

(No Model.)

G. M. McLAUGHLIN & C. E. COOLEY.
WAGON BRAKE.

No. 519,729.

Patented May 15, 1894.

Fig. 1.

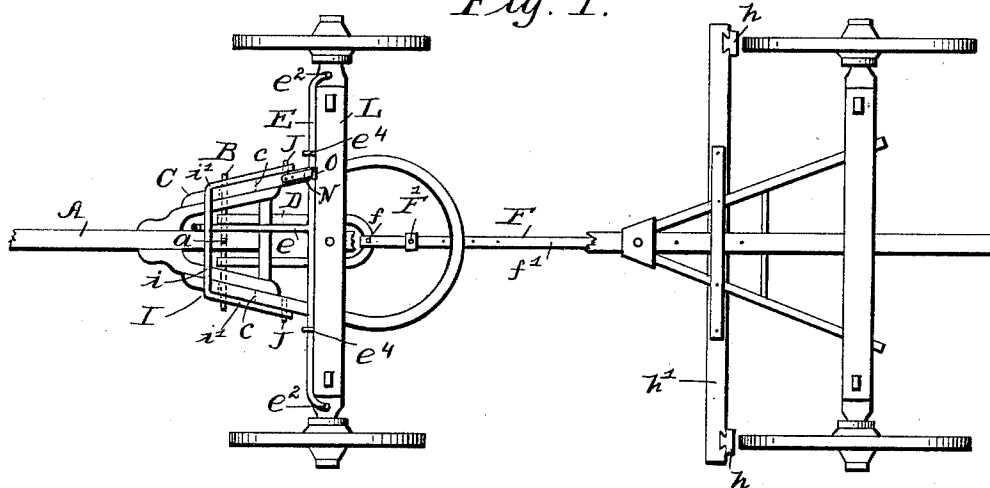


Fig. 2.

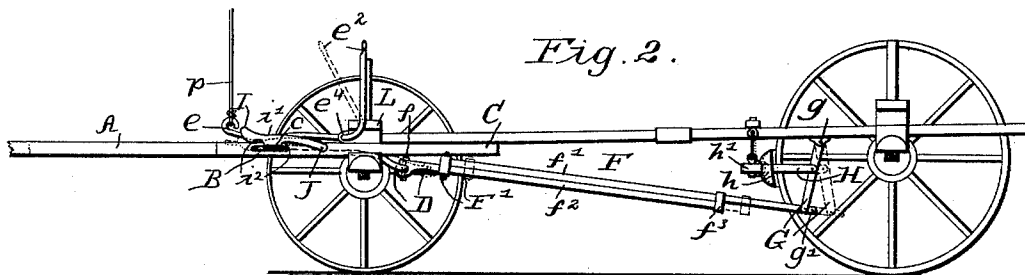


Fig. 3.

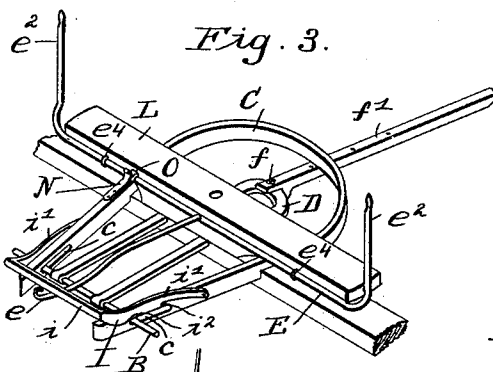


Fig. 4.

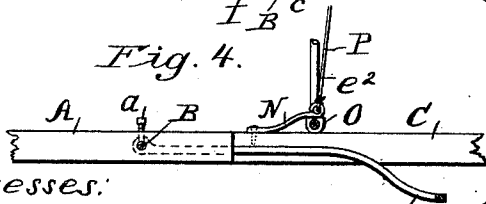


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE M. McLAUGHLIN AND CHARLES E. COOLEY, OF WESTPORT,
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WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 519,729, dated May 15, 1894.

Application filed July 31, 1893. Serial No. 482,038. (No model.)

To all whom it may concern:

Be it known that we, GEORGE M. McLAUGHLIN and CHARLES E. COOLEY, citizens of the United States, residing at Westport, in the county of Jackson and State of Missouri, have invented an Improvement in Automatic Vehicle-Brakes, of which the following is a specification.

Our invention relates to an improved automatic vehicle brake which is designed to lock the wheels of a vehicle independent of the driver, while descending an incline; and it may be said to consist of the novel construction and combination of parts, hereinafter described, and specifically pointed out in the claims.

In the accompanying drawings which illustrate our invention, Figure 1 represents a plan view of a vehicle provided with our improved automatic brake. Fig. 2, is a side elevation of same, showing operation of brake by dotted lines. Fig. 3, is a detail in perspective of the front portion of our invention. Fig. 4, is a broken side view of the tongue and hound, showing the position of the spring which keeps the locking device disengaged from the rod, and Fig. 5, represents a modified form of the sliding rod.

A, indicates the vehicle tongue which is movably connected to hound C, by means of rod B, said rod passes through the tongue near its rear end and is secured therein by means of set screw *a*. Hound C is provided with longitudinal slots *c* in which the rod B slides back and forth according to which way the pressure may be on the tongue. This sliding movement of the rod and tongue may be controlled by means of a locking attachment I, which consists of a comparatively U shaped frame *i* *i'* the latter of which is provided with two notches *i''* that are designed to fit over and engage the ends of rod B, said locking attachment is pivotally connected at its terminals to the hound by means of pivot bolts J. In order to readily operate the locking attachment we provide oppositely located levers *e*² which are connected by cross bar E, which is secured to the vehicle by means of staples *e*⁴. Secured near one end of said cross bar is a collar O, the top of which is a flat surface, so formed, to give a bearing for the rear

end of flat spring N which presses down on the flat surface of the collar and thereby retains levers *e*² at the position set. Cross bar E is also provided with a rod *e*, which extends outwardly beneath the front portion of frame I; said rod terminates in a ring at its outer end for the reception of rope P. The rear end of flat spring N terminates in a circle for the reception of one end of rope P, which is connected thereto for the purpose of operating the locking attachment from the top of a high load which may be placed on the vehicle.

D represents a yoke, the forward ends of which encircle rod B. Secured to the rear of the yoke by means of a bolt *f*, is an extension bar F which consists of two pieces *f'* *f''* which are adjustably secured together by means of bolt F' and strap *f'''* which encircles both pieces.

Pivoted near the rear end of the upper piece *f'* is a lever G, the upper end of which is pivoted to bracket *g*, that is secured to the under side of the vehicle, the rear end of the piece *f'* projects slightly to the rear of the lever, and is provided with a bolt hole *g'* in order that wear of the brake-shoes may be taken up.

Pivotally attached at a point near the center of lever G is a connecting rod H, the forward end of which is secured to the brake beam *h'*.

The operation of our invention is as follows:—When a team starts down a hill the wagon runs forward thus causing the team to push back on tongue A, the backward movement of which is limited by rod B contacting with the rear ends of slots *c* in the hound. On its backward movement the rod carries with it yoke D which causes the extension bar to act on lever G which in turn sets the brakes, as shown by dotted lines in Fig. 2. The pressure on the brake-shoes, is in accordance with the grade of the hill, thus the greater the incline the more rigidly will the brake-shoes be set. If it is desired to set and lock the brakes when a halt is to be made, the team is backed until rod B is pushed back to the rear of slots *c*, when levers *e*² are thrown forward which permits the locking attachment to drop down until its rear notches engage with the ends of rod B, as shown by dotted lines in Fig. 2, and thus preventing said rod from being drawn forward in the slots of the hound. In case

the vehicle, for instance, is loaded with hay so that the driver will be above the levers e^2 , we provide a rope or chain P, the lower end of which is secured to the circular end of spring N, and the upper end is passed up to the driver, so that by pulling up on the rope, collar O will be released of the pressure of spring N and thus allow the locking attachment to take effect on the rod B. When it is desired to start the team, the driver can release the brakes without descending from the load, by means of another rope p the lower end of which is secured to circular end of rod e . As the brake-shoes wear, the lost motion is taken up by extension bar F the rear end of which projects a slight distance beyond lever G, and is provided with bolt holes g' .

M represents a crank rod which may be substituted for straight rod B, thereby doing away with slots c in the hound.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In an automatic vehicle-brake, the combination of a tongue A, a rod B which is secured to the rear portion of the tongue, a yoke D the ends of which are secured to the rod, an extension bar F, the forward end of which is secured to the yoke, its opposite end extending rearwardly is connected to a lever G, bracket g , to which the upper end of the lever is pivotally connected, and a connecting rod H, one end of which is pivotally connected to the lever, its opposite end being connected to the brake-beam, the whole being designed to operate simultaneously, substantially as described.

2. In an automatic vehicle-brake, the combination with the running gear of a vehicle, of a tongue A, a rod B which is secured to the rear portion of the tongue, a hound C having slots c , in which the ends of the rod are adapted to work, a U shaped locking attachment I,

having notches i^2 which are adapted to engage the ends of the rod, a yoke D the front ends of which are also connected with the rod, an extension bar F, and a lever G, together, with the brake beam and shoes, substantially as described.

3. In an automatic vehicle brake, the combination of a tongue, a rod which is secured to the rear portion of the tongue, a hound having slots in which the ends of the rod operate, a U shaped locking attachment which is pivotally connected to the hound, having notches which are adapted to engage the ends of the rod, levers e^2 which are formed integral with cross bar E, the latter having a rod e projecting therefrom, which is adapted to raise the front portion of the locking attachment, a collar, having a flat upper surface, which is secured to the cross bar, a flat spring which is arranged to engage the flat surface of the collar, a yoke D the ends of which are secured to rod B, an extension bar F the forward end of which is connected to the yoke, a lever G the lower end of which is connected to the rear end of the extension bar, a bracket g to which the upper end of the lever is pivotally connected, and a connecting rod H, one end of which is pivotally connected to the lever, its opposite end being secured to the brake beam, substantially as set forth and described.

4. In an automatic vehicle brake, levers e^2 which are connected by means of cross bar E having rod e projecting therefrom, and a collar O the upper flat surface of which is engaged by flat spring N, substantially as set forth and described.

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