regulate the thrust of the horizontal rod, and thus retain the rib *d* in proper operative position.

5 In the raising or lowering of the link-guide the partial rotation by the hand of the operator of the horizontal rod requisite for the purpose is such that the inner end of the rib moves vertically alongside the vertical face of
10 the shoulder *b* without rising above it, also being limited in upward movement by the protruding link in the slot of the link-guide, which directly limits the upward movement of the aforesaid guide. (See Fig. 1 and at the
15 left of Fig. 2.)

In order to sustain the pin 6 in an elevated position, (the link-guide being removed,) I simply rotate the operating-rod C until the rib *d* is elevated above the shoulder *b* of the
20 slot in the bracket 2, when I propel the rod from me or toward me, (as the case may be,) whereupon the rib lies upon said shoulder, thereby sustaining the arm D, hook 4, and pin-holder and pin at substantially the point
25 shown on the right of Fig. 2 and in Fig. 3—that is to say, high enough to permit the link to pass under the bottom of the pin. To drop the pin, the aforesaid action is reversed and the parts assume their normal positions.

30 I preferably employ only one link-guide to a car, leaving the opposite draw-head uncovered and open; also, as may be observed, my link-guide is detachably connected to the arm D, as by a hook, (or a chain,) whereby I may
35 remove it readily in case the cars to be coupled should happen to be each of them provided with such guides upon the meeting draw-heads.

When coupling or uncoupling, I usually operate the pin in that draw-head which is not
40 provided with any link-guide; and in case a pin is broken it may be replaced by another by simply removing the broken one out of the pin-holder and inserting another in its
45 place.

It will be seen that by the employment of my devices a car can be uncoupled from another or coupled to another by a person standing upon the ground at either side of the car;
50 also, that the link can be guided vertically when the bumpers or draw-heads are of uneven height, by a person at either one side or the other of the car, by the movement of the link-guide.

55 In case it may be desirable to also operate the aforescribed link-guide and pin from the top of a car I pivotally connect to the top portion of the lateral arm D a vertically-disposed auxiliary operating-rod, mounted
60 loosely in a retaining-bracket and extending upward to about the top of the car, and provided with a handle portion whereby a person on the top of the car can grasp the handle and raise or lower the vertical rod,
65 thus raising or depressing the link or pin; and in order to propel the rib upon the hori-

zontal rod C onto or off the shoulder *b* in the slot in the bracket 2 by a person at the top of the car, it is readily accomplished by throwing the vertical rod to one side or the other, 70 the retaining-bracket then serving as a fulcrum for said rod. (See dotted lines in various figures of the drawings.)

Having described my invention, what I claim as new, and desire to secure by Letters Patent, 75 is—

1. In a car-coupling, a link-guide consisting of a plate provided with a link-slot larger than the link and suspended in front of the draw-head from an arm connected to a horizontal operating-rod adapted to rotate and move longitudinally in its bearings, and adapted to raise or lower vertically the aforesaid link-guide, in combination with the draw-head and link, substantially as described and 80 shown.

2. In a car-coupling, a horizontal operating-rod mounted in bearings upon the car and having rotary and longitudinal movement therein, a lateral arm connected to said rod, 90 and the slotted link-guide suspended from said arm, in combination with the draw-head and link, substantially as described and shown.

3. In a car-coupling, a horizontal operating-rod mounted in bearings on a car and having rotary movement therein, a lateral arm secured to the said rod, and a slotted link-guide suspended at the front of the draw-head from said lateral arm, in combination with the draw-head and link, substantially as described, and 100 for the purpose set forth.

4. In a car-coupling, the horizontal rod mounted in bearings upon the car and adapted to rotate and to move longitudinally therein, 105 and provided with a lateral arm to which is connected a pin-holder consisting of a flat piece of metal with ears formed at its sides, and having an aperture at its bottom for a removable coupling-pin whose head lies upon
110 the base of said holder, in combination with the draw-head and link, all constructed and operating together, substantially as described and shown.

5. In a car-coupling, the horizontal rod 115 mounted in bearings upon the car and having rotary and longitudinal movement therein, one or more of said bearings being provided with a longitudinal slot having an internal shoulder, and the horizontal rod formed with a flanged portion contiguous to one end of the bearing and a ribbed portion adjacent to the opposite end and adapted to operate in the slotway of the bearing, and an arm connected to the horizontal rod and having a 120 link guide or pin connected thereto, in combination with the draw-head and link, substantially as shown and described.

6. In a car-coupling, a guide-bracket provided with a longitudinal slot having an internal shoulder, in combination with the horizontal operating-rod mounted in said bracket 130

and provided with a flanged and a ribbed portion, substantially as shown, all operating together as and for the purposes specified.

7. The guide-bracket 2, constructed with a horizontal slotway, *a*, extending from a side of the bracket part way the length thereof, said slotway being provided at its inner extremity with a rectangular shoulder portion rising perpendicularly above the lower face of the slotway, substantially as described, and for the purposes specified.

8. The operating-rod C, provided with a flange, *c*, and a rib or projection, *d*, contiguous thereto, and having a handle portion, substantially as described.

9. In a car-coupling, a horizontal operating-rod mounted in bearings upon the car and having rotary and longitudinal movement therein, a lateral arm secured to the aforesaid rod, and a vertical operating-rod fulcrumed in a bearing upon the car and having vertical movement therein and pivotally connected to the lateral arm, and the slotted link-guide suspended from the aforesaid arm, in combination with the draw-head, link, and pin, substantially as described.

10. In a car-coupling, a horizontally-disposed operating-rod mounted in guide-brack-

ets upon the car and adapted to rotate and move longitudinally therein, one or more of said brackets being constructed with a longitudinal slotway extending from a side thereof part way its length, and having at its inner extremity a rectangular shoulder portion rising perpendicularly above the lower level of the slotway, the horizontal rod operating in the bracket and provided with a flange contiguous to an end thereof and adapted to regulate the outward thrust of the rod, and having a longitudinal rib adjacent to the rectangular shoulder of the slotway, said rib being adapted to vertical movement alongside the perpendicular face of said elevated shoulder and adapted to move horizontally onto and rest thereon, and a lateral arm connected to the operating-rod and having a coupling-pin attached thereto, in combination with the draw-head and link, substantially as described, and for the purposes specified.

In witness whereof I have hereunto set my hand this 17th day of March, 1888.

SILAS B. FYLER. [L. s.]

In presence of—

WM. C. RAYMOND,
PARKE W. WICKS.