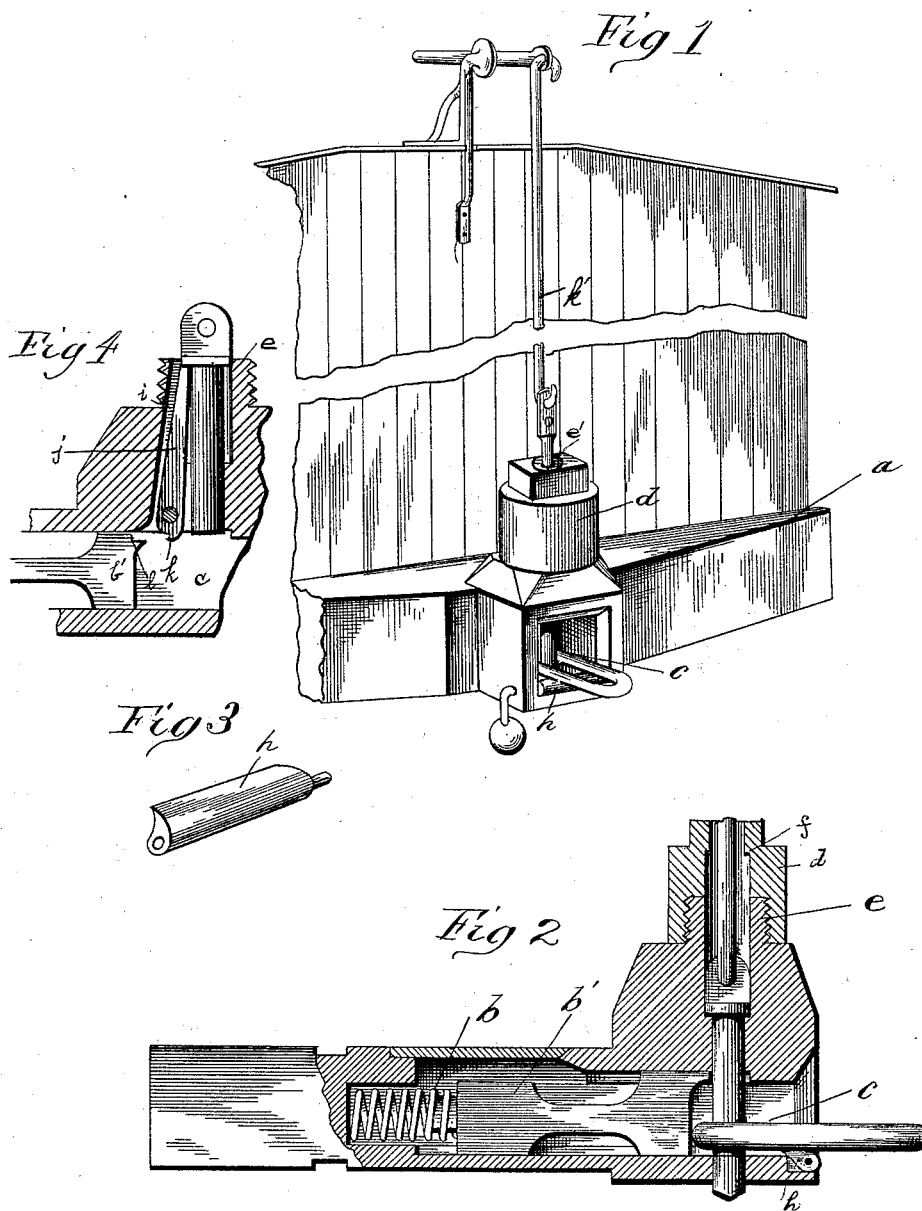


(No Model.)

W. ULERY.
CAR COUPLING.

No. 422,854.

Patented Mar. 4, 1890.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM ULERY, OF BRISCOE, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 422,854, dated March 4, 1890.

Application filed November 18, 1889. Serial No. 330,693. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ULERY, of Briscoe, in the county of Lincoln and State of Missouri, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to certain improvements in car-couplings, and more particularly to that class known as "link-and-pin couplers;" and the object of the invention is to provide a coupling by which the cars can be very readily and quickly coupled and uncoupled without danger; also, to provide a suitable inclosing-cap secured to the upper portion of the draw-head, so that there will be no danger of the pin when raised slipping out of place.

A further object is to provide a peculiarly-shaped link raising and guiding device located in the foremost part of the draw-head, whereby the link can be guided into the draw-head and be held in the desired position for coupling with the next car; also, to provide means to hold the pin raised when the spring-block is held back by the link.

In the accompanying drawings, Figure 1 is a perspective view showing a portion of one end of a railway-car with my invention attached. Fig. 2 is a view showing the various parts in longitudinal section, and Fig. 3 is a detail of the link raising and guiding device. Fig. 4 is a longitudinal section showing a portion of a head provided with a trigger.

Like letters of reference mark the same parts throughout the different views.

The letter *a* indicates a car.

b b' indicate a spring and spring-actuated block, said spring and block being secured in the rear of the draw-head *c*. To the upper part of the draw-head *c* is a suitable cap *d*, which is screw-threaded and adapted to be screwed down on the stud or projection *e*. This cap is adapted to receive and hold the pin in place, and is provided on its interior,

at its upper portion, with a shoulder *f*, said shoulder or ledge acting as a stop for the pin when the lever-rod (which has its upper portion fastened to the top of the car and adapted to be operated therefrom) is drawn upward to uncouple the cars. This cap *d* is so formed that when screwed down on the projection or stud *e* it will only have an opening at its top portion just sufficiently large to allow the pin to freely move therein. A washer *e'* can be slipped over the lever rod and pin, so as to fit snugly on said cap, and in this way all dirt, ice, &c., will be prevented from entering the draw-head.

h indicates a link raising or guiding device, which is secured in any suitable manner in the foremost part of the draw-head, and this link guiding and raising device is provided with a tongue-extending through the side of the draw-head and having its handle portion weighted. The object of having this handle portion weighted is that, after the link of an approaching car has been guided into the draw-head of another car, the lifter and guider will then, by reason of its own weighted handle, revert to its original position. The link now lying closely against this raising and guiding device will hold it in the desired position for coupling with the next car. This raising and guiding device is so constructed that when it is secured in the groove of the draw-head a smooth surface for the link to travel over is produced. It is movably fitted in the groove, and has on its under portion and extending the length of it an opening for the reception of the handle, which is fastened therein in any suitable manner. This lifter and guider can be made of any suitable material, and when constructed as described will present a very smooth surface, over which the link can glide when the cars come together.

k' indicates the pin-lifting rod, which is fastened to the top and side of the car and can be operated therefrom either by hand or foot.

The operation of my invention is obvious. When the cars come together, the link of one will enter the draw-head of the other and be guided by the link-raiser against the spring-actuated block. This block will then be forced back, and the pin, which had been resting on the upper portion of one end of the

block when uncoupled, will fall into the link and be coupled. The cap on the upper portion of the draw-head not only acts as a safeguard against the pin being forced altogether out of place when withdrawn, but also serves as an inclosing-casing for the pin, and will always keep the same clear from dirt, ice, &c. To uncouple the cars all that is necessary is to raise the lever-rod, when the spring-actuated block will press forward and its upper portion at one end will act as a support for the pin when the same drops after having been raised from the link by the operator.

With this class of couplers as heretofore constructed, when the cars are joined and it is desired to uncouple them, there is nothing to hold the pin from the link after the brakeman has drawn the same and stepped out to signal the engineer to start. I overcome this difficulty by forming a deep vertical groove *i* in the rear wall of the pin-hole of the draw-head, and locating a vertical trigger *j*, pivoted near its lower end, so that the trigger can swing in a vertical plane, and its upper end will normally tend to swing into the pin-hole, so as to catch beneath the head of the pin and hold the same suspended. The lower end of the trigger is provided with a shoulder *k*, to engage a corresponding shoulder *l* on the upper side of the sliding block, so that when the block is held back by the link and the pin is down the upper end of the trigger will be swung out into the pin-hole. Thus when the pin is drawn the upper end of the trigger will catch under the head of the pin and hold the same when the link presses back the block. The brakeman can then step out and signal the engineer, and as the link leaves the head the block springs forward and throws and engages the shoulder *k*, thereby causing the trigger to release the pin and allow the same to drop onto the block.

From the foregoing description it will be readily seen that the device herein described will constitute a very simple and durable coupling, which can be easily coupled and uncoupled without danger to the operator.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A car-coupling consisting of a spring and spring-actuated block located in the rear of the draw-head, a link raiser and guider secured in the foremost part of the draw-head, having an arm extending through the side of the same and having its end weighted, an inclosing-cap for the pin screwed on the stud or projection above the draw-head, and a lever and rod fastened to and operated from the top of the car, substantially as described.

2. The herein-described car-coupling, consisting of the draw-head, having the pin-hole extending through its top and the threaded extension, a pin located in said hole, and an inclosing-cap having an internal thread on said extension and an opening extending therethrough to receive the pin, and provided with an internal shoulder at its upper end to prevent the pin being drawn out of the casing, and a trigger suitably secured in a groove in the rear of the draw-head, its upper end adapted to engage the collar of the pin and to hold the same in place while the cars are being coupled, substantially as described.

3. The herein-described car-coupling, consisting of a spring and spring-actuated block located in the rear of the draw-head, a link raiser and guider consisting of a block journaled in the lower front end of the draw-head upon which the link rests, provided with an arm extending through the side of the draw-head, and having a lateral extension provided with a weighted end, an inclosing-cap for the pin screwed on the stud or projection above the draw-head, having the pin-hole extending through its top and the threaded extension, an internal shoulder at the upper end of said extension, and a trigger located in a groove in the rear of the draw-head, its upper end adapted to engage the collar of the pin, for the purpose set forth.

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

WILLIAM ULERY.

Witnesses:

JOHN A. McDOWELL,
JAMES A. WEEKS.