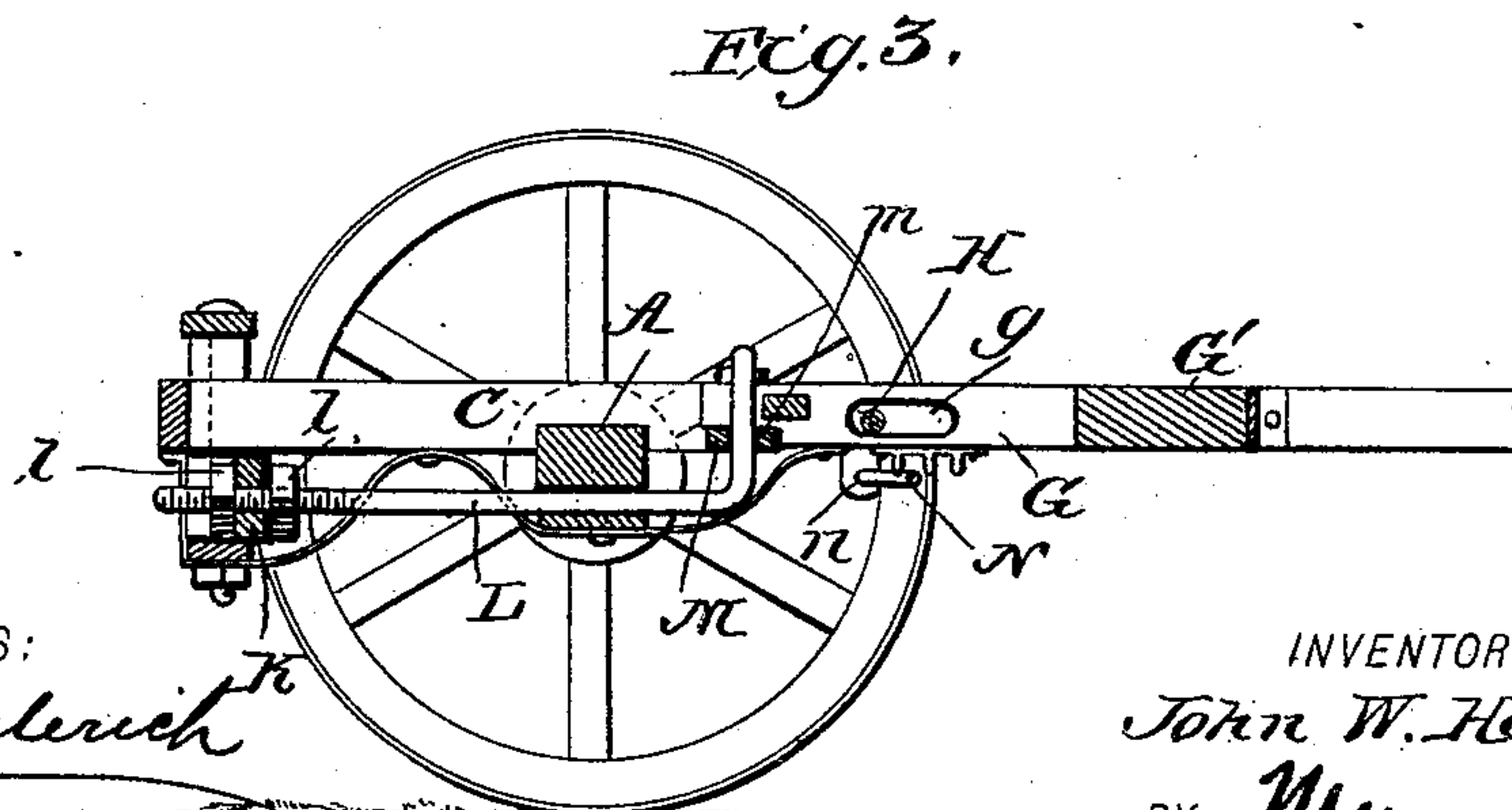
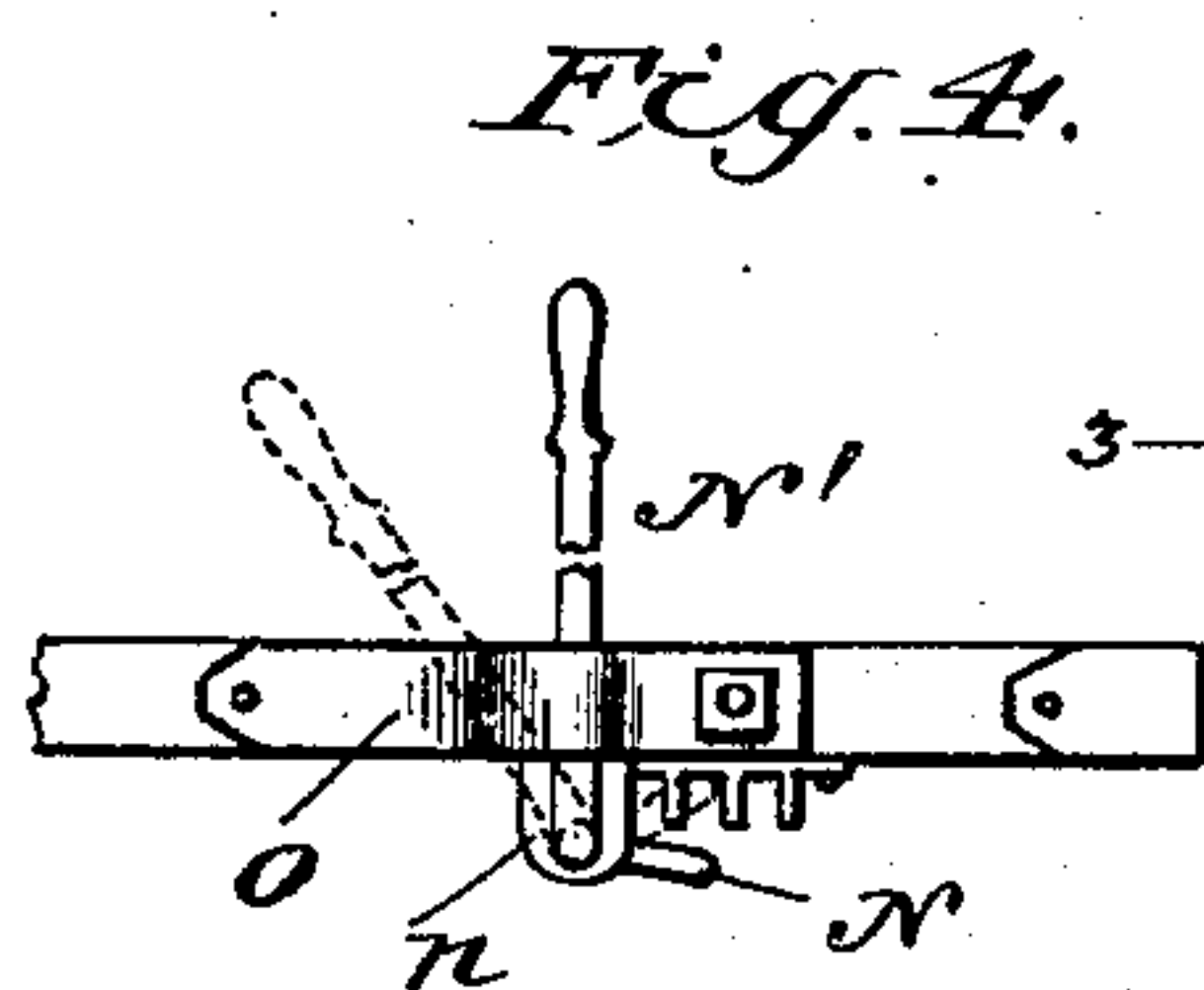


J. W. HERRIN.
WAGON BRAKE.

Patented June 9, 1891.



WITNESSES;

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UNITED STATES PATENT OFFICE.

JOHN W. HERRIN, OF MOUNT VERNON, ILLINOIS.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 453,904, dated June 9, 1891.

Application filed February 25, 1891. Serial No. 382,841. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HERRIN, of Mount Vernon, in the county of Jefferson and State of Illinois, have invented a new and useful Improvement in Wagon-Brakes, of which the following is a specification.

This invention relates to an improved wagon-brake, the object of the invention being to provide a brake which will be automatically applied to the front wheels when the vehicle to which it is attached starts down an inclined grade, and will be automatically released when a level grade is reached or the vehicle is started up an incline.

A further object is to provide a locking device whereby the brake may be locked either when applied or released, thus taking all strain off the draft-animals.

With these objects in view my invention consists in the peculiar construction, combination, or arrangement of the various parts, all of which will be more fully hereinafter described and claimed.

In the drawings forming a part of this specification, Figure 1 is a top plan view of the running-gear, showing my invention. Fig. 2 is a bottom plan view of brake mechanism. Fig. 3 is a vertical longitudinal section on line 3 3 of Fig. 2. Fig. 4 is a detail view of the locking device.

Referring to the drawings, A indicates the front axle; A', the rear axle; B, the reach; C, the front hounds; D, the head-block; E, the bolster, and F the king-bolt, all of which are of the usual construction and are arranged in the usual manner.

The tongue G is provided with tongue-hounds G', the said tongue and tongue-hounds being pivoted between the forward ends of the front ends by means of the transverse bolt H. The tongue G and tongue-hounds are provided with horizontally-elongated apertures g, through which the pivotal bolt H passes, the said elongated apertures permitting a longitudinal movement of the tongue, the purpose of which will appear further on. The brake levers or beams K K are pivoted centrally to the inner ends or corners of the front hounds, the outer end of each lever or beam having a shoe k attached thereto and adapted to bear upon the rear side of the front wheels.

A rod L is adjustably secured at its rear end to the inner end of each brake lever or beam, the said rear ends being threaded and passed through the brake-lever and are each provided with nuts ll upon the opposite sides of the said lever. By this construction the brake-lever can be adjusted upon the rod as the shoe becomes worn. The forward ends of the rods L L are passed through the front axle upon opposite sides of the king-bolt and then bent upwardly at right angles, the said bent ends being connected with the tongue by means of a plate M, secured to the rear end of the tongue proper, said plate having apertures m at its opposite ends, which receive the ends of the rods L L, the said ends working in the apertures as the tongue rocks up and down upon the pivotal bolt.

The rods L are each provided with a spline and a feather l' where they pass through the axle, which prevent them turning. From the above description it will be seen that by pressing rearward or backward on the tongue the rods L L will be forced longitudinally rearward and the inner ends of the brake lever or beams thrown rearward, while the outer ends will be moved forward, bringing the brake-shoes in contact with the rear sides of the front wheels, thus automatically applying the brakes and checking the speed of the vehicle. It will thus be seen that the brakes will be automatically applied the moment the vehicle starts down an inclined grade, and will be released the moment a level grade is reached or the vehicle started up an incline, as the moment the tongue is drawn forward the brakes will be released, the operation being exactly the reverse of applying the same. It is also to be observed that the brakes would ordinarily be applied when an attempt is made to back the vehicle. To remedy this, I have provided a locking device by means of which the tongue is locked against longitudinal movement, and hence prevents the application of the brake. This locking device consists of a cranked rock-shaft N, pivoted in the depending ears n, secured to the front hounds near their forward ends, the hand-lever N', secured to one end of the cranked rock-shaft, and the toothed bar or bars secured to the under faces of the tongue-hounds near their rear ends, the

cranked portion of the rock-shaft being adapted to be turned by the hand-lever and made to engage the toothed bar or bars, thus preventing the tongue moving backward so long as the hand-lever is held in this position, and to hold it in this position I employ a spring locking-guard O, arranged at the outer side of the hound, though other devices may be used for this purpose. The cranked rock-shaft and toothed bars are also so arranged in relation to each other that the tongue can be locked when either in a forward or rear position, thus permitting the brakes to be locked when going downgrade, if desired, and the crank-shaft is also so arranged and constructed that when it is turned into engagement with the toothed bar the cranked portion will be directly below the pivotal bolt and in parallel relation therewith, by means of which arrangement the tongue can rock upon the pivotal bolt, while it is locked against longitudinal movement. If desired, the connecting-rods L L may be passed beneath the front axle, being secured to said axle by means of staples or clips secured to the under side of the same, and the opposing faces of the front hounds and tongue-hounds may be faced with metal to prevent undue wear of said parts.

Having thus described my invention, what I claim as new is—

1. In a wagon-brake, the combination, with the front hounds, of the tongue pivoted therebetween and capable of longitudinal movement, the pivotal bolt upon which it moves, a rack bar or bars secured to the under side of the tongue, a crank-shaft secured to the under side of the hounds, the cranked portion lying normally in the same vertical plane as the pivotal bolt, and a hand-lever by means of which the crank-shaft is thrown into and out of engagement with the rack bar or bars, substantially as and for the purpose described.

2. The combination, with the front hounds, of the tongue having the tongue-hounds attached thereto, the pivotal bolt upon which the tongue rocks and has a longitudinal movement, the cranked rock-shaft secured below the forward end of front hound, and the toothed bar or bars attached to the under side of the tongue-hounds, adapted to be engaged by the cranked rock-shaft, substantially as and for the purpose described.

JOHN W. HERRIN.

Witnesses:

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