(No Model.)

J. L. POALK.

CAR-BRAKE.

No. 259,773. Patented June 20, 1882.

Fig. 1.

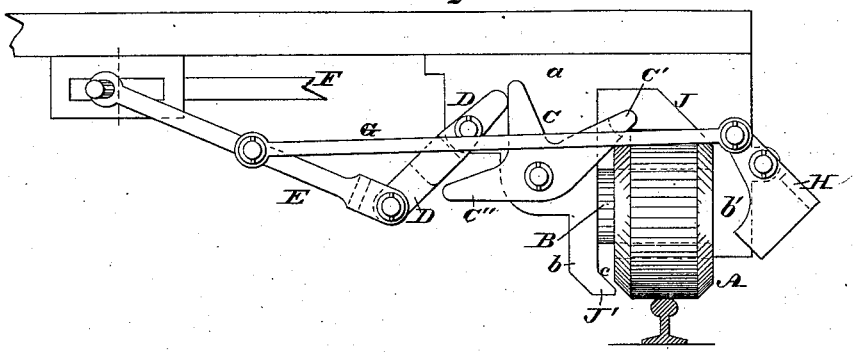


Fig. 2.

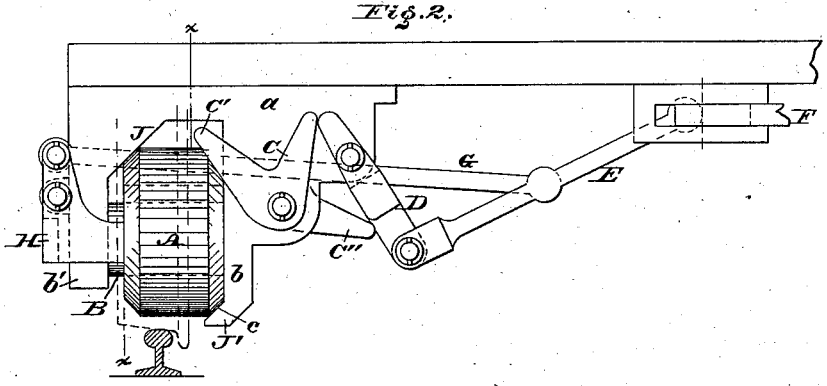


Fig. 3.

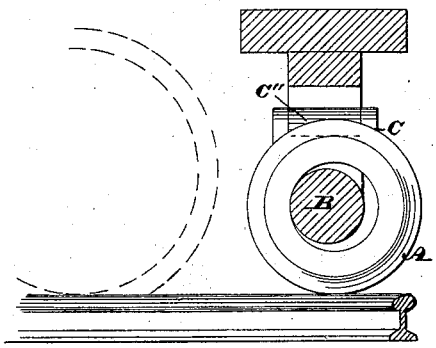
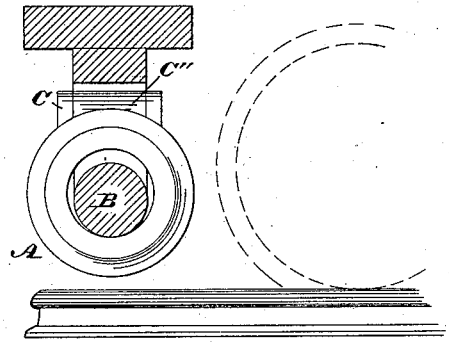


Fig. 4.



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CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 259,773, dated June 20, 1882.

Application filed April 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, J. LANE POALK, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Car-Brakes, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figures 1 and 2 are views of opposite sides of the car-brake embodying my invention. Figs. 3 and 4 are vertical sections in line *x x*, showing the brake-shoe in different positions.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a car-brake having a rotary shoe, which is loosely hung on its bearing and positively forced against the rail, whereby the shoe is held in contact with the rail with a wedging effect, and thereby powerfully operated.

It also consists of means for positively throwing off the brake and raising the shoe clear of the rail.

Referring to the drawings, A represents the brake-shoe, the same being of the form of a roller constructed of metal mounted on an axis or bearing, B, which extends horizontally and transversely, so that the tread of the roller is parallel with the longitudinal direction of the rail. The axis or bearing B is properly fixed to the truck of the car, and so disposed that the roller overhangs the rail, and the opening in the roller, through which the axle or bearing is passed, is of much greater diameter than the thickness of said bearing, whereby the roller has vertical play on the bearing, and is thereby adapted to be lowered on the rail and raised therefrom.

To a hanger, *a*, secured to the truck is pivoted an upwardly-projecting elbow-lever, C, the outer limb of which has a cross-bar, C′, so that it overhangs the roller or shoe A, and is adapted to be forced against the surface thereof, there being a lever, C, on each side of the hanger, and the upper or outer ends of the two levers are connected by said cross-bar C′.

To the hanger *a* is also pivoted a lever, D, the upper end of which is adapted to bear against the inner limb of the elbow-lever C, said lever D having pivoted to it an arm, E, to which is connected an operating-lever, F, both suitably mounted, and one of the levers C is formed with a limb, C″, which extends downwardly, so as to be engaged by the lower part of the lever D, it being seen that when the said lever D is operated in one direction it bears against the upper limb of the lever C, and when operated in the other direction it bears against the lower limb, C″.

To the arm E is pivoted an arm, G, which extends horizontally and transversely, and has connected to its outer end a pivoted arm, H, which, pivoted to the hanger *a*, is adapted to press against the outer side of the shoe A and force the latter inward on its bearings, the shoe having a certain amount of sliding motion on the bearings, which are sustained on hangers *b b′*, which are either downward extensions of the hangers *a* or separate pieces secured to the truck. The upper inner face of the hanger *b′* is inclined, as at J, and the lower end of the hanger *b* is formed with a foot, J′, which extends outwardly under the shoe, and has its upper face beveled, as at *c*, the edges of the tread of the shoe being beveled to accord with the faces J *c* of the hangers *b′ b;* but the roller may be spheroidal, and said faces J *c* of corresponding rounded form, without departing from my invention.

When the brakes are to be applied the lever F is operated, thus moving the arm D against the lever C. This lowers the shoe, and also causes it to slide toward the hanger *b′*, and presses it against the inclined face J thereof, whereby by the combined action of the cross-bar and said inclined face J on opposite edges of the shoe the latter is forced downwardly against the rail or track, where, owing to the loose connection of the shoe and its bearing B, and the pressure of the face J and cross-bar C′, the shoe acts with somewhat of a wedging effect, due to the eccentric position of the shoe with relation to its bearing, the resistance of the rail, and the holding-power of the face J and cross-bar of the lever C, (see Fig. 3,) so that the brake acts powerfully and soon stops the train. By operating the lever F in reversed order the arm D bears against the limb C″, thus causing the lever C to raise the cross-bar C′ from the shoe, and the arm H is forced against the outer side of the shoe, thus moving the latter against the foot J′ and causing it to ride up the same, whereby the shoe is lifted from the rail and so held until

the lever F is again manipulated, when the arm H leaves the shoe and the bar C′ depresses it, the subsequent action being similar to that previously stated.

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

1. The roller A, in combination with its fixed bearing B, said roller being movable vertically on said bearing, for the purpose set forth.

2. A vertically and laterally movable roller, in combination with a depressing and shifting lever and a fixed attachment of a car-truck, said truck and lever combining to wedge said roller against the rail of a track when said roller has been shifted into the proper position, as set forth.

3. The brake-shoe roller, in combination with the inclined face J of the hanger *b′*, the lever C, and operating mechanism of said lever, substantially as and for the purpose set forth.

4. The brake-shoe, in combination with elevating mechanism consisting of an inclined foot and a lever or arm which forces the shoe on and up said foot, substantially as and for the purpose set forth.

J. LANE POALK.

Witnesses:
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