

No. 618,885.

Patented Feb. 7, 1899.

J. H. LEE.
RAILWAY CAR BRAKE.

(Application filed Sept. 13, 1898.)

(No Model.)

Fig. 1.

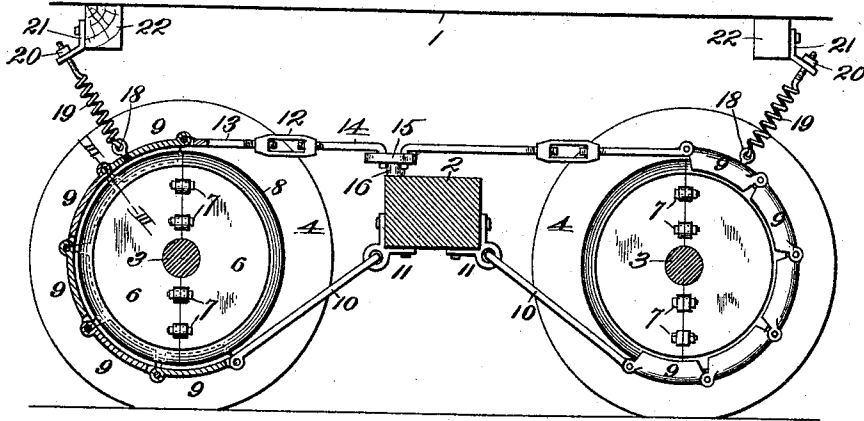


Fig. 2.

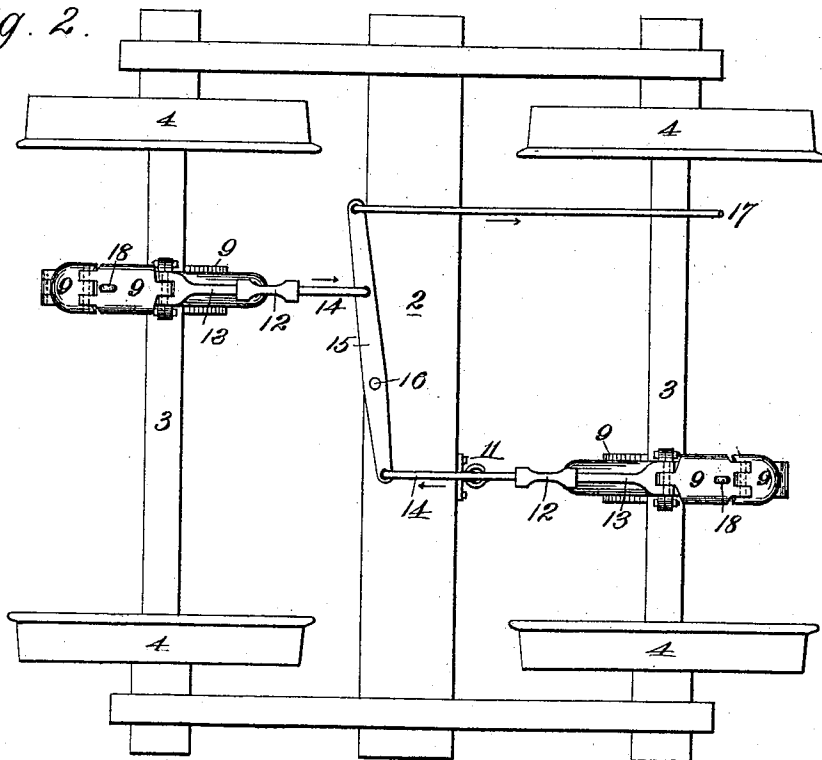
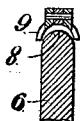


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN H. LEE, OF KANSAS CITY, MISSOURI, ASSIGNOR OF ONE-HALF TO
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RAILWAY-CAR BRAKE.

SPECIFICATION forming part of Letters Patent No. 618,885, dated February 7, 1899.

Application filed September 13, 1898. Serial No. 690,866. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. LEE, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Brakes for Railway-Cars, of which the following is a specification.

My invention relates to vehicle-brakes, and more especially to a brake for use upon street or railway cars; and it has for its object the provision of a brake which is practically instantaneous in its application and which embodies no parts to drop in front of a wheel in case of breakage and thereby cause the derailment of the car, as frequently happens with the style of brakes at present in use when the brake-beam or brake-shoe drops in front of a wheel.

A further object of the invention is to provide a brake which is simple, strong, durable, cheap of manufacture, and easy of attachment to or removal from a car.

To these purposes the invention consists in certain novel and peculiar features of construction and combinations of parts, as will be hereinafter described and claimed, and in order that the invention may be fully understood I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section illustrating my improved brake in connection with the wheels of a car. Fig. 2 is a top plan view of the same. Fig. 3 is a section taken on the line III III of Fig. 1.

In the said drawings, 1 designates a part of the car or truck-frame; 2, the truck-bolster; 3, the axle of the truck, and 4 the car-wheels, these parts being of the usual or any preferred construction.

My improved brake mechanism is constructed as follows—that is to say, a wheel mounted on each axle of the truck at opposite sides of and equal distances from its center consists of a pair of half-wheels 6, clamped tightly together and upon the axle by means of bolts 7 or their equivalents, and the periphery of said wheel is semicircular or approximately semicircular in cross-section, as shown at 8.

9 designates a series of segmental brake-

shoes pivoted together to form a chain or flexible brake of such length that it extends by preference a little more than half-way around the wheel. Its lower end is pivotally connected by the link 10 with a bracket 11, secured to the truck-bolster, while its upper end is adjustably connected by means of the turn-buckle 12 and threaded arms 13 14 to a lever 15, pivoted, as at 16, to the truck-bolster midway between the points of connection with said lever of the rods 14 of the chain-brakes upon the companion brake-wheels 8, so that when the brake-rod 17, pivotally connected to one end of the lever, is pulled through the instrumentality of power of any description the chain-brakes shall be applied to the rounded peripheries 8 of the wheels instantaneously.

The force of gravity naturally holds the shoes 9 of the chain-brake which are below the axis of the wheels out of contact with the latter, and in order to hold the shoes which are above the axis of said wheels out of contact with the wheels the uppermost shoes, by preference, are formed with eyes 18, which are connected to the retractile springs 19. The upper ends of said springs are threaded and engaged by adjusting-nuts 20, bearing against the angle-plates 21, to the end that said springs may be tensioned when necessary. The brackets are secured to cross-beams 22 of the truck-frame. It is essential, of course, that the connection for the upper ends of the springs shall maintain the same relative distance from the brake-wheels at all times; otherwise the chain-brakes would be tensioned with each upward spring of the car and become slack with each downward movement, and as a result the topmost shoes would be lightly applied to the brake-wheels about half the time, which is of course undesirable.

In practice as the power is applied to pull the rod 17 in the direction indicated by the arrow, Fig. 2, the chain-brakes of the wheels are instantly applied, the springs 19 offering practically no resistance to this operation, and as the power upon the pull-rod is removed the power of the springs 19, assisted by the natural gravitative action of the chain-brakes, causes the latter to instantly move

out of contact with the brake-wheels, the parts being so proportioned and adjusted, however, that the chain-brakes are held close to the wheels always in order to respond instantaneously when the braking power is applied. For this reason it is obvious that it will require less air to apply this brake than brakes of the usual type, and consequently it can be used at less cost in power.

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

A vehicle-brake, comprising a wheeled truck or frame, a pair of wheels clamped upon the axles or shafts of the truck with their peripheries semicircular in cross-section, brackets secured to opposite sides of the truck-bolster, a lever pivoted upon the upper side of the truck-bolster, a pair of brackets secured to the frame of the vehicle above the truck a series of segmental brake-shoes pivoted together and extending about one-half way around each of the wheels provided with rounded peripheries, links pivotally connect-

ing the lower ends of said series of brake-shoes with the brackets secured to the bolster, links connected together by turnbuckles and pivotally connected at their opposite ends to the lever and the upper ends of said series and brake-shoes; said series of shoes being connected to said lever at equal distances from and at opposite sides of its pivot, eyebolts projecting upward from the top-most brake-shoes of said series, retractile springs connected to said eyebolts and having their opposite ends threaded and extending through the brackets on the framework of the vehicle, and adjusting-nuts engaging the upper or threaded end of said springs all arranged substantially as and for the purpose described.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN H. LEE.

Witnesses:

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C. F. BARTHOLOMEES.