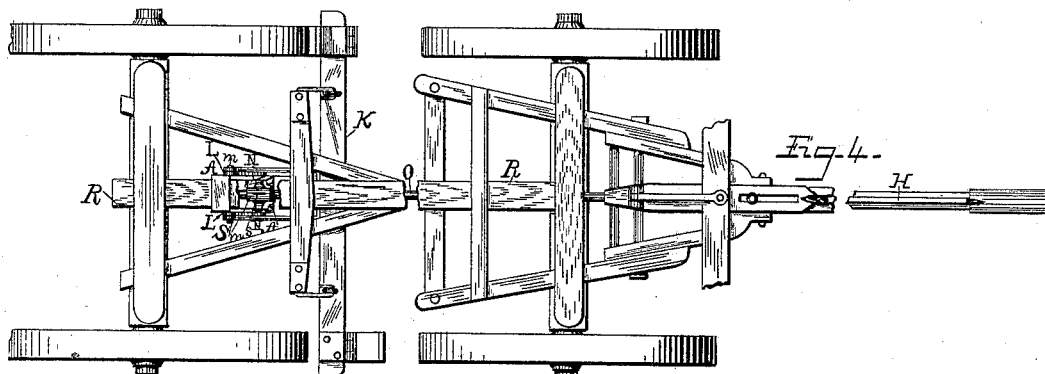
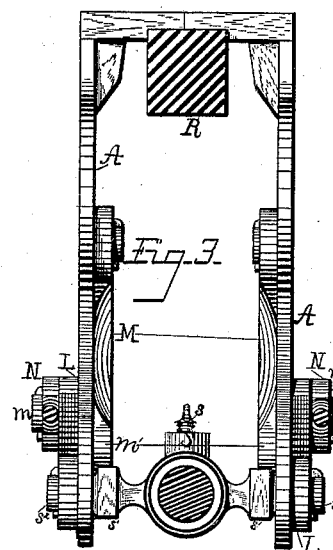
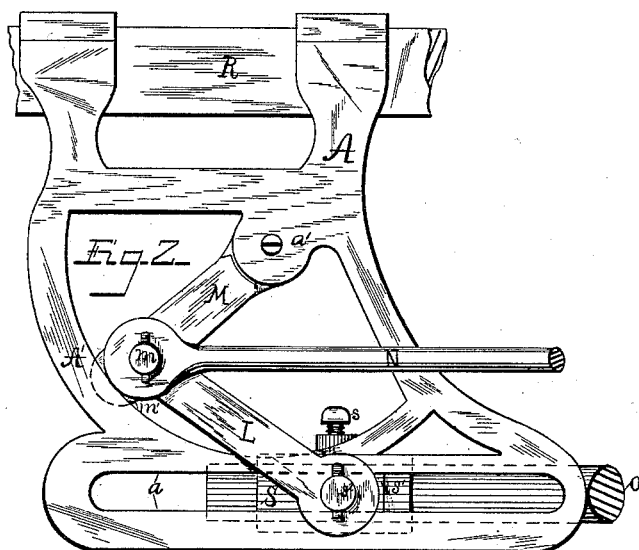
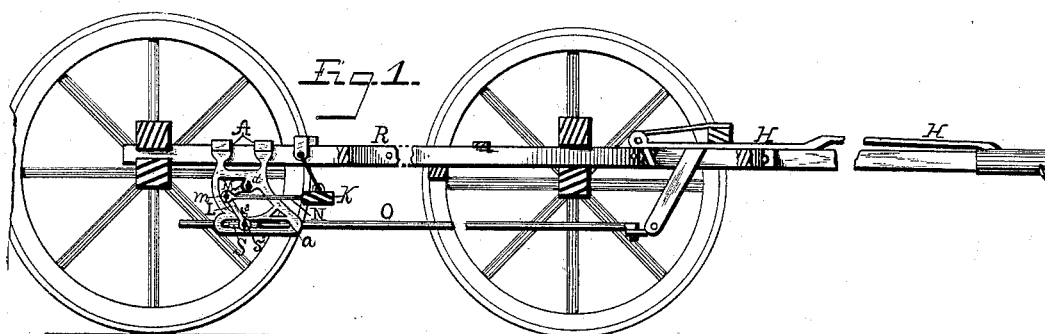


(No Model.)

C. F. MOORE.
AUTOMATIC VEHICLE BRAKE.

No. 418,210.

Patented Dec. 31, 1889.



Witnesses

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By her Attorney

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UNITED STATES PATENT OFFICE.

CHARLES F. MOORE, OF GILLETT, PENNSYLVANIA.

AUTOMATIC VEHICLE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 418,210, dated December 31, 1889.

Application filed May 7, 1889. Serial No. 309,884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. MOORE, a citizen of the United States, residing at Gillett, in the county of Bradford and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Vehicle-Brakes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improvement in vehicle-brakes; and my said invention consists of a novel construction and arrangement of levers connecting the brake-bar with the braking mechanism, a novel adjustable cross-head for the brake-rod, and a novel bracket-frame for supporting said parts, all as and for the purposes as will be hereinafter more fully described, and form the subject-matter of the annexed claims.

My invention relates to those vehicle-brakes in which the brake is automatically brought into action by the holding back of the team through connections with a rod that slides upon the pole, which rod is connected at its outer end to the yoke or holdback-straps, and a rod that extends beneath the reach and parallel thereto, which rod is connected to said rod that slides on the pole and to the brake-bar, my present invention being designed as an improvement upon the invention for which a patent was granted me on May 17, 1887, Serial No. 363,251, and has particular relation to the connections between the rod that extends beneath the reach and parallel thereto and the brake-bar.

For a better understanding of the details of construction and arrangement of my invention reference is had to the accompanying drawings, wherein—

Figure 1 is a view in sectional side elevation of the running-gear of a wagon supplied with my automatic brake. Fig. 2 is an enlarged view, in side elevation, of the levers that connect the brake bar and rod beneath the reach and supporting-bracket for said parts; and Fig. 3 is a view in front elevation of said supporting-bracket and connections as applied in position to the reach of a wagon. Fig. 4 is a plan view of the same.

The letter H indicates the rod that slides upon the pole of the vehicle, and O the rod that connects the said rod H with the brake-bar K, these parts being the same as in my patent hereinbefore referred to.

Referring now to my invention, A A represent a frame or bracket that is secured to and depends from the reach R, between the hind wheels of the vehicle. At the bottom portion of this depending bracket-frame A A is a longitudinal slot *a*, and at about the center of said frame is a pivot-bearing *a'*, for the purposes as will presently appear.

S is a cross-head that receives the rear end of the rod O, and this cross-head is provided with a set-screw, as at *s*, whereby it may be adjusted upon and set at any point upon the said rod O, and this said cross-head has lateral extensions or arms, as at *s'*, at each side thereof, which arms *s'* enter the slots *a* in the brackets A A, and thereby hold and guide the cross-head and rod O in their backward and forward movements. Extending from each of the arms *s'* of the cross-head S is a pin or projection *s''*, that receives a link L, which link at its other extremity is received upon a similar pin or projection *m*, that projects from the outer end of a short lever M. Upon this pin *m* of the lever M is also received the outer end of the rods N, whose other extremity is secured to the brake-bar K, and by which means said brake-bar is operated. This short lever M is pivoted at one end to the bracket A at *a'*, and at its outer end is provided with a pin *m*, to receive the link L and rod N, as before stated, and in addition to this a lip or projecting flange *m'* is provided at the outer end of said lever M, which flange, by its engagement with the part A' of the bracket A, prevents lateral movement of said lever.

The object and advantages of the construction herein described are that the cross-head S and rod O are always held rigidly in place and any tendency to lateral displacement prevented, and, in addition to this, the links L, pivoted to the arms of the cross-head, and lever M, pivoted to the bracket-frame, form a compound system of leverage, whereby great power is exerted upon the brake-bar, and, in addition to this, the parts may be so

adjusted that when the rod O has reached the limit of its rearward movement the link L will stand about vertical and the lever M almost horizontal, the pivot-bearings a' and m be on a line or "dead-center," and thus lock the brake in position against the wheels, in which position the parts will remain until the forward movement of the team drawing upon the rod O releases the levers from their locked position and also disengages the brakes from the wheels.

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

1. In a vehicle-brake, in combination with the rod O, extending beneath the reach and parallel thereto, the cross-head S, adjustably secured to said rod, having arms s' and bracket-support A A, secured to the reach and depending therefrom, and having a longitudinal slot a , to receive said arms s' of the cross-head S, substantially as described, for the purposes specified.

2. In a vehicle-brake, in combination with the cross-head S, having arms s' and projections s^2 , brake-bar K, and rods N, the link L, and short lever M, substantially as described, for the purposes specified.

3. The bracket-support A A, having slot a and pivot-bearing a' , combined with the rod

O, cross-head S, having arms s' and projections s^2 , short lever M, link L, brake-bar K, and rods N, all constructed and arranged to operate substantially as described, for the purposes specified.

4. The short lever M, pivoted at one end to the support A and having a lip or flange m' , that engages the part A' of said supporting-bracket A, for the purposes specified.

5. The combination, in an automatic vehicle-brake, with the brake-bar and its rods, rod sliding upon the pole, and a rod extending beneath the reach and connected to said rod on the pole, of a cross-head secured to the rod beneath the reach, and two levers pivotally connected to the cross-head and supporting-frame and brake-bar, said levers being of such length relatively to each other and so pivoted in their supporting-frame that upon the rearward limit of movement of the rod beneath the reach the pivots of the said levers will be at a dead-center and the brake locked in position against the wheels.

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

CHARLES F. MOORE.

Witnesses:

HARVEY S. W. DEGAW,
WM. H. BRERETON.