

(No Model.)

S. J. FORD.
CAR COUPLING.

No. 518,140.

Patented Apr. 10, 1894.

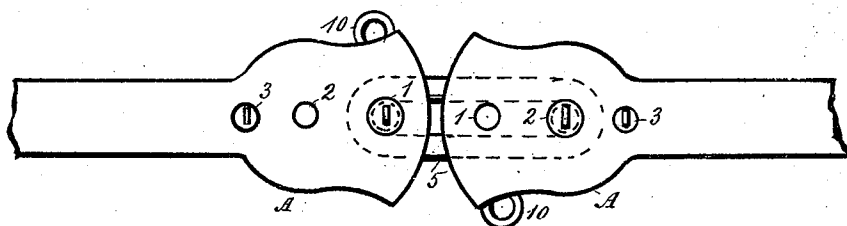


Fig. I.

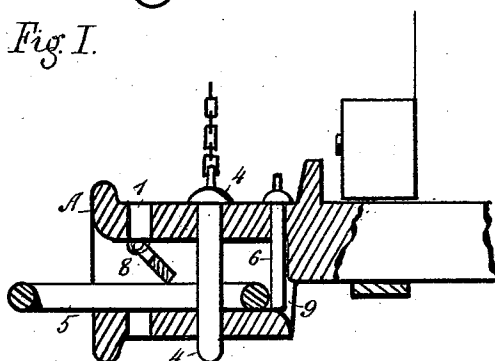


Fig. II.

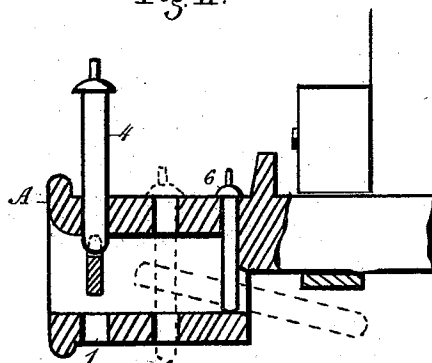


Fig. III.

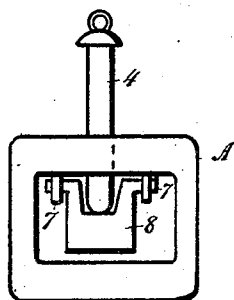


Fig. IV.

Witnesses:
H. S. Millar
L. M. Adams

Inventor,

S. J. Ford.
By *[Signature]*

UNITED STATES PATENT OFFICE.

SIMEON J. FORD, OF PLACERVILLE, CALIFORNIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 518,140, dated April 10, 1894.

Application filed September 16, 1893. Serial No. 485,720. (No model.)

To all whom it may concern:

Be it known that I, SIMEON J. FORD, a citizen of the United States, residing at Placerville, in the county of El Dorado and State of California, have invented a new and useful Improvement in Car-Couplings, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a plan view of my improved automatic car-coupling. Fig. 2 is a vertical longitudinal section showing the link in position to enter the draw-head of an approaching car. Fig. 3 is a similar section showing the approaching draw-head in position to receive the link; and Fig. 4, a front view showing the swinging device for supporting the coupling-pin.

My invention relates to improvements in car-couplings and its objects are: first, to improve the device described in my Patent No. 427,758, dated May 13, 1890, and second, to obviate the only valid objection to the link and pin system.

It is generally conceded by railway managers and employes that since the introduction of automatic appliances whereby the coupling process may be safely and easily effected by appliances which are operated from the outside or the top of a car, the sole remaining disadvantage of the link and pin method is due to the fact, that as hitherto arranged the coupling is necessarily long and allows too much space between cars, the consequence being that when the brakes are suddenly and forcibly applied to check the progress of the train, it is liable to be broken apart and wrecked by the giving way of a link or pin. The same result may occur when a train is started too abruptly.

My invention provides simple and reliable means to obviate the defect referred to and includes other novel and desirable improvements which will now be described in detail.

In the accompanying drawings, A A Fig. 1, represent two draw-heads in coupled position. Their faces being rounded from side to side, it will be seen that they may be coupled almost in contact and yet permit the cars to pass around curves without breaking or

straining the links or pins. All necessity for long and slack coupling is thus obviated and the cars being kept closely together, no damage can ensue when the brakes are brought into sudden and vigorous action. Each draw-head is provided with three pin holes 1, 2 and 3. The first two are occupied interchangeably by the coupling pin 4. It will be understood that when in an uncoupled condition, as represented in Fig. 2, the rear end of the link 5 is held between the coupling pin (in the pin hole 2) and the supplementary pin 6, which occupies the pin hole 3. The principal portion of the link being within the draw-head and lying on the floor thereof, the projecting end is held by gravity in a horizontal plane and in readiness to enter an approaching draw-head. The inner surface of the roof of the draw-head is provided at each side of the pin hole 1 with eye-bolts 7 which engage the bifurcated arms of a swinging pin support 8. When preparing for coupling with an approaching link, the pin is elevated as shown in Fig. 3 and the support gravitates to a vertical position. The lower end of the pin rests between the arms of the swinging support. When the approaching link enters the draw-head, the swinging support yields to the pressure; the coupling pin is thus automatically liberated and falls into the link. The uncoupling process is effected by means of crank shafts or other preferred suitable appliances which are conveniently and safely operated by trainmen at the sides or on top of the cars. The draw-head is also provided with a rear opening 9. When the link is not in use, it may be run back and suspended on the coupling pin as shown in Fig. 4. If desired an extra link may be carried in the same manner or by the supplementary pin 6.

The coupling pin when not in service may be deposited and conveniently carried in the ring 10 which is attached to the side of the draw-head.

What I claim as new is—

1. In an automatic car-coupling apparatus, the combination with the herein described draw-head provided with a rounded face, a series of pin holes and a rear opening, of the swinging pin support suspended within the

draw-head, substantially as and for the purposes herein set forth.

2. In an automatic car-coupling apparatus, the combination of the draw-head having a
5 rounded face, a series of pin holes and a rear opening, the swinging pin support, and the supplementary pin all constructed and arranged substantially as herein described.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of to August, 1893, in the presence of witnesses.

SIMEON J. FORD.

Witnesses:

LOUIS H. GIGNAC,
E. W. WITMER.