

(No Model.)

2 Sheets—Sheet 1.

F. P. MUSSER.
CAR BRAKE.

No. 519,587.

Patented May 8, 1894.

Fig. 3.

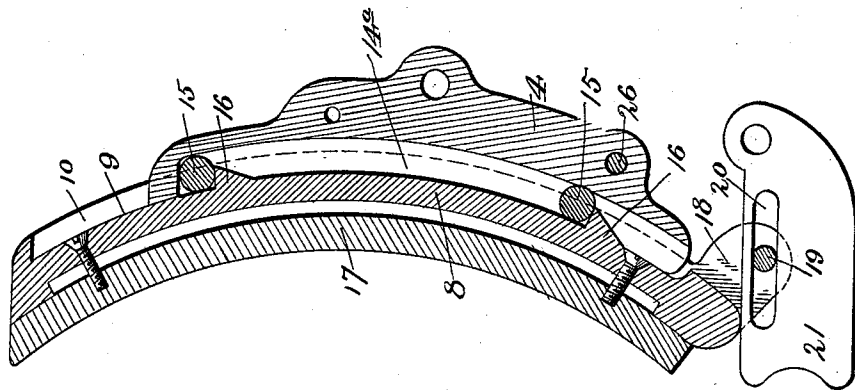
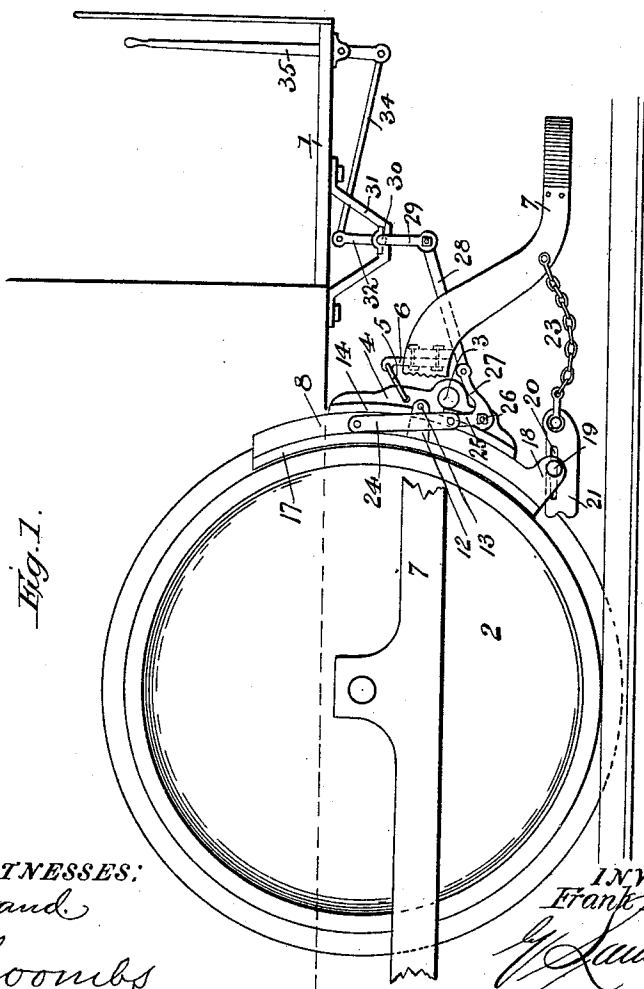


Fig. 1.



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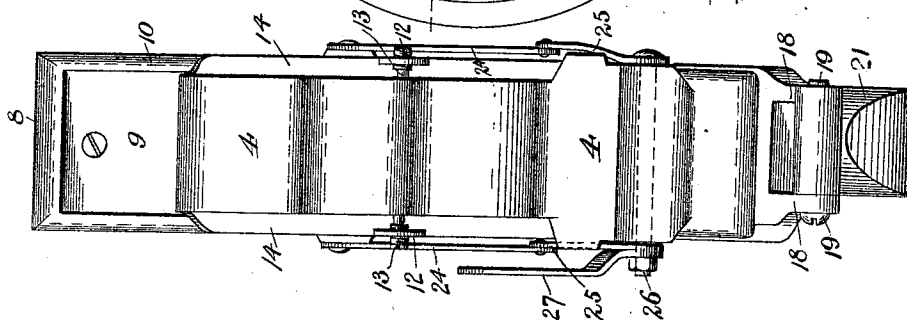
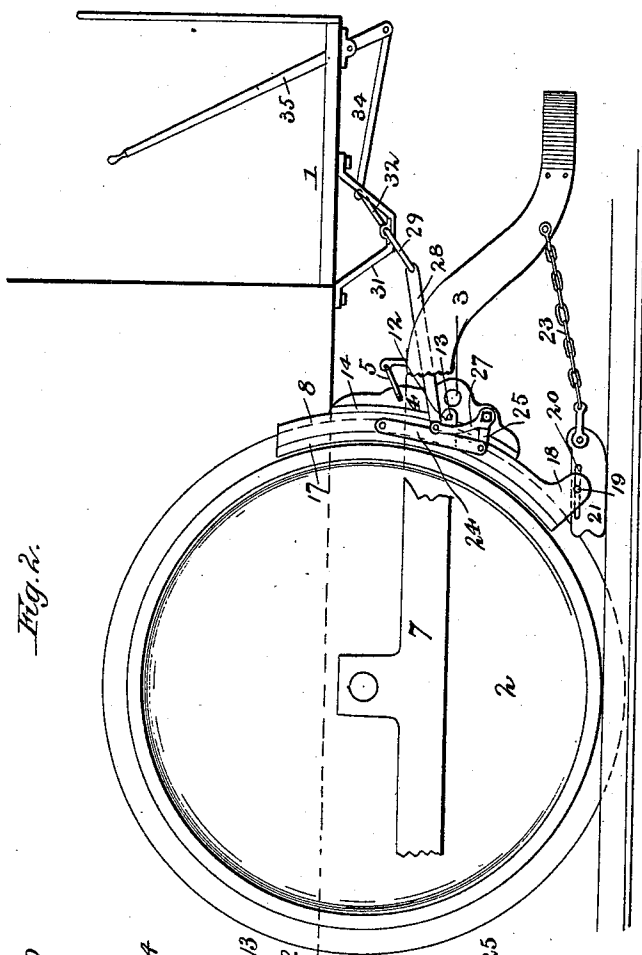
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UNITED STATES PATENT OFFICE.

FRANK P. MUSSER, OF BEAVER FALLS, PENNSYLVANIA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 519,587, dated May 8, 1894.

Application filed January 23, 1894. Serial No. 497,796. (No model.)

To all whom it may concern:

Be it known that I, FRANK P. MUSSER, a citizen of the United States, and a resident of Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Car-Brakes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in car brakes and its object is to provide a supplemental or what I term an emergency brake, combined therewith, which may be employed independently of said brake or in connection with the same, as may be desired.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings: Figure 1 is a side elevation of a portion of a car with my improvements applied thereto, the brakes being released or not in use. Fig. 2 is a similar view the brakes being set. Fig. 3 is a longitudinal sectional view of the brake. Fig. 4 is a front face view of the brake.

In the said drawings, the reference numeral 1 designates the platform of a railroad car, and 2 one of the wheels thereof, which may be of any ordinary construction.

The numeral 3 designates a transverse brake bar connected with any suitable means for operating the same. As the means for operating said bar form no part of my present invention, it is not necessary to illustrate or describe them herein, it being sufficient to state that they may be of any ordinary or suitable construction. Secured to said bar at each end thereof is a clog or segment 4, having pivoted thereto near the upper end a bail 5, which is also pivoted to arms 6, secured to the side irons 7 of the car. Connected with this clog or segment is a curved brake shoe 8, having a recess 9, forming flanges 10 between which the clog fits. Secured to each side of said shoe is a lug 12, provided with a screw threaded aperture in its free end in which fits a set screw 13. These screws project over flanges 14, formed on the clog, by which the

latter and the shoe are loosely connected together. By this connection the shoe is held to the clog, yet can be raised or lowered when desired independently thereof. The clog or segment on its inner or concave side is formed with a recess 14, to receive anti-friction rollers 15, which are held in place by projections 16, on the shoe. The object of these rollers is to reduce friction between the clog and shoe. The concave face of the shoe is provided with a curved wearing face 17 of metal or other suitable material, secured thereto by means of screw bolts so that it can be removed and replaced by a new one when worn.

The lower end of the shoe 8, is formed with lugs 18, provided with a pin 19, which passes through a slot 20, in a supplemental shoe or block 21, connected at its front end by means of a chain 23, with the side iron 7. It will thus be seen that the said shoe or block 21 is pivotally connected with shoe 8, the pin 19 acting as a pivot, the slot 20 being for the purpose of allowing the shoe or block 21 to have a free forward and backward movement as the shoe 8 moves up and down.

Pivoted to each side of the shoe 8 intermediate of its ends is a lever 24, the opposite ends of which are pivoted to a crank 25, secured to each end of a short shaft 26, pivoted in bearings at the lower end of the clog. Secured to one end of this shaft is an arm 27, pivoted to a rod 28, connected with a crank 29, on the end of a transverse shaft 30, journaled in brackets 31 depending from the under side of the car platform. This shaft intermediate of its ends is provided with a crank 32, connected by means of a rod 34, with an operating lever 35.

It will of course be understood that there is one of these brake mechanisms at each side of the car.

The operation is as follows: When used as an ordinary brake the parts will be in the position shown in Fig. 1, and the levers 24 and cranks 25 being in line with each other the shoe 8 is held in the elevated position shown and prevented from falling down. While in this position the shoe 8 can be forced into contact with the wheel by means of the brake bar and its connections in the ordinary manner. In case, however, the brake should fail to work, or an emergency should occur, by

operating the lever 35, by means of its connections the shaft 26 will be rotated operating cranks 25 and levers 24, depressing the shoe 8, so that the shoe or block will come in
 5 contact with the rail, and the shoe 8 be also pressed, tightly against the wheel, thereby effectually braking the same. By reason of the block 21 being connected with the side
 10 iron 7, it is prevented from wedging between the wheel and rail, which would be liable to throw the car from the track.

Having thus fully described my invention, what I claim is—

1. In a brake mechanism, the combination
 15 with the brake bar, the clog or segment, of the vertically movable shoe having a pivoted block at the lower end, and means substantially as described for elevating and lowering said shoe.

2. In a brake mechanism, the combination
 20 with the brake bar the clog and the vertically movable shoe having a pivoted friction block at its lower end, of the levers pivoted to said shoe, the cranks to which said levers are also
 25 pivoted, secured to a short transverse shaft, the arm secured to said shaft and the operating lever and connections; substantially as described.

3. In a brake mechanism, the combination
 30 with the brake bar, the clog, having a pivoted

bail connected with the side iron of a car, and formed with a recess on its concave side and with side flanges, of the vertically movable shoe having a recess and projections on its
 35 convex side, and the pivoted shoe or block at the lower end of said shoe and the lugs provided with set screws working over the side flanges of said clog, of the levers pivoted to said shoe, the cranks connected therewith and
 40 secured to a transverse shaft, the arms also secured to said shaft and the operating lever and connections; substantially as described.

4. In a brake mechanism, the combination with the brake bar the clog secured thereto,
 45 the vertically movable shoe loosely connected therewith, and means substantially as described for operating the same, of the block having a slot therein, the pin passing through said slot for pivotally connecting the same
 50 with the shoe and the chain connecting said block with the car; substantially as and for the purpose specified.

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

FRANK P. MUSSER.

Witnesses:

H. J. BAILEY,
 C. M. HENNON.