

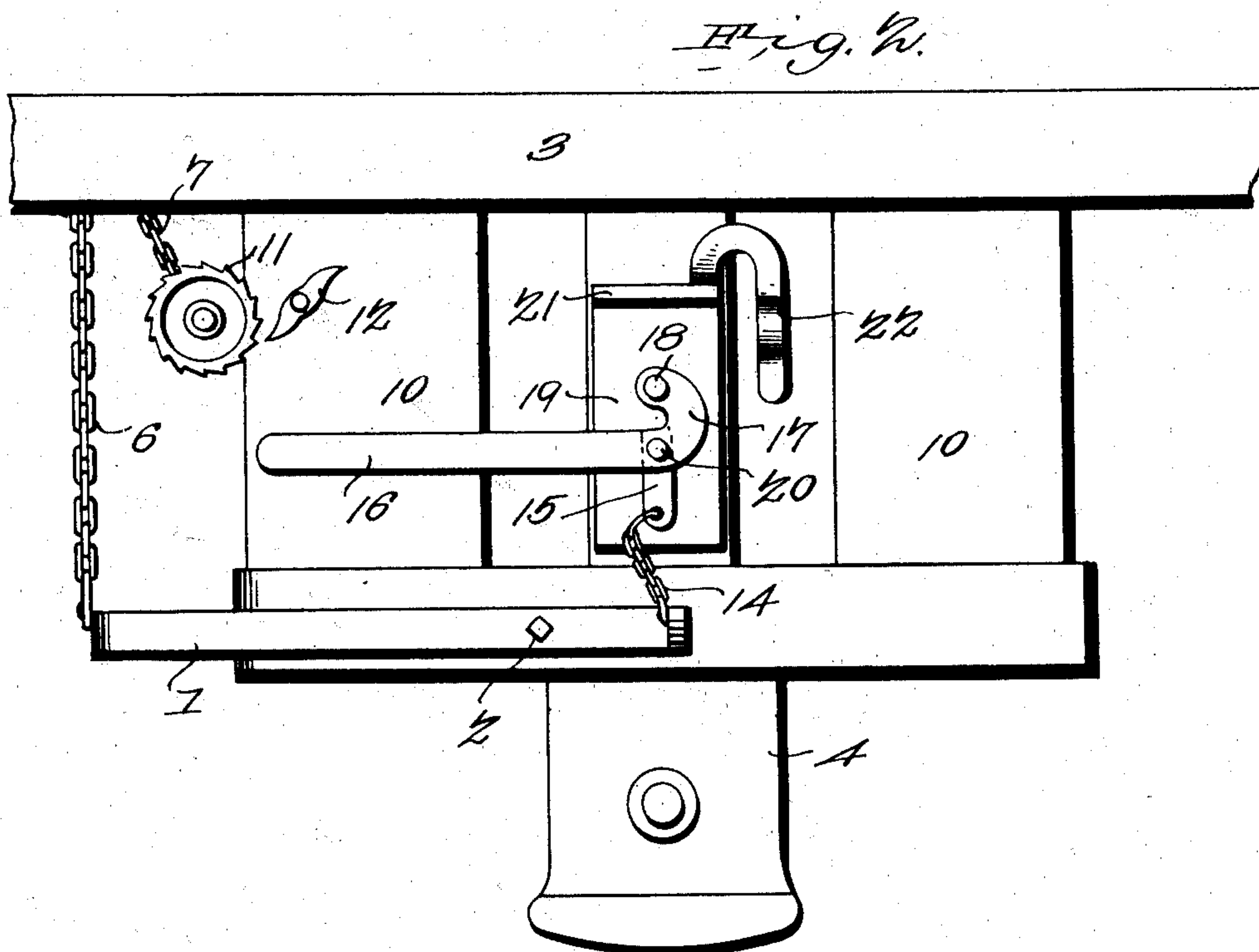
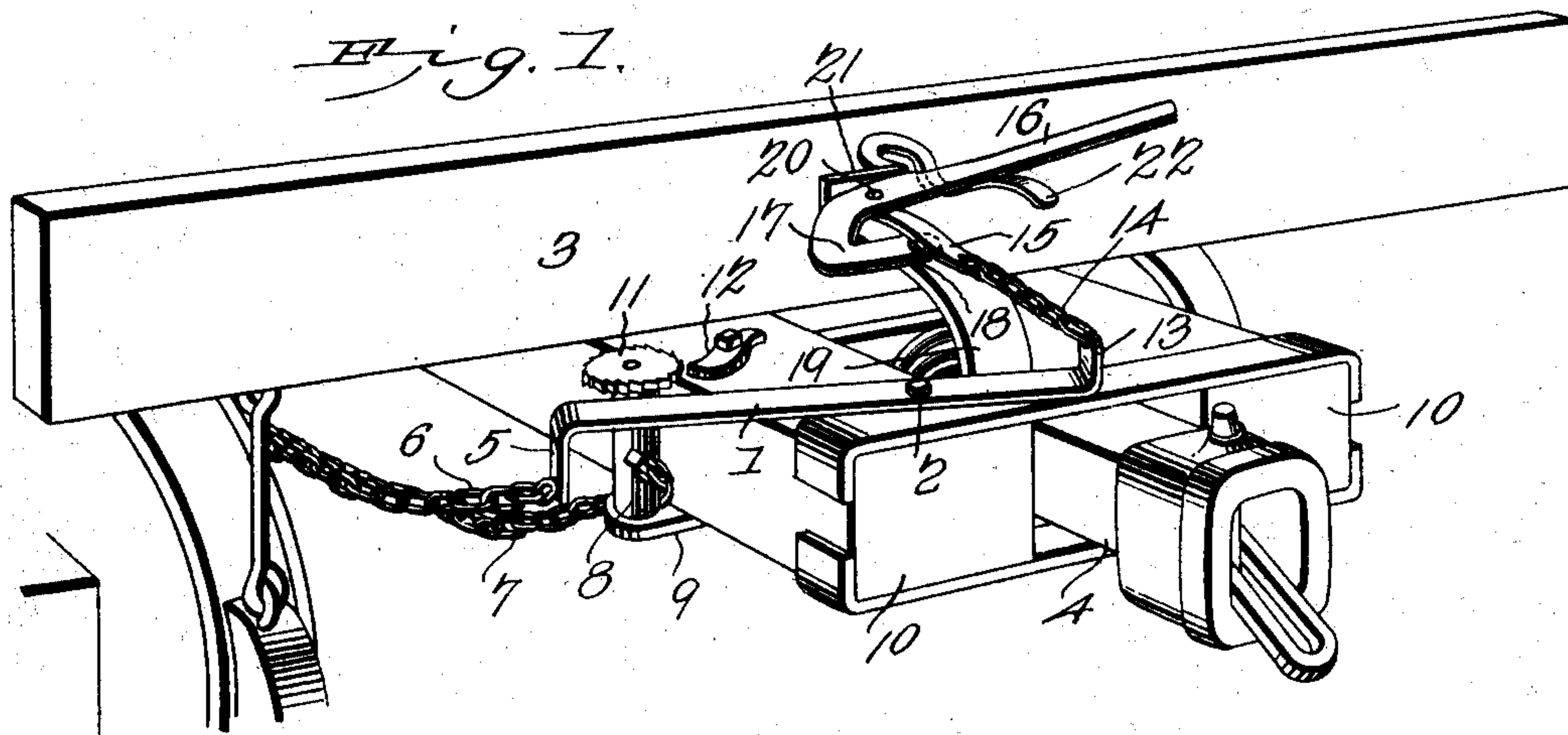
No. 706,452.

Patented Aug. 5, 1902.

A. W. REED.
AUTOMATIC CAR BRAKE.

(Application filed Apr. 14, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

ARTHUR W. REED, OF ORVISBURG, MISSISSIPPI.

AUTOMATIC CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 706,452, dated August 5, 1902.

Application filed April 14, 1902. Serial No. 102,911. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR W. REED, a citizen of the United States, residing at Orvisburg, in the county of Pearl River and State of Mississippi, have invented a new and useful Automatic Car-Brake, of which the following is a specification.

The invention relates to improvements in automatic car-brakes.

The object of the present invention is to improve the construction of automatic car-brakes and to provide a simple, inexpensive, and efficient device designed for use on various kinds of cars and adapted to be readily applied to the same and capable of enabling the brakes to be controlled by the engineer and to be applied to the longitudinal movement of the draft mechanism of a car.

A further object of the invention is to provide a device of this character having means adapted to be arranged to prevent an automatic application of the brakes, to permit the cars to be freely backed, and to permit the brakes to be applied by hand.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a portion of a car provided with an automatic brake constructed in accordance with this invention. Fig. 2 is a plan view of the same, the cam-lever being arranged to prevent an automatic operation of the brakes.

Like numerals of reference designate corresponding parts in both figures of the drawings.

1 designates a transverse lever fulcrumed between its ends by a bolt 2 or other suitable fastening device on a portion of the car 3, preferably to one of the draft-timbers at one side of the draw-head 4 and located above the same; but the transverse lever and the devices hereinafter explained for connecting the lever with the draw-head are adapted to operate equally as well beneath the same. The outer end 5 of the transverse lever is bent downward and is connected by a chain 6 or other flexible connection with the brake mechanism of the car, and the said brake mechanism is designed to be of the ordinary

construction, and it is also connected by a chain 7 with a sleeve or drum 8, mounted in a suitable bearing of a bracket or support 9 at one side of the draft-timber 10 and adapted to receive a brake-staff to enable the brake to be operated by hand. The sleeve or drum 8 is provided at its upper end with a ratchet-wheel 11, located at the upper face of the draft-timber 10 and arranged to be engaged by a pivoted pawl 12.

The inner end 13 of the transverse lever is bent upward and is connected by a short chain 14 with a link 15, which is pivoted to a cam-lever 16, having a hook-shaped or curved end portion 17, fulcrumed at its terminal 18 on a bracket or support 19, which is bolted or otherwise secured to the draw-bar or shank of the draw-head. The link is pivoted by a bolt 20 to the lever at the inner end of the curved portion at a point opposite the fulcrum, and the said lever is adapted to be oscillated to carry its body portion at the inner or outer side of the fulcrum, whereby the flexible connection between the locking-lever 16 and the transverse lever is tightened or slackened to arrange the parts for automatic action or to prevent an automatic operation of the brakes. When the flexible connection is placed under tension, by arranging the parts as illustrated in Fig. 1 of the drawings the brake is adapted to operate automatically, when the draw-bar is moved inward or rearward, which may be effected by slowing down the speed of the engine. The rearward movement or inward longitudinal movement of the draw-head swings the outer arm of the transverse lever away from the car and applies the brakes, and when the draw-head is drawn outward under tension the brake-shoes are thrown off the wheels.

The support 19 consists of a bracket or bar secured at its front end to the shank of the draw-bar and bent upward therefrom and extended rearward at a point above the said shank, and the rear end 21 of the bracket or bar is bent upward to form a support for a locking-spring 22. The locking-spring 22 has an approximately U-shaped rear portion, which is secured at one side to the bracket or bar, and the outer side is extended forward and is bent to form a shoulder for engaging the lever when the latter is in the po-

sition shown in Fig. 1. The outer end of the spring is curved downward to present an inclined face to enable it to be readily depressed by the lever 16, when the latter is swung from the position shown in Fig. 2 to that illustrated in Fig. 1. The curved end portion of the lever is deflected to arrange its outer end below its inner end, and the link 15 passes over the outer end of the curved portion and is arranged at the lower face of the inner terminal of the curved portion. The cam-lever is adapted to be readily oscillated to arrange it in either of its positions, and the spring will securely retain it in the position shown in Fig. 1. When the lever 16 is arranged as shown in Fig. 2, the longitudinal movement of the draft mechanism will not affect the brakes.

What I claim is—

1. In a device of the class described, the combination with a car having a car-coupling capable of longitudinal movement, of a transverse lever fulcrumed between its ends on the car and designed to be connected at its outer end with the brake mechanism, and means for connecting the inner arm of the lever with the car-coupling, said means comprising a connection and a lever arranged to place the connection under tension to cause the inward movement of the car-coupling to apply the brake and adapted to slacken or loosen the said connection to prevent the longitudinal movement of the car-coupling from affecting the brakes, substantially as described.
2. In a device of the class described, the combination with a car having a car-coupling capable of longitudinal movement, of a transverse lever fulcrumed between its ends on the car and designed to be connected at its outer arm with the brakes, a lever carried by the draw-head and fulcrumed at one end, and a connecting device extending from the inner arm of the transverse lever to the operating-lever and connected with the same beyond the fulcrum-point and adapted to be placed under tension by the operating-lever and to be slackened or released by the same, substantially as described.
3. In a device of the class described, the

combination with a car having a car-coupling capable of longitudinal movement, of a transverse lever fulcrumed between its ends on the car and designed to be connected at its outer arm with the brakes, an operating-lever carried by the draw-head and fulcrumed on a suitable support, a flexible connection extending from the operating-lever to the transverse lever and adapted to be placed under tension by the former, and a resilient catch for locking the operating-lever against movement when the flexible connection is under tension, substantially as described.

4. In a device of the class described, the combination with a car having a car-coupling capable of longitudinal movement, of a transverse lever fulcrumed on the car and designed to be connected at its outer arm with the brakes, an operating-lever having a curved end portion and fulcrumed at the outer terminal thereof and carried by the car-coupling, and a flexible connection extending from the inner arm of the transverse lever to the operating-lever and connected with the same to the inner terminal of the curved portion, substantially as described.

5. In a device of the class described, the combination with a car provided with a car-coupling capable of longitudinal movement, a transverse lever fulcrumed on the car and designed to be connected at its outer arm with the brakes, a bracket secured to the draw-head, an operating-lever fulcrumed on the bracket, a flexible connection extending from the operating-lever to the inner arm of the transverse lever and connected with the former beyond the fulcrum and adapted to be placed under tension by the said operating-lever, and a spring secured to the bracket and forming a catch for locking the operating-lever when the flexible connection is placed under tension, substantially as described.

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

ARTHUR W. REED.

Witnesses:

J. H. RILEY,

M. E. WAINWRIGHT.