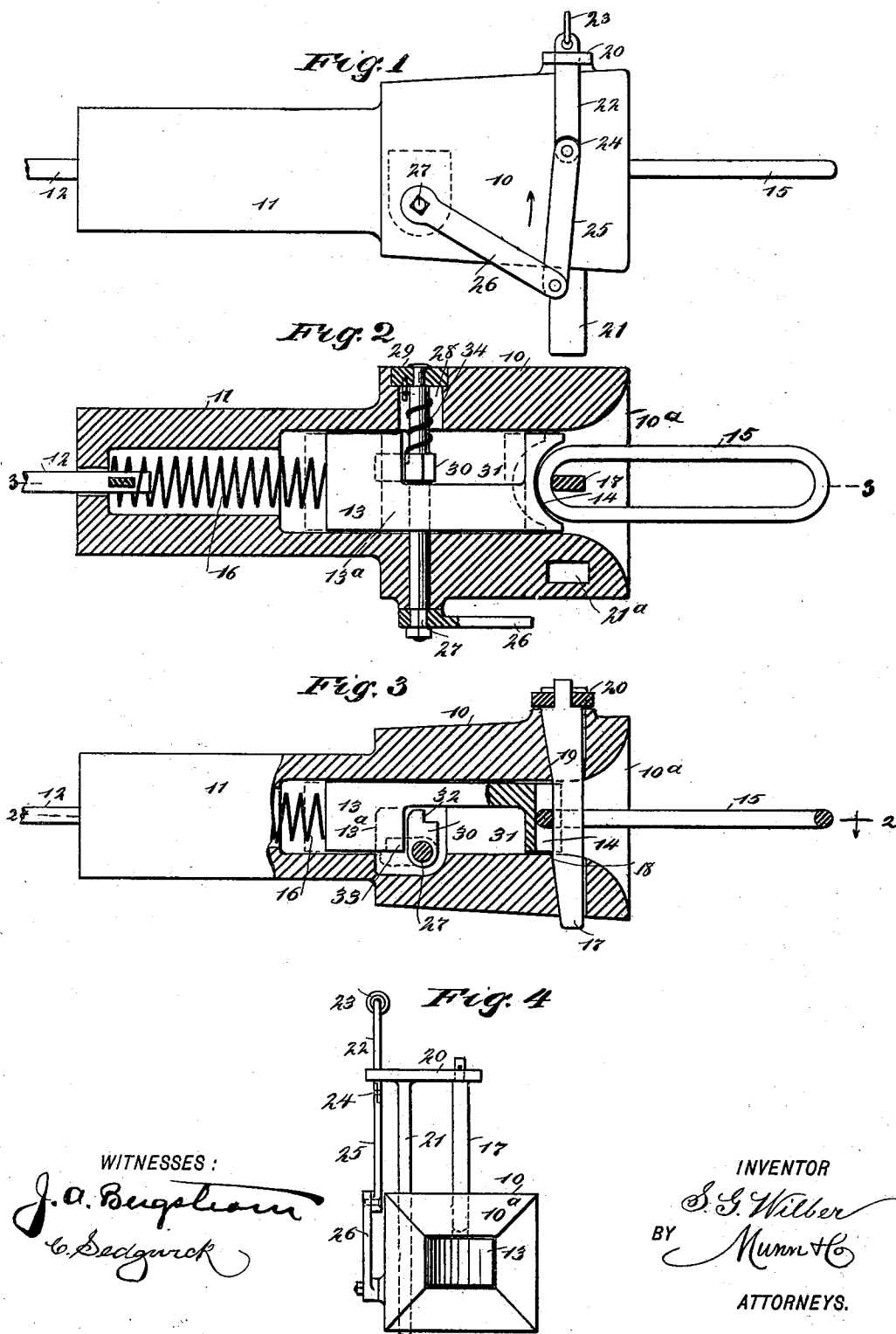


(No Model.)

S. G. WILBER.
CAR COUPLING.

No. 507,866.

Patented Oct. 31, 1893.



UNITED STATES PATENT OFFICE.

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

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 507,866, dated October 31, 1893.

Application filed February 21, 1893. Serial No. 463,196. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL G. WILBER, of Lake Hill, in the county of Ulster and State of New York, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

My invention relates to improvements in automatic car couplings and is intended as an improvement on the coupling for which Letters Patent of the United States No. 490,004 were issued to me on January 17, 1893.

The object of my present invention is to construct a coupling so that it operates in principle much like the coupling referred to above, but also to construct it in a way which renders it more compact and certain in operation, and further to construct the follower block so that it is sure to trip at the right time and so that it may be made to hold the coupling link at any necessary inclination, to the end that it may readily enter couplings of dissimilar heights.

To this end my invention consists in certain features of construction and combinations of parts, as will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the coupling embodying my invention. Fig. 2 is a sectional plan on the line 2—2 in Fig. 3. Fig. 3 is a broken vertical longitudinal section on the line 3—3 in Fig. 2; and Fig. 4 is a front end view of the coupling.

The coupling has the usual hollow draw-head 10 with a bowl-shaped mouth 10^a to facilitate the entering of the link, and the draw-head has the usual rearwardly extending shank 11 and draw-bolt 12 to enable it to be suspended beneath the car and connected therewith in the usual manner. In the draw-head is a sliding follower block 13, having a concave front end 14, this concave portion being shaped to fit snugly against the rounded end of an ordinary coupling link 15 which is held in the draw-head by a pin 17 and between the pin and the follower block. The follower block is pressed forward by a spiral spring 16 which is arranged in the hollow

shank 11, and the tension of the spring is such as to press the follower block firmly against the link 15 so as to bind the latter between the follower block and the pin, and the friction on the link is such that the latter may be swung to any necessary inclination and held in place, thus enabling it to be readily arranged to enter an opposing coupling of any usual height.

The pin 17 is adapted to move vertically through the draw-head in the usual way, and at points coincident with the lower and upper walls of the draw-head it is beveled, as shown at 18 and 19 so as to prevent it from sticking and permit it to be readily raised. The upper end of the pin 17 is secured to a cross bar 20 adapted to lie flatwise on the top of the draw-head and the cross bar extends to one side of the draw-head and is secured to a guide bar 21 which extends parallel with the pin 17 and slides vertically in a hole 21^a in the draw-head, the guide bar thus serving to keep the pin in proper position. A lever 22 slides vertically in the outer end of the cross bar 20 and has, at its upper end, a ring 23 adapted to connect with any suitable lever mechanism for raising the lever, and the lower end of the lever is pivoted, as shown at 24, to a second lever 25 which, at its lower end, is pivoted to the crank 26 of a rock shaft 27, and the latter extends transversely through the draw-head and through a slot 13^a, see Fig. 3, in the follower block 13. The draw-head is recessed on one side around the shaft 27, as shown at 28, and this recess is kept closed by a plate 29 in which one end of the shaft 27 is journaled. The recess enables the shaft and the latch thereon to be readily inserted in the draw-head.

On the rock shaft is a latch 30 which is held to swing in a recess 31 of the follower block and which has a shoulder 32 adapted to engage a shoulder on the follower block at the rear end of the recess 31, as shown at 33 in Fig. 3, and the latch is normally held in an elevated position and out of contact with the follower block, as shown in Fig. 3, by a spiral spring 34 which encircles the rock shaft, and one end of which is secured to the latch while the other is secured to the plate 29, as shown in Fig. 2.

The coupling is set for operation by raising the lever 22, and the first movement of this lever does not raise the pin 17 as the lever 22 slides freely through the cross bar 20, and as a result the crank 26 is raised which throws the latch 30 against the follower block 13 and pushes the block back thus relieving the tension on the link 15 and pin 17. When, however, the joint 24 strikes the cross bar 20 it cannot go through the slot in the bar and the bar 20, the guide bar 21, and the pin 17 are raised thus releasing the link. The continuous raising of the levers 22 and 25 and of the crank 26 throws the latch 30 and follower block 13 back, until the shoulder 32 catches at 33 against the lower portion of the follower block, as indicated by dotted lines in Fig. 3, and the shaft 27 is thus held from turning the crank 26 and the connected levers will support the pin 17 in a raised position. When a link is pushed into the draw-head, it strikes the follower block and pushes it back against the tension of the spring 16, thus releasing the latch 30 which, impelled by the spring 34, swings quickly into a vertical position thus throwing down the crank 26 and pin 17 which slides through the link, thus locking the link in the draw-head.

It will be noticed that the tripping mechanism is contained entirely within the draw-head so that it cannot be clogged by snow or ice.

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

1. A car coupling, comprising a hollow draw-head, a spring-pressed follower block held to slide therein and having a recess on

its under side, a spring-pressed rock shaft journaled in the draw-head and having a latch to swing in the recess of the follower block and to engage the block, a vertically movable pin held to slide in the draw-head, and an operative crank and lever connection between the rock shaft and the pin whereby the two are caused to move in unison, substantially as described.

2. A car coupling, comprising a hollow draw-head, a follower block held to slide therein said pin being beveled at its upper and lower ends and provided with a recess as specified, a spring-pressed rock shaft held to turn in the draw-head, a latch carried by the shaft and adapted to swing in the recess of the block and engage the block, a vertically movable pin arranged in front of the follower block, a cross bar secured to the pin, a crank on the rock shaft, and pivoted levers connected with the crank and extending through the cross bar, the lower lever being adapted to engage and lift the cross bar and pin, substantially as described.

3. In a car coupling, the combination of the draw-head, the vertically movable pin therein, said pin being beveled at its upper and lower portions which are adapted to be in contact with the draw-head, with the spring-pressed follower-block arranged behind the pin and having a concaved front end to fit a coupling link, substantially as described.

SAMUEL G. WILBER.

Witnesses:

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BYRON C. SNYDER.