

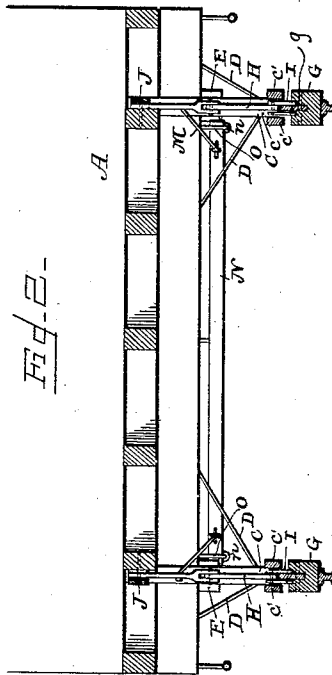
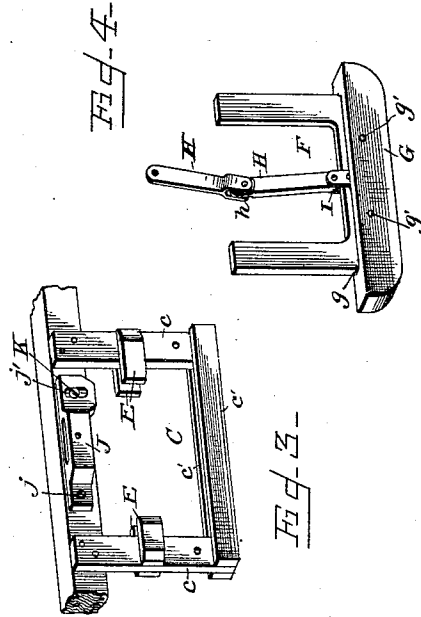
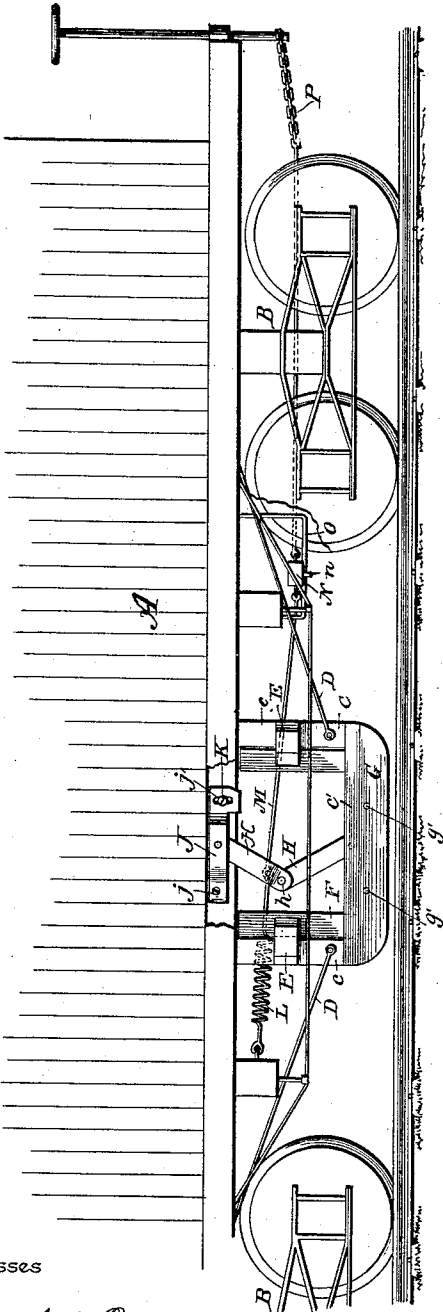
(No Model.)

R. C. WRIGHT.  
CAR BRAKE.

No. 484,486.

Patented Oct. 18, 1892.

Fig. 1-



Witnesses

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# UNITED STATES PATENT OFFICE.

REZIN CLAYBORNE WRIGHT, OF COLORADO SPRINGS, COLORADO.

## CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 484,486, dated October 18, 1892.

Application filed April 30, 1892. Serial No. 431,284. (No model.)

*To all whom it may concern.*

Be it known that I, REZIN CLAYBORNE WRIGHT, a citizen of the United States, residing at Colorado Springs, in the county of El Paso and State of Colorado, have invented a new and useful Brake, of which the following is a specification.

This invention relates to car-brakes; and it has for its object to provide certain improvements in car-brakes of that character in which the brakes, instead of being applied to the wheels, are applied directly to the rails.

It is the main object of the present invention to provide an improved construction whereby a powerful leverage is exerted upon the shoes, and a brake in which the rocking motion of the cars is readily yielded to either while the brakes are on or off.

With these and many other objects in view, which will appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a side elevation of the bottom of a car-body having my improved brakes secured thereto. Fig. 2 is a vertical transverse sectional view through the opposite brakes applied to the rails. Fig. 3 is a detail in perspective of the depending brake-housing or guide-frame. Fig. 4 is a similar view of the sliding shoe-frame.

Referring to the accompanying drawings, A represents the body of a car supported upon the ordinary wheel-trucks B, located near each end thereof. Secured to the under side of the car-body and depending centrally between the ends trucks on opposite sides of the car are the opposite U-shaped guide frames or housings C. The said guide-frames C comprise the opposite vertical portions c, connected at their lower ends by the parallel strips c', secured at their ends to the lower ends and opposite sides of the vertical portion c, and said U-shaped guide-frames are securely braced to the car-body by the brace-rods D, connected therewith, and suitable points of attachment. The said guide-frames C depend to a suitable distance above the rails of the track, and instead of being located between the trucks may be located at

the ends of the car in front of the trucks, if found desirable or advisable. Secured to opposite sides of the depending side portions c of said U-shaped frames and projecting inwardly are the opposite pairs of guide-lugs E, between which slide the opposite arms of the U-shaped shoe-frames F. The opposite arms of the U-shaped shoe-frames F slide between the parallel strips c' of said guide-frames and work against the inner edges of the side portions c within said frames and between said guide-lugs, thus being securely housed and guided in their up-and-down movements within said guide-frames to force the elongated shoes G upon the rails or lift the same therefrom. The shoes G are of substantially the same length as the lower strips of said guide-frames and are provided with the top grooves g, which receive the lower ends of the U-shaped shoe-frames, to which the said shoes are securely and removably attached by means of the securing pins or keys g'.

The shoes G may be made of any suitable material adapted for use in braking cars and are controlled, together with the sliding frames to which they are connected, by means of the jointed or toggle levers H. The said levers H are connected to each other at one end by the knuckle-joints h, and the lower levers are connected at their other ends centrally to the U-shaped shoe-frames by means of the connecting-links I, pivotally connected to the lower levers and said U-shaped shoe-frames, while the upper levers H are pivotally connected at their other upper ends in the adjusting-brackets J. The said adjusting-brackets J are pivoted at one end at j beneath the car-body, and are provided at their other ends with the adjusting-slots j', through which pass the adjusting-screws K, engaging the timbers of the car-body and providing means for moving one end of said brackets, so as to adjust said toggle-levers according to the amount of leverage required to throw the opposite shoes upon the rails of the track.

Secured to each of the upper levers H, adjacent to their pivotal or knuckle connection with the lower levers, are the opposite retractile springs L, connected at their other ends to a suitable point of attachment, so as to normally break the hinges or joints of said levers and withdraw the sliding shoe-frames within

the guide-frames and shoes from the rails. Connected also to the said upper levers H at the same point of connection as the springs are the opposite connecting wires or rods M, the other ends of which are connected to the opposite ends of the sliding horizontal equalizing-bar N. The said equalizing-bar N is provided near each end with the eyes *n*, working over the depending-stirrups O, depending from the bottom of the car and supporting the horizontal equalizing-bar N to slide thereon. Centrally secured to said bar N is the operating-chain P, which is controlled by means of the ordinary hand or air brake-operating mechanism, so as to straighten out the toggle-levers to apply the brakes when necessary.

It will be readily seen that by the use of the equalizing-bar the brakes while being adapted to be powerfully applied to the rails at the same time will not cramp the car. As the car rocks, the equalizing-bar, pulling from the outer ends to the levers and then from the center thereof to the operating mechanism, allows the tension on each brake to be equal, and also by being supported to slide beneath the car the levers on one side will straighten up while those on the opposite side will drop back and yield to the motion of the car and therefore give the same free play while the brakes are being applied.

The construction and operation of the herein-described brake are now thought to be apparent.

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

1. In a car-brake, a depending guide-frame projecting from the car-body over the rail, a shoe-carrying frame sliding within said guide-frame over the rail, and adjustable toggle-levers connected with said sliding frame and suitable operating mechanism, substantially as set forth.

2. In a car-brake, a braced depending U-shaped guide-frame, a U-shaped shoe-frame

sliding within said guide-frame, a brake-shoe removably connected with said sliding shoe-frame below the guide-frame, and adjustable operating toggle-levers connected with said shoe-frame and suitable operating mechanism, substantially as set forth.

3. In a car-brake, the depending U-shaped guide-frames having opposite pairs of guide-lugs, U-shaped shoe-frames sliding within said guide-frames and between said guide-lugs, elongated brake-shoes removably connected with said shoe-frames, jointed levers pivotally connected with said shoe-frames and adjustably to the body of the car, and suitable operating mechanism, substantially as set forth.

4. In a car-brake, depending guide-frames, shoe-carrying frames sliding within said guide-frames over the rail, adjusting brackets pivotally connected at one end to the car-body above said frames and radially adjustable from such points of pivot, toggle-levers connected with said sliding frames and said adjustable brackets, and suitable operating mechanism, substantially as set forth.

5. In a car-brake, depending guide-frames, shoe-carrying frames sliding within said guide-frames over the rails, toggle-levers connected with said sliding frames and the body of the car, retractile springs connected with said levers at a suitable point of attachment for normally breaking the hinge of the levers to raise the shoe-frames, opposite stirrups depending from the car-body, an equalizing-lever sliding in said stirrups, connecting rods or wires connected to each end of said bar and to said toggle-levers, and an operating-chain connected centrally to said bar, substantially as set forth.

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

REZIN CLAYBORNE WRIGHT.

Witnesses:

E. G. PERKINS,  
J. A. WRIGHT.