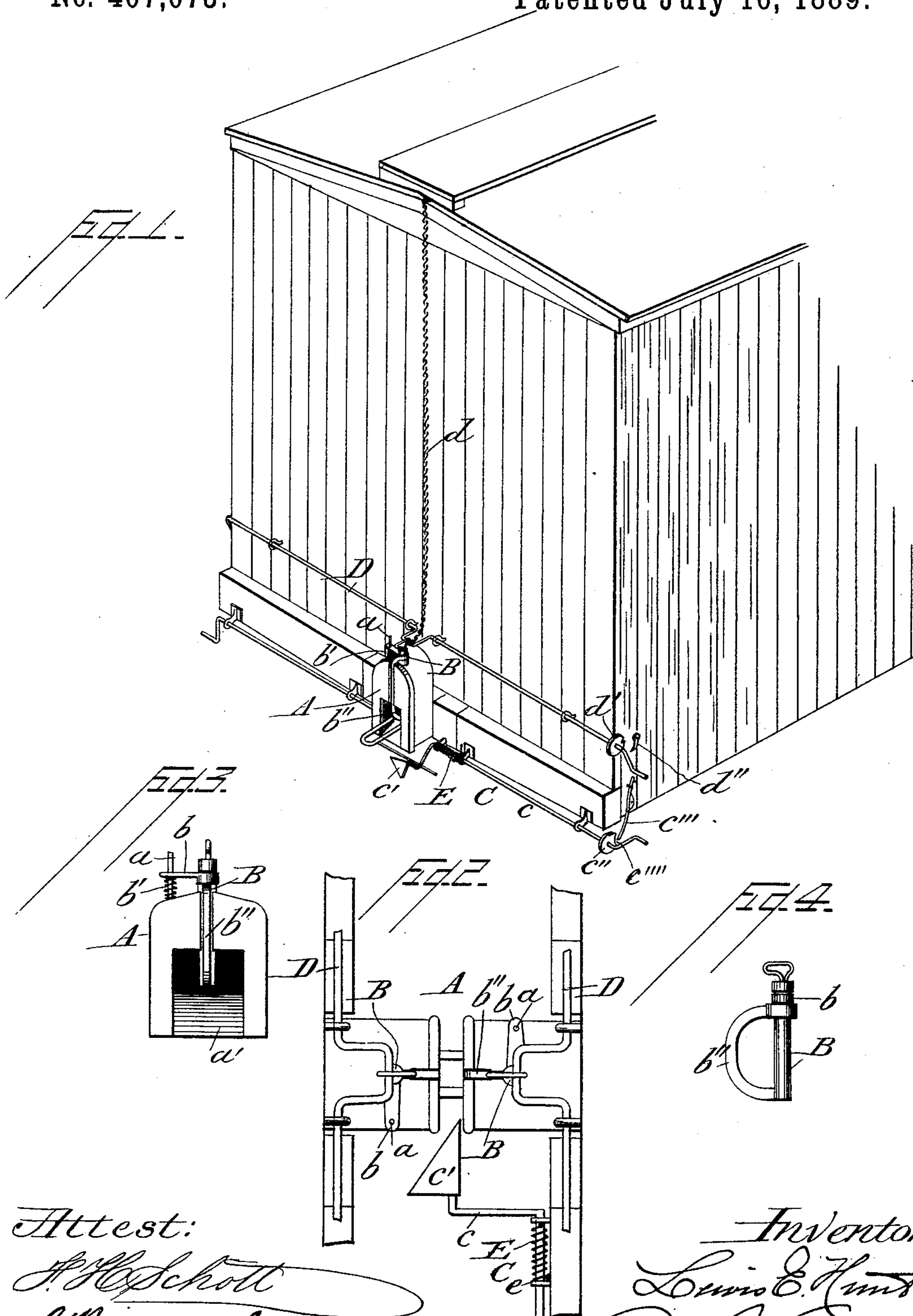


(No Model.)

L. E. HUNT.
CAR COUPLING.

No. 407,073.

Patented July 16, 1889.



Attest:

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 407,073, dated July 16, 1889.

Application filed February 25, 1889. Serial No. 301,148. (No model.)

To all whom it may concern:

Be it known that I, LEWIS E. HUNT, a citizen of the United States, and a resident of Hiram, in the county of Paulding and State of Georgia, have invented a certain new and useful Improvement in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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 letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in car-couplings, the object being to furnish a coupling which shall be reliable in its action, durable, and easily constructed and operated.

The invention consists in an improved construction whereby these objects are attained, the details of all of which will be hereinafter fully set forth, and the parts claimed as new pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the device attached to a car, showing the means for operating the various parts. Fig. 2 is a plan view of two draw-heads when coupled together, and showing the link-lifter in the position it assumes when driven out by the impact of the two draw-heads, but before it falls and springs back directly under the draw-head to which it is attached. Fig. 3 is a face view of the draw-head, showing the construction of the pin and its spring and guide. Fig. 4 is a side elevation of the pin, showing its peculiar construction.

In the figures, like reference-marks indicating corresponding parts in the several views, A is the draw-head, and B the pin; C, the link-lifter, and D the device for lifting the pin from the side or top of the car. The draw-head A may be of any construction compatible with the other parts of the device, and has an upright pin *a*, upon which slides the pin-guide *b*, and around which is a coil-spring *b'*, which serves to return the pin B to its place when its weight is insufficient for the purpose. The pin B, in addition to this device for guiding it laterally, has a link-guide *b''*, which serves to guide the link under the end of the pin, at the same time automatically

raising the pin to allow of its passage, and is formed substantially as shown in Fig. 4, being attached both at the head and point of the pin. For raising the pin from the side or top of the car, I have provided the bar D and rod or chain *d*.

It will be observed on reference to Fig. 4 that the hole through the head of the pin is slotted horizontally. This is to provide against the movement allowed by the elasticity provided in the draw-bar bending the bar D on the impingement of two draw-heads. The bar D extends from the draw-head to each side of the car, and is provided with the ratchet-wheels *d'* and pawls *d''*, for the purpose of holding the pin in suspension when it is desired to enter a link into the recess in the draw-head without coupling.

The link-lifter C is shown in Figs. 1 and 2, and consists of a shaft *c*, adapted to be moved laterally in its bearings, and bent in such form as to allow the triangular piece *c'* to be turned up in front of the draw-head and in contact with the under side of the link in such a manner as to raise the link. This piece is made triangular, as shown, in order that when it has been raised and has held the link in the desired position, being held stationary as regards its semi-rotary motion by the pawl *c'''* and ratchet *c''*, the impinging of the face of the approaching draw-head against the inclined edge will force the piece, and hence the rod *c*, in a lateral direction, releasing the engagement of the pawl *c'''* and ratchet *c''*, which will allow the compressible torsion-spring E, attached, as hereinafter described, to partially revolve the rod *c*, and as soon as the piece *c'* shall fall below the draw-head move it laterally until in position for operation, the notch *c''''* in the wheel *c''* being to provide against the wheel *c''* striking the pawl *c'''* when the wheel moves laterally back into position, as there is of course a variation in the time relative to the rotary motion of the wheel *c''* at which it returns to its position as regards lateral motion. The spring E, used for forcing the rod *c* inwardly and partially revolving it at the same time, is of interior diameter slightly larger than the rod *c*, and is secured at the end nearest the center to the said rod *c*, while at the other end it rests against the bearing *e*, in which

the rod *c* is journaled, and is fastened securely to the end of the car, the spring being arranged so that a partial revolution of the rod *c* will increase its tension, and lateral motion from the draw-head will compress it.

The operation of this device is as follows: To couple cars, it is to be understood that the link is in the stationary car-coupling. Set the link in the position in which it will enter the approaching draw-head by means of the link-lifter C. As soon as the approaching draw-head shall have come sufficiently near, the link will enter the recess and be guided by the incline *a'* until it comes in contact with the incline *b''* on the pin; raise the pin, and pass under, after which the pin will drop into its place, being guided into place by the pin *a*, and assisted, if it is found necessary, by the spring *b'*. The draw-head in motion in approaching the stationary one will strike the inclined edge of the triangular piece *c'* and move it laterally by reason of the inclined edge, and thereby release the engagement of the pawl *c''* and ratchet *c'''*, at which time the spring E will partially revolve the shaft *c* and turn the piece *c'* downwardly, and as soon as it falls below the bottom of the draw-head the spring, having been compressed by the former lateral movement of the shaft *c*, will return it to its place.

To uncouple, the tension is taken off of the draw-heads to allow a free movement of the pin, and the said pin is raised, by means of the pin-lifter D, either from the sides or top of the car.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a car-coupling, the combination of the draw-head A, and the pin B, having guide-link *b''* fastened at both head and point of said pin, substantially as shown and described.

2. In a car-coupling, the draw-head A, having pin *a*, and the pin B, having arm *b* sliding on said pin *a*, all combined and operating substantially as shown and described, and for the purpose specified.

3. In a car-coupling, the link-lifter consisting of the shaft *c*, plate *c'*, spring E, pawl *c''*, and ratchet *c'''*, all combined and operating substantially as and for the purpose specified.

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

LEWIS E. HUNT.

Witnesses:

A. P. WOOD,
NED WOOD.