No. 711,084. Patented Oct. 14, 1902.

J. TONER.

CAR BRAKE.

(Application filed Mar. 4, 1902.)

(No Model.)

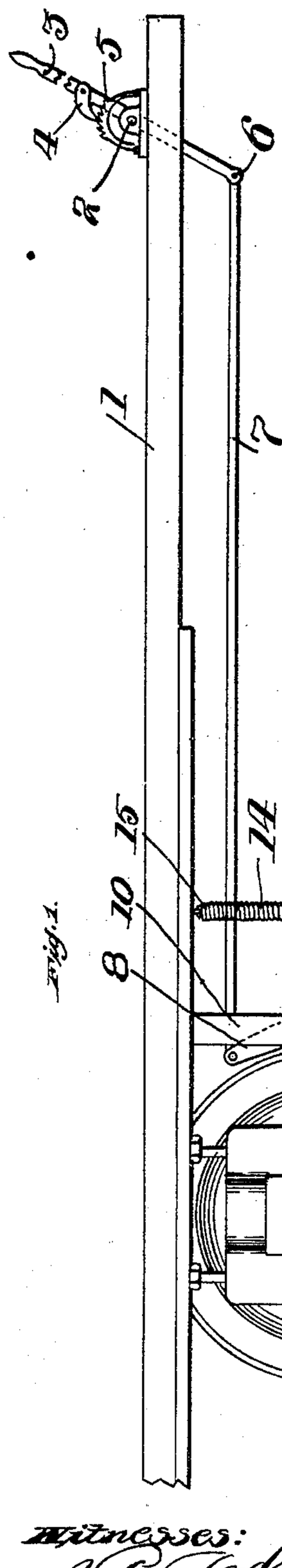

Fig. 1.

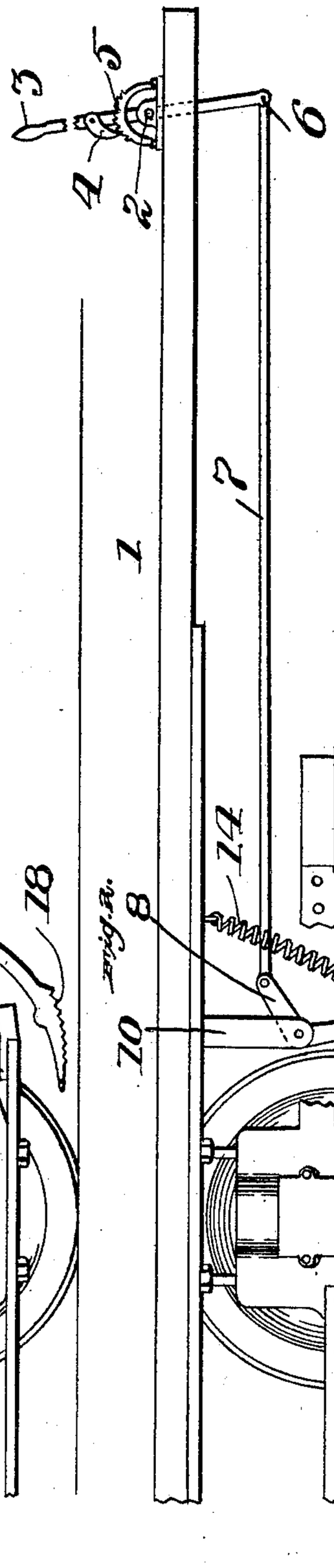

Fig. 2.

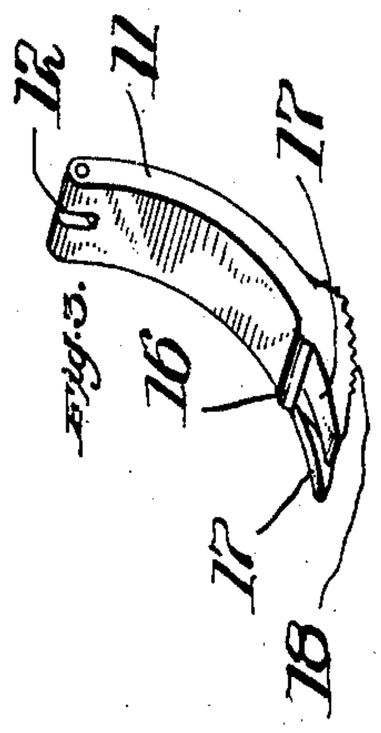

Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH TONER, OF PITTSBURG, PENNSYLVANIA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 711,084, dated October 14, 1902.

Application filed March 4, 1902. Serial No. 96,626. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH TONER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Car-Brakes, of which improvement the following is a specification.

This invention relates to certain new and useful improvements in car-brakes, and relates more particularly to brakes for street-railways and the like.

The present invention has for its object the provision of novel means whereby an emergency-brake is provided that will cause the car to stop almost instantaneously.

It is a well-known fact that many accidents are caused at times when the rails are wet or covered with ice, thereby causing the wheels to skid upon the rails when the brakes are applied to the periphery of the wheel.

It is the object of the present invention to overcome this difficulty and to provide an emergency-brake that will bring the car to an almost instantaneous stop when the occasion requires.

My invention has for a further object to provide an emergency-brake constructed upon the principle of a chock-block that will engage both the tread and flange of the wheel and will likewise engage the flange and tread of the rail and road-bed, thereby bringing the car to an instantaneous stop and also prevent flat wheels, as is now the case.

A still further object of the invention is to provide a brake of this character which will be extremely simple in construction, strong, durable, comparatively inexpensive to manufacture, and highly efficient in its use.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a side elevation of a portion of a truck with my improved brake mechanism attached thereto and showing the same in its normal position. Fig. 2 is a similar view showing the position of the mechanism when the brake is applied. Fig. 3 is a perspective view of one of the brake-shoes or chock-blocks.

The platform of the car 1 has pivotally secured thereto in a suitable bearing 2 an operating-lever 3, carrying a gravity-pawl 4, which engages in the toothed rack 5, securely attached to the platform of the car. This operating-lever 3 extends through a suitable opening formed in the platform of the car and is pivotally connected at 6 to an operating-rod 7, which extends radially to the bell-crank lever 8 and is pivotally connected therewith. This bell-crank lever 8 is pivotally secured at 9 in the hanger 10, secured to the under face of the car. To the other end of the bell-crank lever is attached pivotally a brake-shoe or chock-block 11, which is bifurcated, as shown at 12, to form a pivotal connection with the bell-crank lever. This brake-shoe or chock-block 11 is secured to a spring 14 near its upper end, said spring being also secured at 15 to the under face of the car. The brake-shoe or chock-block is provided with a ridge 16 on its upper face and carries fingers 17 17, between which the flange of the wheel extends. The under face of the flanges of said chock-block is corrugated, as at 18, and this corrugated face is adapted to contact with the road-bed or rail.

When it is desired for the car to make an emergency stop, the operating-lever is operated to the position as shown in Fig. 2 of the drawings, thereby causing the brake-shoe or chock-block to extend under the wheel and engage the same. The wheel will ride up to the ridge 16, and the roughened or corrugated under face 18 of the shoe will firmly grasp the road-bed and will likewise engage the wheel, thereby causing an almost instantaneous stop.

It will be understood that there are bell-crank levers arranged on each side of the car, and these are connected together, and that a brake-shoe is provided for each forward wheel of the truck. The spring 14 serves to return the brake-shoe to its normal position after the motor has been reversed and the car-wheels again brought upon their former position upon the rails.

The many advantages obtained by the use of my improved device will be readily appar-

ent from the foregoing description, taken in connection with the accompanying drawings, and it will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. In a car-brake, the combination of brake-shoes or chock-blocks carrying extending fingers between which the flange of the wheel engages, a ridge to limit the movement of said wheel, a corrugated under face on said brake-shoes to engage the rails and road-bed, means to operate said brake-shoes, and means whereby said brake-shoes are returned to their normal position, substantially as described.

2. In a car-brake, the combination of an operating-lever, an operating-rod, bell-crank levers pivotally secured to the under face of the car, brake-shoes or chock-blocks pivotally secured to said bell-crank levers, springs attached to said brake-shoes or chock-blocks and the body portion of the car, extending fingers carried by said brake-shoes, and an integral flange extending on the upper portion of said brake-shoes, all parts being arranged and operated substantially as described.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOSEPH TONER.

In presence of—
LOUIS MOESER,
M. HUNTER.