

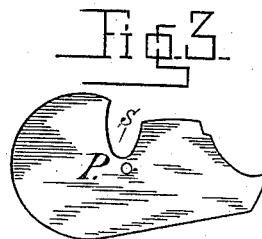
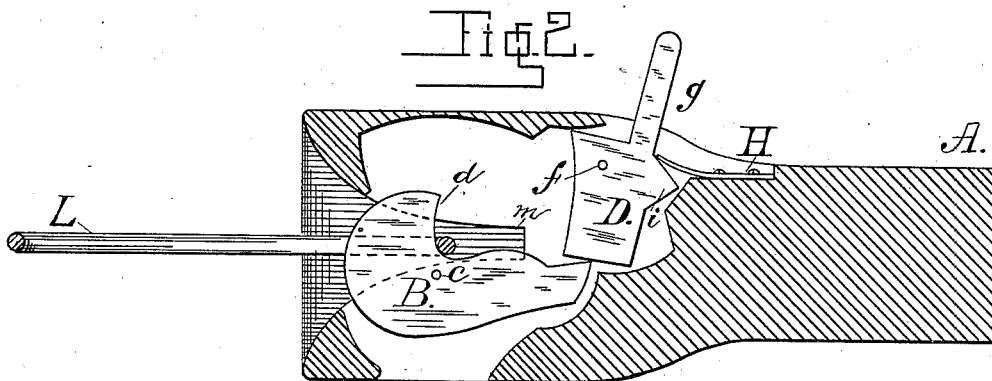
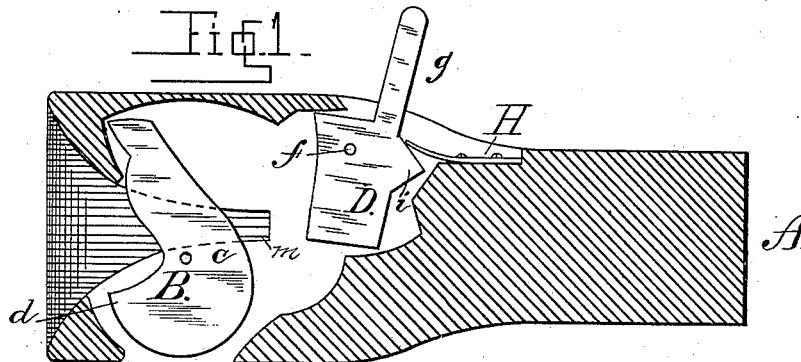
(No Model.)

R. T. PAYNE.

CAR COUPLING.

No. 307,581.

Patented Nov. 4, 1884.



Witnesses;  
W. Blackwood  
R. D. Bois

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# UNITED STATES PATENT OFFICE.

ROBERT T. PAYNE, OF WARM SPRINGS, VIRGINIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 307,581, dated November 4, 1884.

Application filed April 3, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT T. PAYNE, a citizen of the United States, residing at Warm Springs, in the county of Bath and State of Virginia, have invented certain new and useful Improvements 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.

My invention relates to car-couplings; and it consists of a device by which the link is held in readiness for coupling, the cars coupled automatically, and uncoupled by means of a suitable lever, and when thus uncoupled may be left in a condition to be "buffed" without coupling. It is comprised, essentially, but of four parts—a suitably-formed draw-head, a coupling-latch, a swinging block to hold the coupling-latch in position, and a lever to operate the swinging block. It is adapted to all classes of cars in which an open link may be used, and to links of all lengths, by which more or less play may be given.

My improvement is illustrated in the accompanying drawings, in which Figure 1 is a side elevation, partly in section, showing position of parts when the car is uncoupled; Fig. 2, a similar view showing the parts and the link in position when the car is coupled; and Fig. 3 is a modified form of latch.

In the drawings, A is a draw-head of the ordinary flared-mouthed form. It is provided with a slot, *m*, in which the link slides in its backward movement, and which is made deep enough to hold the link unsupported in a horizontal position for coupling.

B is a coupling-latch pivoted to pin *c*, and with its heaviest part in front of said pin. It is provided with a hook, *d*, and at the rear it is beveled or inclined, as shown, to adapt it to engage with the curved face of the swinging block.

D is a swinging block, pivoted on pin *f*, and provided with lever *g*. The inner walls of the draw-head are cut out to correspond to the curvatures of the latch and swinging block and to admit of their operation.

H is a spring secured within a recess in the draw-head, and bearing upon a projection, *i*, formed on the back of the swinging

block. This spring may be dispensed with, as hereinafter stated but its employment is preferred.

L is an open link of the usual form.

The operation of the device is as follows: When the car is uncoupled, the latch stands as shown in Fig. 1, its head in the recess *m* in the bottom of the draw-head. When the link enters the draw-head, it strikes the latch at a point above the pin *c*, forces the back of the latch against the front face of the swinging block, which is forced backward until the rear point of the latch falls below the swinging block, whereupon the block, by its own weight, or by the action of the spring, falls forward over the rear end of the latch to the position as shown in Fig. 2. The swinging block, hung and swinging at its upper extremity, as shown, will, of its own weight, fall over the rear end of the latch; but the spring is found useful in making the action of the swinging block quick and certain. To uncouple, the swinging block is simply moved backward by lever *g*, or any suitable lever arrangement may be substituted therefor, whereupon the latch is drawn forward as the cars separate, and is left in position for coupling again. For buffing the cars without coupling, the lever need only be left or fixed in position to hold the swinging block free from the latch, and the link of the opposite car will strike the walls of the draw-head at the back of slot *m*. When the car is coupled, the latch and the holding-block are relieved from pulling-strain, as the pressure exerted against the under side of the swinging block D forces it against the upper inside face of the draw-head strain on the latch. The holding-block and their pivots thus relieved, and the latch and lock being thus disconnected, these parts are less liable to break and to get out of order, and thus being hung to swing freely the coupling and uncoupling is effected with the greatest ease and with very little friction and jar.

P is a modification of the latch B, and is provided with a deeper notch, S, the purpose of which is to prevent the end of the link from going as far back into the draw-head, and thus insure closer coupling.

The usual pin and link may be used in connection with this coupling.

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

In a car-coupling, the draw-head provided  
5 with the slot or recess *m*, in which the link is held for coupling, in combination with the pivoted latch B, the swinging block D, and the lever, all arranged as described, whereby the cars are automatically coupled, the pulling-

strain exerted mainly on the draw-head, and a car buffed without coupling, as herein set forth.

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

ROBT. T. PAYNE.

Witnesses:

J. B. DAVENPORT,  
F. A. HYDE.