(No Model.)

S. G. WILBER.

CAR COUPLING.

No. 490,004. Patented Jan. 17, 1893.

Fig. 1.

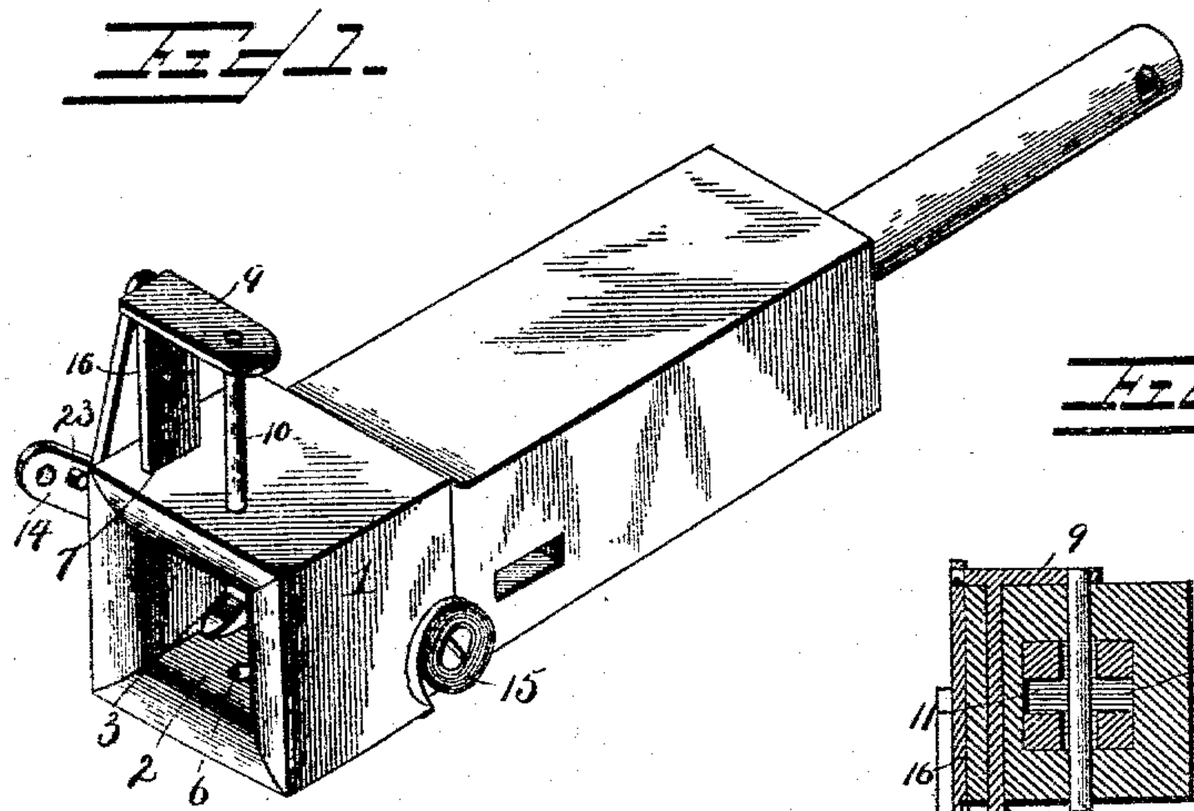

Fig. 5.

Fig. 2.

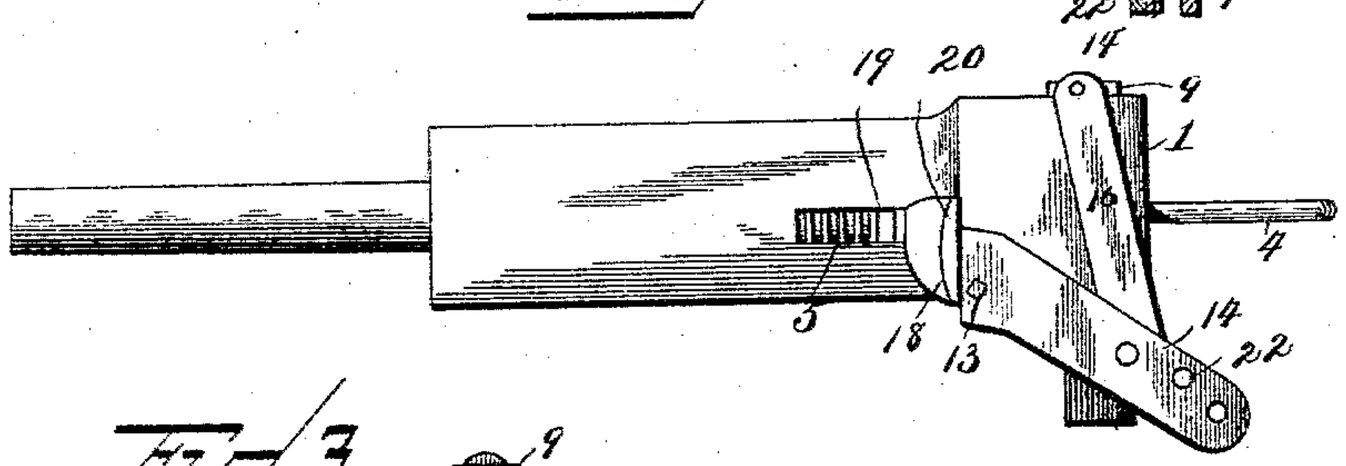

Fig. 3.

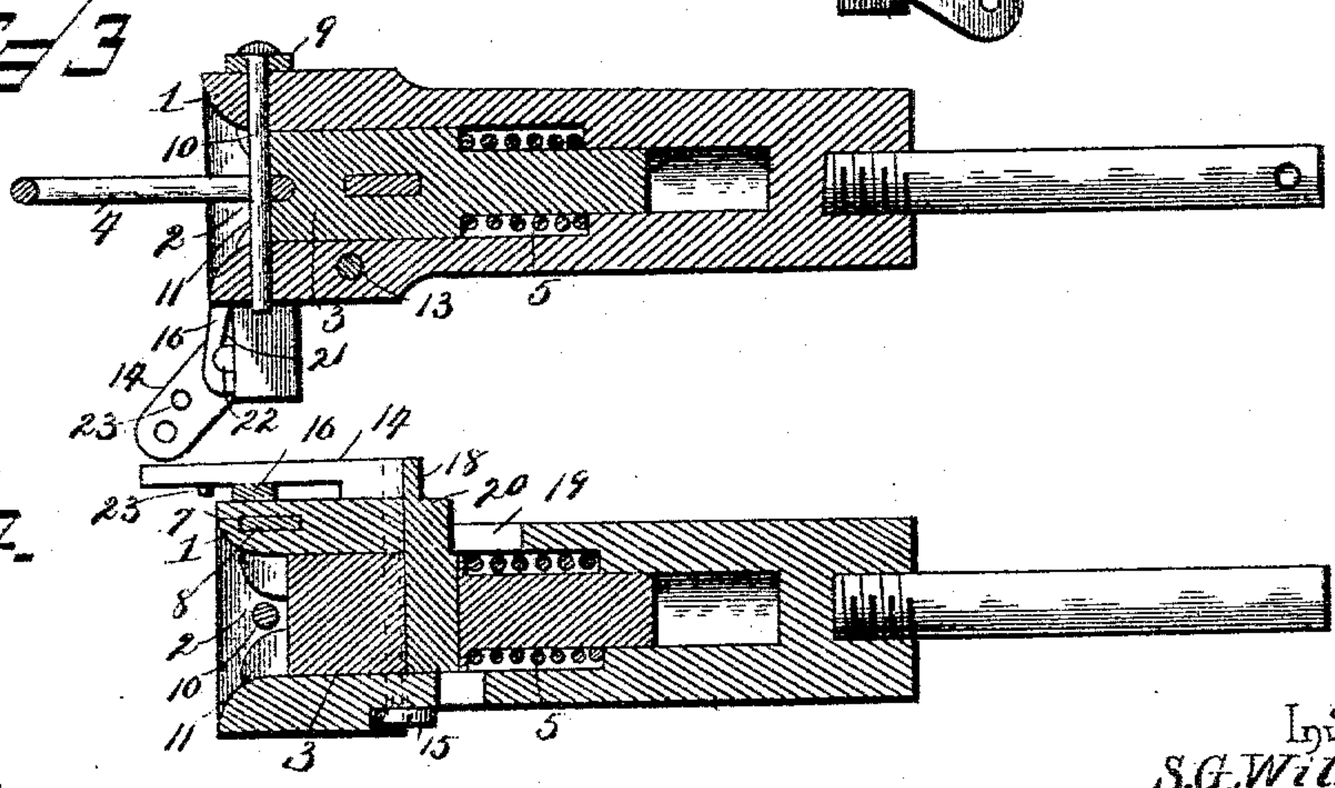

Fig. 4.

Witnesses
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S. G. Wilber.

By his Attorneys,
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UNITED STATES PATENT OFFICE.

SAMUEL G. WILBER, OF LAKE HILL, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 490,004, dated January 17, 1893.

Application filed October 26, 1892. Serial No. 450,037. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL G. WILBER, a citizen of the United States, residing at Lake Hill, in the county of Ulster and State of New York, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car coupling.

The object of the present invention is to simplify and improve the construction of pin and link car couplings and to provide one which will be adapted to couple automatically when cars come together and which may be readily uncoupled, and which will avoid the necessity of persons going between cars.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended.

In the drawings—Figure 1 is a perspective view of a car coupling constructed in accordance with this invention, the parts being shown in position preparatory to coupling. Fig. 2 is an elevation of the opposite side of the draw-head, the parts being shown in the coupled position. Fig. 3 is a longitudinal sectional view. Fig. 4 is a horizontal sectional view. Fig. 5 is a transverse sectional view.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a draw-head having a longitudinal link opening 2 in which is arranged a spring actuated follower block 3 adapted to engage the adjacent end of a link 4 and to be held in contact with the same by a spring 5 to maintain the link at any desired elevation to insure its entrance into the mouth of a draw-head of a car to be coupled. The draw-head is provided with a coupling pin perforation 6 and with a parallel opening 7 in which is arranged a guide-bar 8 which has at its upper end an arm 9 extending inward from the guide-bar and secured to the upper end of the coupling pin 10 whereby when the guide-bar is moved the coupling pin will be moved with it. The front end of the follower block is provided with a link receiving recess 11, and with a recess 12 which is disposed at right angles to recess 11 and which is adapted to receive the coupling pin to enable the block to bear against the link. The coupling pin is preferably disposed in a vertical plane similar to the ordinary pin and link coupling but it may if desired be arranged horizontally as the coupling pin will operate in any of these positions with equal facility.

The guide-bar is adapted to reciprocate vertically to raise and lower the coupling pin and it is actuated in its movements by a rock shaft 13 extending transversely through the draw-head and provided at one side with a forwardly extending arm 14 and connected at the other end with a spiral spring 15 having one end secured to the rock shaft and its other end connected with the draw-head whereby when the pin is lifted the spring will be compressed or wound around the rock shaft to actuate the coupling pin in descending when the rock shaft is free to receive the impulse of the spring. The forwardly extending arm is connected by a link bar 16 with the guide bar and it has its rear end 17 extended beyond the rock shaft and oppositely beveled to form shoulders; and these shoulders are engaged by an outwardly extending horizontal arm 18 which extends laterally from one side of the follower block and traverses in a slot 19 of the draw-head and terminates at its outer end in an enlarged head 20 having a flat front face adapted to engage either of the shoulders of the inwardly extending heel of the arm 14 whereby the rock shaft is held against turning when the arm is in its raised or lowered position. The laterally extending arm of the follower block is adapted to be disengaged from the heel of the rock shaft arm to release the rock shaft and enable it to be actuated by the spring, by means of the link striking the follower block and moving it rearwardly carrying with it the laterally extending arm. The lower end of the link bar is provided with a longitudinal slot 21 in which is arranged a pivot 22 which connects the rock shaft arm to the link bar and the slot permits the rock arm to have a slight movement before actuating the coupling pin in order to carry the follower block out of engagement with the coupling pin before the latter descends to avoid any friction between the coupling pin and the follower block. The outer end of the arm 14 is designed to be connected with

any suitable means for enabling the arm to be moved against the action of the spring to set the coupling without necessitating a person going between cars; and the outward end of the arm is also provided at its inner side with a stop 23 to limit its upward movement to prevent the coupling pin leaving its perforation in which it works.

It will readily be seen that the coupling is simple and comparatively inexpensive in construction, that it is capable of automatic coupling and that it may be readily uncoupled and set for coupling. When the coupling pin operates in a vertical position as illustrated in the accompanying drawings, the spiral spring for actuating the rock shaft can be omitted as the parts will fall by gravity but the spiral spring is desirable as it makes the parts respond more quickly; and I desire to be understood that changes in form and proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

What I claim is:

1. In a car coupling the combination of a draw-head, a spring actuated follower block arranged within the same, a vertically disposed coupling pin, a vertically disposed guide mounted on the draw-head and connected with the coupling pin, a rock shaft journaled on the draw-head and having a forwardly extending arm connected with the guide and adapted to be engaged by the follower block to hold the pin in an elevated position preparatory to coupling, substantially as described.

2. In a car coupling the combination of a draw-head, a spring actuated follower block arranged therein, a coupling pin, a guide bar arranged parallel with the coupling pin and connected therewith, a spring actuated rock shaft having a forwardly extending arm connecting with the guide bar and adapted to be engaged by the follower block to hold the pin in position for coupling, substantially as described.

3. In a car coupling, the combination of a draw-head, a spring actuated follower block arranged therein and having an outwardly extending arm, a coupling pin, a guide bar arranged parallel with the coupling pin and connected with the same, a spring actuated rock shaft journaled in the draw-head and having forwardly extending arm connected with the guide bar and provided with a heel arranged to be engaged by the arm of the follower block, substantially as described.

4. In a car coupling, the combination of a draw-head, having a longitudinal slot, a spring actuated follower block arranged within the draw-head and having an outwardly extending arm extending through the slot and terminating at its outer end in a head, a coupling pin, a guide bar arranged parallel with the coupling pin and provided at one end with an arm connected with the coupling pin, and spring actuated rock shaft mounted in the draw-head and having a forwardly extending arm provided at its inner end with an oppositely beveled heel to be engaged by the arm of the follower block and having its front end connected with the guide bar, substantially as described.

5. In a car coupling, the combination of a draw-head, a spring actuated follower block having an outwardly extending arm, a coupling pin, a guide bar arranged parallel with the coupling pin and mounted on the draw-head and provided at one end with an arm connected with the coupling pin, a rock shaft journaled on the draw-head and having a forwardly extending arm provided at its inner end with a heel to be engaged by the arm of follower block and a link bar having one end connected with the guide bar and provided at its other end with a slot and connected thereat with the arm of the rock shaft, substantially as and for the purpose described.

6. In a car coupling, the combination of a draw-head, a spring actuated follower block arranged therein and provided at its front end with recesses arranged at right angles, a rock shaft having a forwardly extending arm and adapted to be engaged by the follower block, a coupling pin arranged in the draw-head and adapted to fit in one of said recesses, a guide bar arranged parallel with the coupling pin, and connected therewith, and also connected with the forwardly extending arm of the rock shaft, and a link adapted to fit in the other recess, substantially as described.

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

S. G. WILBER.

Witnesses:
JOHN H. SIGGERS,
GEO. C. SHOEMAKER.