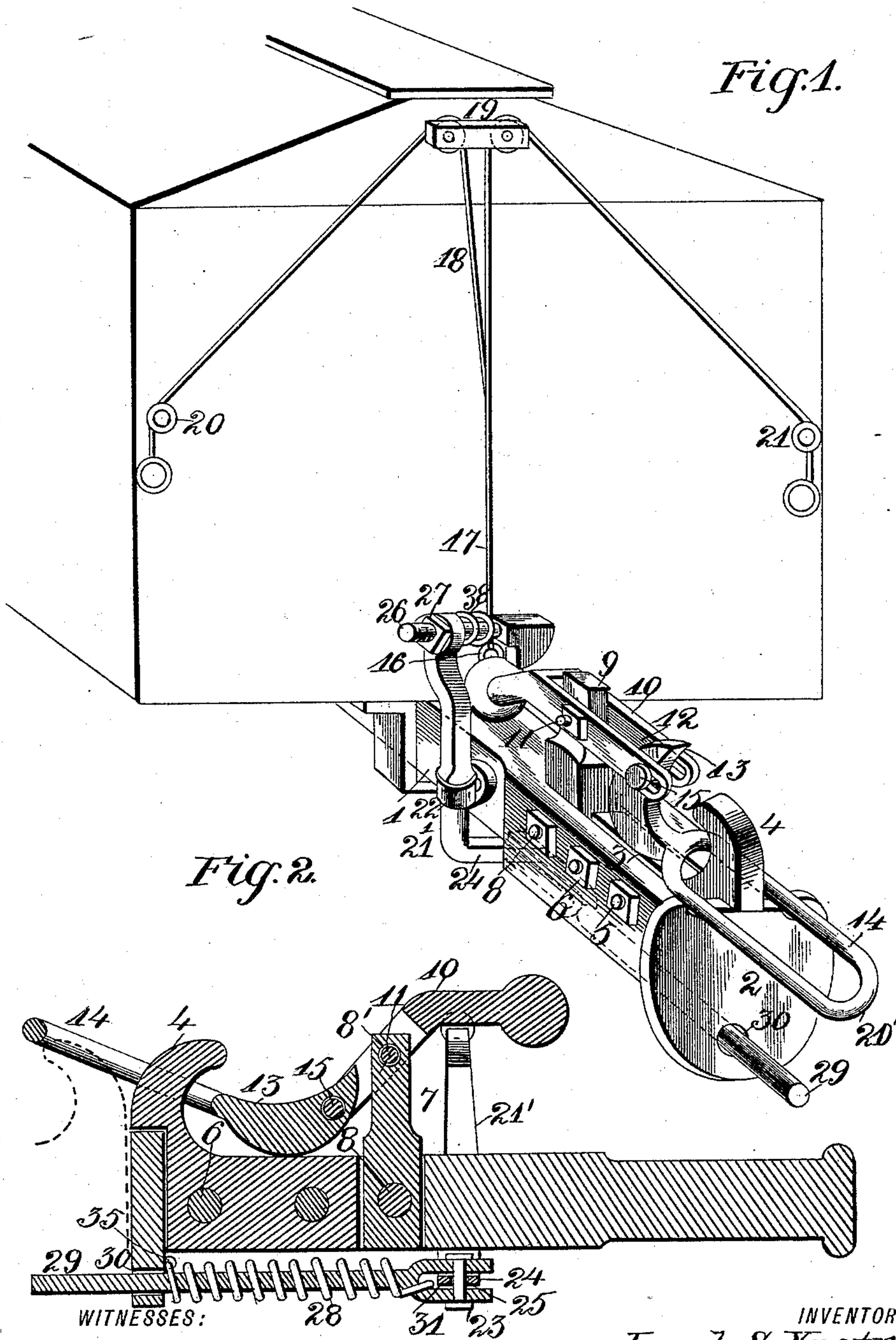


(No Model.)

J. S. VENTRESS.
CAR COUPLING.

No. 441,992.

Patented Dec. 2, 1890.



WITNESSES:
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JOSEPH S. VENTRESS, OF IDAHO SPRINGS, COLORADO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 441,992, dated December 2, 1890.

Application filed September 22, 1890. Serial No. 365,816. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH S. VENTRESS, of Idaho Springs, Clear Creek county, Colorado, 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 a part hereof.

My invention relates to improvements in car-couplings; and it consists in the novel mechanical construction, as will be more fully hereinafter described, and designated in the claims.

In the drawings, Figure 1 is a perspective view of my invention as applied to a car. Fig. 2 is a longitudinal mid-section of the same.

Referring to the drawings, 1 represents a draw-bar, which terminates in a percussion portion or head 2. Said draw-bar is provided with a longitudinal slot 3, in which a hook 4 is secured by means of bolts 5 and nuts 6. The object of this construction is if the hook should be broken another can be readily inserted by removing bolts 5. At the rear of said hook and in slot 3 a standard 7 is secured by means of the rivet 8 passing through draw-bar 1 and said standard. The upper end of said standard is provided with a perforation 8' and a decreased upper portion 9.

10 represents a link-lever pivoted to standard 7 by means of a bolt 11 passing through said lever and perforation 8.

12 indicates a longitudinal slot made in the front end of lever 10, in which the standard 7 is inserted in the operation of pivoting, and also in said slot the cam-shank portion 13 of a connecting-link 14 is pivoted by means of a bolt 15 passing through a rectangular perforation made in said lever and said cam-shank. At the rear end of said lever a perforation 16 is made, in which are secured ropes or chains 17 and 18. Said ropes pass vertically upward to the top of the car, thence through a ring or other suitable fastening 19, then are brought downward, forming a gentle declivity, and pass through rings 20 and 21, secured at a suitable distance from the bottom of the car-box. The ends of said ropes pass downward to a convenient distance to be used by the operator when it is desired to lift the rear end of the lever in the operation of uncoupling.

14 represents the link proper with a cam-

shank 13 secured in slot 12 and the link portion passing over hook 4 and rests on head 2 when the lever is in its normal position.

21' represents a vertical arm pivoted in an eyebolt 22, which bolt passes through draw-bar 1 and is secured thereto by means of a nut. Said vertical arm is provided at its lower extremity with a right-angle extension 24. Said extension has a perforation 25. The upper portion of said vertical arm has a square perforation, through which a trigger 26 passes, and is secured thereto by a nut 27. Encircling said trigger is a spring 38. Said trigger has its lower surface beveled off to a point to permit lever 10 in its upward motion to pass. The lever in striking the bevel portion throws the trigger to one side until said lever passes, and then by the tension of a spring 28, attached to right-angle extension 24 and the head 2, the trigger is drawn under the lever and holds said lever in an upright position. When the rear end of the lever is thrown upward by the construction hereinbefore described, the cam-shank is thrown downward and the link proper 14 upward, by which operation said link is permitted to pass over the hook in the opposite car.

29 represents a push-rod, which passes through a perforation 30, made in head 2. The rear end of said push-rod is provided with a longitudinal slot 31, in which slot right-angle extension 24 of arm 21' is pivoted by means of a rivet 23. Over said push-rod a spiral spring 28 is set, one end of said spring being fastened to the head 2 of the draw-bar by means of a small hook 35 and the rear end of said spring passing through and being fastened in slot 31 of push-bar 29.

When it is desired to couple the cars, elevate the lever 10 by means of ropes or chains 17 and 18. When said lever is raised, trigger 26 automatically passes under said lever and holds it, and consequently the connecting-link, in an upright position. When the opposite car strikes push-rod 29 and drives it, and consequently the lever, backward, the lever is tripped and the link falls over the hook fastened in the draw-bar of the opposite car.

Having fully described my invention, what I claim is—

1. A car-coupling consisting of a draw-bar provided with a hook, a link connected to said

draw-bar, one end of said link being provided with a cam, and a lever pivoted to said cam, whereby the opposite end of the link is elevated and depressed, substantially as set forth.

5 2. A car-coupling consisting of a draw-bar provided with a hook, a link connected to said draw-bar, one end of said link having a cam, a lever pivoted to said cam, whereby the opposite end of said link is elevated, and means
10 for holding said lever in an elevated position, substantially as described.

3. A car-coupling consisting of a draw-bar provided with a hook, a link connected to said draw-bar, one end of said link having a cam,
15 a lever pivoted to said cam, whereby the opposite end of said link is elevated, a means for holding said lever in an elevated position, and a push-rod connected to said draw-bar and to a tripping device, whereby the free end
20 of the link is lowered, substantially as set forth.

4. In a car-coupling, the combination of a draw-bar 1, carrying a standard 7, a link 20, having a cam 13 formed thereon, and a lever 10, loosely connected to said cam and pivotally mounted on said standard, whereby the link is lowered and depressed, substantially as set forth. 25

5. In a car-coupling having a head 2, a tripping device consisting of a push-rod 29, normally protruding through said head, a spiral spring 28, encircling said rod, a vertical rocking arm 21', pivotally connected to said rod, a trigger 26, secured to said arm, and a spiral spring 38, encircling said trigger, substantially as set forth. 30 35

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

JOSEPH S. VENTRESS.

Witnesses:

LEWIS T. ROBERTS,
A. A. HOSKIN.