(No Model.)

S. M. BEERY.

BRAKE.

No. 453,573. Patented June 2, 1891.

Fig. 1.

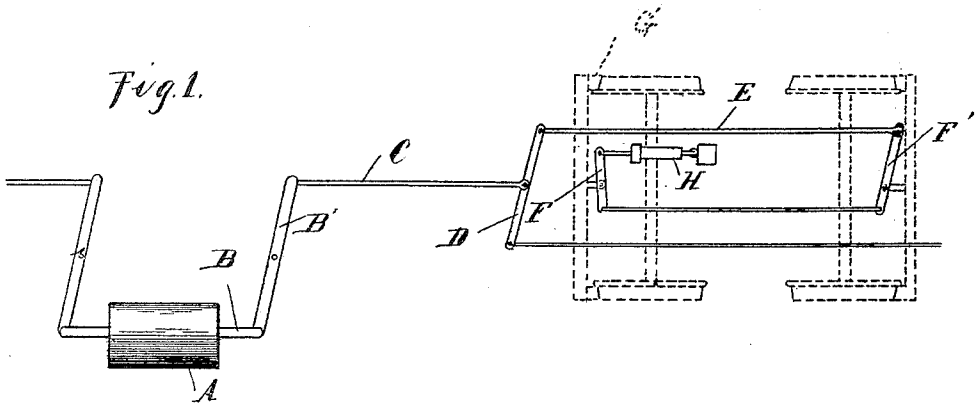


Fig. 2.

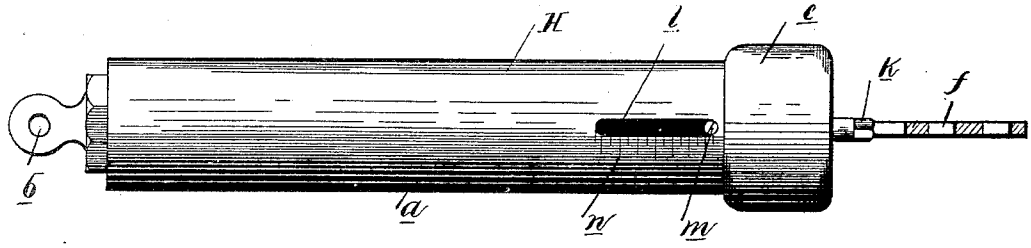
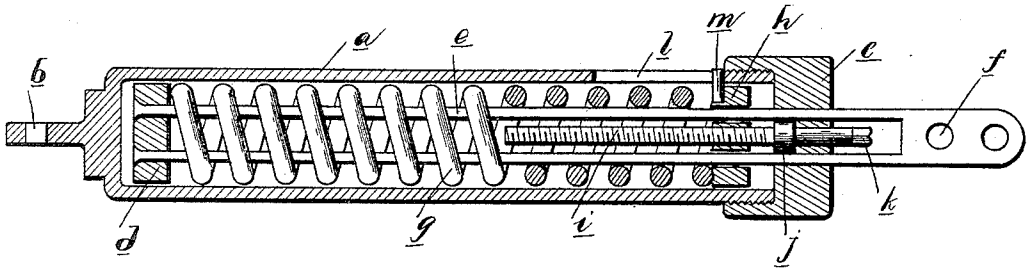


Fig. 3.



Witnesses
A. E. Hobbie
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Inventor
Samuel M. Beery
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SAMUEL M. BEERY, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, OF ONE-HALF TO THE BEERY VALVE COMPANY, OF SAME PLACE.

BRAKE.

SPECIFICATION forming part of Letters Patent No. 453,573, dated June 2, 1891.

Application filed November 13, 1890. Serial No. 371,363. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL M. BEERY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Brakes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to new and useful improvements in brake mechanism; and the invention consists in the peculiar construction of an elastic connection designed to be applied between the brake-motor and the brake-lever, whereby undue pressure upon the wheels is prevented and all danger of skidding or sliding of the car-wheels is overcome.

The invention further consists in the peculiar construction of the various parts, whereby the tension of the spring may be adjusted from time to time, and whereby the exact tension of the spring will be indicated to the operator at all times, all as more fully hereinafter described.

In the drawings, Figure 1 is a plan view of the ordinary brake mechanism as applied to a railway-car. Fig. 2 is an enlarged side elevation of my improved elastic connection; and Fig. 3 is a vertical central longitudinal section thereof, partly in elevation.

A is the air-brake cylinder, which is connected to the brake-beams of the car through the medium of the piston B, lever B′, brake-rods C, lever D, rod E, and brake-rods F F′, the latter carrying the brake-shoes G.

H is my improved flexible connection, which in the drawings I have shown applied at one end to the lever F. It may be applied at any other point in the system between the brake-motor and the brake-beam. Its construction is as follows: *a* is a casing inclosed at one end and provided at that end with an eye *b*, which may be either secured to a stationary abutment or to the end of the brake-rod, according to its location. This cylinder at its other end is suitably screw-threaded to receive a cap *c*. Within this cylinder is secured a piston *d*, adapted to fit the interior thereof, and to which is secured the bifurcated piston-rod *e*, which extends through the cylinder and passes through suitable apertures in the cap *c*, and is provided at its outer end with suitable means for securing it to the brake-beam, such as a series of apertures *f*. Within the cylinder and upon this piston-rod is a suitable spiral spring *g*, bearing with one end against the piston and at the other end against the adjustable abutment *h*, which is held in its adjusted position by means of a screw-bolt *i*, passing through the cap *c* and having a collar *j* bearing against the inner edge of said cap, and a squared portion *k* outside of the cap, by means of which a wrench may be applied to turn it in either direction to increase or diminish the tension upon the spring.

l is a slot in the side of the casing, through which projects an index finger or stem *m*, secured to the adjustable abutment *h*. *n* is a scale arranged opposite this slot to indicate the amount of compression upon the spring.

The index-finger *m* is detachably secured in position and acts as a lock to prevent the withdrawal of the cap *c* and the abutment *h*, it being evident that as the bifurcated piston-rod passes through both of these the cap cannot be turned until the stem has been previously withdrawn, and that therefore the parts are free from danger of being meddled with. By bifurcating the rod I am also enabled to place the adjusting-screw *i* centrally of the cap and abutment.

The parts being thus constructed and arranged, the spring being compressed to a suitable tension when the brake is applied to a proper degree the spring will not be compressed; but as soon as too great power is brought to bear from a brake-motor the spring will be compressed and prevent the wheels from being stopped and thereby slide along the track. The tension of the spring may be readily adjusted at any time by simply turning the screw-bolt *k*, and the exact amount of tension can be seen by observing the position of the stem *m* in relation to the scale *n*.

What I claim as my invention is—

1. The combination, with the brake-rod of a car, of an elastic connection applied thereto and consisting of a casing, a spring within said casing, a piston bearing against one end of said spring, an adjustable abutment at the other end of said spring, a piston-rod con-

nected to said piston, and means for adjusting said abutment, substantially as described.

2. The combination, with the brake-rod of a car, of an elastic connection applied thereto and consisting of a tubular casing having an eye formed at one end by which it is secured to the brake-rod, a cap at the opposite end, a spring within a piston at one end of said spring, a piston-rod connected thereto extending through the cap and secured to the brake-rod, an adjustable abutment at the opposite end of said casing, an index on said abutment, and a scale to indicate the compression of said spring, substantially as described.

3. An elastic connection for brake mechanism, consisting of a casing, a spring within said casing adapted to be compressed by a piston, an adjustable abutment for compressing said spring, and a scale to indicate the amount of compression thereof, substantially as described.

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

SAMUEL M. BEERY.

Witnesses:
J. H. SEWALL,
S. A. MEDARY.