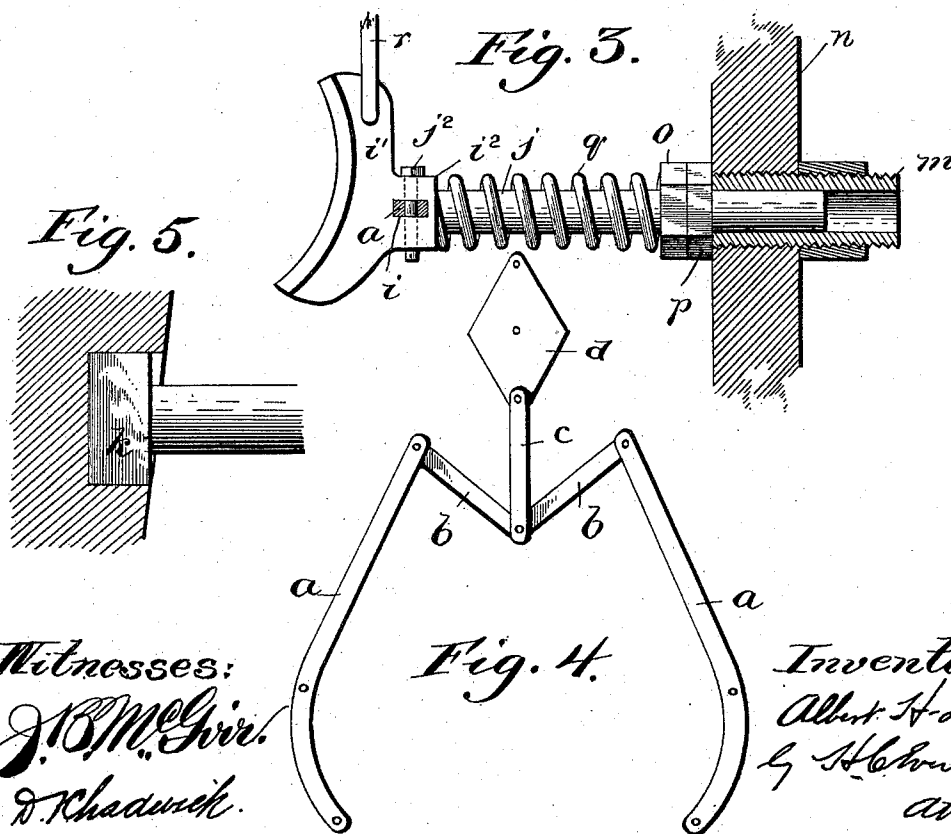
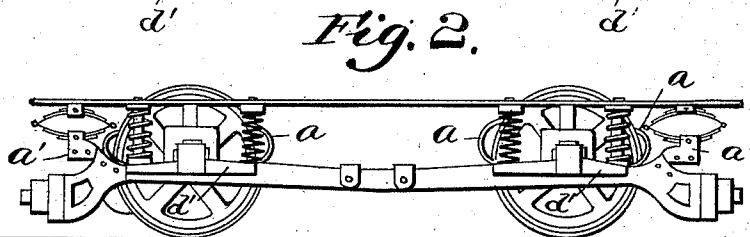
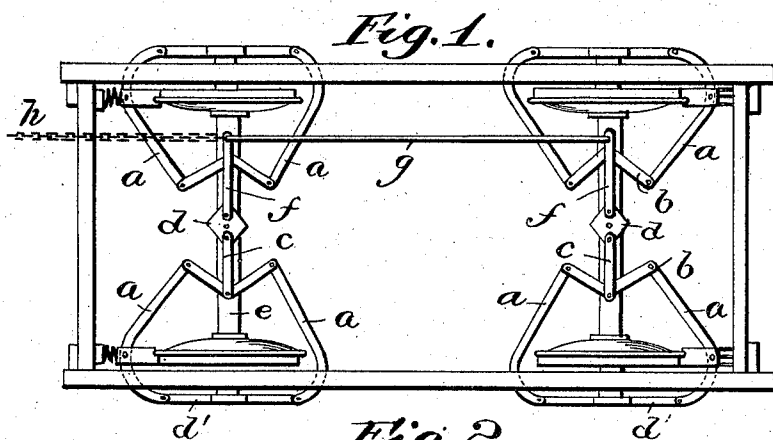


(No Model.)

A. H. LOWRY.
CAR BRAKE.

No. 575,160.

Patented Jan. 12, 1897.



Witnesses:
J. B. McGirr.
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UNITED STATES PATENT OFFICE.

ALBERT H. LOWRY, OF PITTSBURG, PENNSYLVANIA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 575,160, dated January 12, 1897.

Application filed March 9, 1896. Serial No. 582,435. (No model.)

To all whom it may concern:

Be it known that I, ALBERT H. LOWRY, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Brakes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in brakes, and has for its object the provision of new and novel means whereby the brake-shoes will be automatically applied to the wheels of the car in case any part of the operating mechanism should break, thus preventing many accidents that are caused in this manner.

A further object of the invention is to provide a brake that will be extremely simple in its construction, strong, durable, effectual in its operation, and comparatively inexpensive to manufacture; furthermore, a brake that can be readily attached to any car and operated with any style of leverage that may be required, according to the construction of the car.

With the above and other objects in view the invention finally consists in the novel construction, combination, and arrangement of parts to be hereinafter more specifically described, and particularly 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 letters of reference indicate similar parts throughout the several views, in which—

Figure 1 is a top plan view of a truck, showing my improved brake in position. Fig. 2 is a side elevation of the same. Fig. 3 is a side elevation of the brake-shoe and operating mechanism, partly in section. Fig. 4 is a plan view of the operating-lever arms. Fig. 5 is a side elevation of the brake-shoe, partly in section, to show the manner of securing operating-rod.

In the drawings, *a a* represent the curved arms, which are pivotally connected at their inner ends to arms *b b*, which are also pivotally connected to the arm *c*. This arm *c* is attached to the plate *d*, and the outer ends

of the arms *a a* are pivotally attached to cross-bar *d'*, attached to the journal-box. The plate *d* is located at or about the middle of the axle, and a set of these series of arms is provided for each wheel where the truck is a four-wheeled one, as shown in the drawings. An operating-rod *f* is provided in the place of the arm *c* at one side. This arm *f* is pivotally connected to the arms *b b* and to the end and center of the plate *d*. A brake-rod *g* connects these two arms together, and to the rod of the forward axle is connected the brake-chain *h*. One of the curved arms *a* extends through the aperture *i*, provided in the brake-shoes *i'* of each wheel. The brake-shoes are suspended by means of an operating-bolt *j*, which is secured in the same by a head *k*. This bolt *j* operates in a sleeve *m*, which is screw-threaded and secured in a casting *n*, attached to the truck-frame. A rigid nut *o* is provided on the operating-shaft *j*, and a jam-nut *p* is provided between the nut *o* and the sleeve *m* for adjusting the tension of the spring *q*, provided on the shaft between the brake-shoe and the nut *o*. A supporting-rod *r* is connected to the brake-shoe and relieves the shaft *j* of the weight. I have only shown a portion of this supporting-rod in Fig. 3 of the drawings, as I do not claim anything on this construction, the same being attached in any of the ordinary and well-known manners. The brake-shoe *i'* is provided on the rear portion with a shoulder *i''*, in which the shaft *j* is secured, and a bolt *j'* passes through the shoulder and the spring-arm *a'*, that engages in the shoe and holds the arms *a* in the operative position.

The operation of my improved brake is exactly the reverse of that required for the ordinary brake; that is, when the brake-shoes are not in engagement with the wheels the brake-chain will be wound on the operating-shaft instead of being released, as the ordinary brake, the spring-arms *a* holding the brake-shoes from engagement with the wheels. When it is desired to apply the brake, the operating-lever is released, causing the spring *q* to extend and forcing the brake-shoes against the curved portion of the arms, forcing the inner ends of the same outward and applying the brake to the wheel.

When it is desired to release the brake, the brake-chain *h* is wound on the operating-lever and in turn causes the brake-rod *g* to pull on the arms *f*, simultaneously operating the arm *c*, pivoted to the arms *b b*, and forcing the arms *a*, that are in engagement with the brake-shoe *i*, against the same and compressing the spring *q* and relieving the pressure of the brake-shoes on the wheels.

It will be obvious that my improved brake may be readily applied to any style of truck that may be desired, and also that it may be found necessary to operate the same with the different brake-levers, but the general construction as shown for applying the brake will be the same.

The advantages obtained in this construction of a brake will be readily apparent, as should the brake-rod or brake-chain become broken, as very often happens, the springs would instantly apply the shoes to the wheels and prevent many accidents that occur through breakage of this character.

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

1. In a brake, the combination of the curved brake-arms having their inner ends pivotally connected to arms connected to the operating-arm; the outer ends of the curved arms being pivotally connected to a cross-bar, one of said arms passing through each brake-shoe, the said shoe being supported by a shaft operating in a casting secured to the truck-frame, said shaft being provided with a rigid

and jam nut and a coil-spring between the brake-shoe and rigid nut, substantially as shown and described.

2. In a brake, the combination of the curved arms at the sides of each wheel, said arms being connected by a series of pivoted arms to a center plate, a brake-rod connecting the arms on one side together, a casting secured to the truck-frame and carrying a screw-threaded sleeve adapted to receive the shaft carrying the brake-shoe, said shaft having a rigid and a jam nut, a coil-spring between the shoe and rigid nut, and an aperture in each brake-shoe adapted to receive one of the curved arms, substantially as shown and described.

3. In a brake, the combination of the shaft carrying the brake-shoe secured thereto by a bolt, said shaft operating in a screw-threaded sleeve, secured in a casting attached to the truck-frame, curved arms at the side of each wheel, said arms connected together at their outer ends by a cross-piece secured to the journal-box and at their inner ends by pivoted arms attached to the center plate, a brake rod and chain for operating said arms, and a coil-spring on the shaft for applying the brake-shoe when the brake-chain is released, substantially as shown and described.

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

ALBERT H. LOWRY.

Witnesses:

ALFRED M. WILSON,
H. E. SEIBERT.