H. MARKRUD.

WAGON-BRAKE.

No. 169,459. Patented Nov. 2, 1875.

Fig. 1.

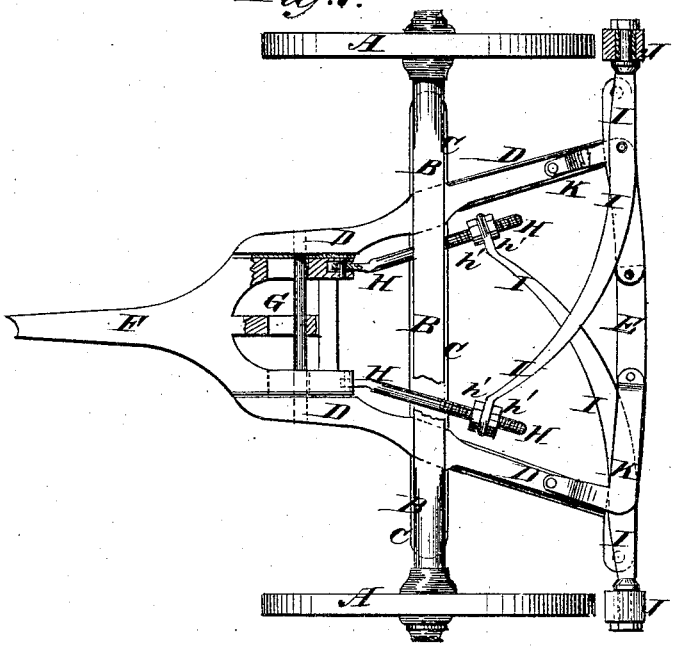
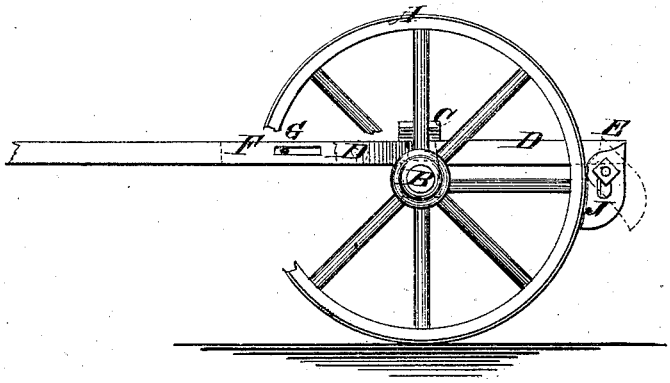


Fig. 2.



WITNESSES:

Francis McArdle.

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INVENTOR:

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BY

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UNITED STATES PATENT OFFICE.

HALVOR MARKRUD, OF ETTRICK, WISCONSIN.

IMPROVEMENT IN WAGON-BRAKES.

Specification forming part of Letters Patent No. **169,459**, dated November 2, 1875; application filed July 24, 1875.

To all whom it may concern:

Be it known that I, HALVOR MARKRUD, of Ettrick, in the county of Trempealeau and State of Wisconsin, have invented a new and useful Improvement in Automatic Brake for Wagons, of which the following is a specification:

Figure 1 is a view of the under side of the forward part of the running-gear of a wagon to which my improvement has been applied, parts being broken away to show the construction. Fig. 2 is a side view of the same, part of the wheel and of the hounds being broken away to show the construction.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with drawing, and then pointed out in the claim.

A are the forward wheels. B is the forward axle. C is the sand-board. D are the forward hounds. E is the sway-bar, and F is the tongue, about the construction of which parts there is nothing new. G is the bolt that pivots the tongue F to the hounds D, and which passes through a hole in the said hounds, and through a short slot in the said tongue, so that the tongue may have a play upon the said bolt. To the rear ends of the branches or braces of the tongue F are pivoted the forward ends of the two rods H. The rods H pass back through the spaces between the axle B and sand-board C, and have screw-threads cut upon their rear ends. I are bent levers, which are pivoted to the sway-bar E near its ends. The forward parts of the levers I cross each other, and their forward ends have eyes formed in them to receive the rear ends of the rods H, and are secured in place adjustably upon the said rods H by nuts *h'*, screwed upon the ends of the rods H, one upon each side of the end of each lever I. The nuts *h'* should be made with half-collars to prevent the ends of the levers I from wearing the screw-threads of the rods H. J are brake-shoes, which are made with concaved forward sides to fit against the faces of the wheels, and in about the shape shown in Fig. 2. The brake-shoes J have longitudinal slots formed in them to receive the rounded ends of the levers I, upon which they are secured by nuts. The forward side of the slots in the shoes J are faced with iron to prevent wear, and for the same reason the rounded ends of the levers I have tubular washers placed upon them. The pivoted parts of the levers I are covered by angular keepers K, to keep them from being pushed out of place by the wheels, and to strengthen the hounds and sway-bar.

By this construction, when the wagon presses forward against the tongue F, the levers I are operated to press the shoes J forward against the wheels, and the friction of the wheels causes the shoes J to rise, bringing their wider part against the wheels and making the pressure greater.

When the wagon is backed the backward movement of the wheels carries the shoes J into the position shown in dotted lines in Fig. 2, and prevents the wheels from rubbing against the shoes so much as to impede their movement.

I am aware that it is not new to connect a sliding tongue with brake-bar by rods; but

What I claim is—

The combination, with brake-shoes, of levers I, bowed and crossed as shown and described, the sway-bar E, the adjustable screw-bolts H, and the sliding tongue F, as and for the purpose specified.

HALVOR MARKRUD.

Witnesses:

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