

(No Model.)

2 Sheets—Sheet 1.

T. ROOD.
WAGON BRAKE.

No. 369,995.

Patented Sept. 13, 1887.

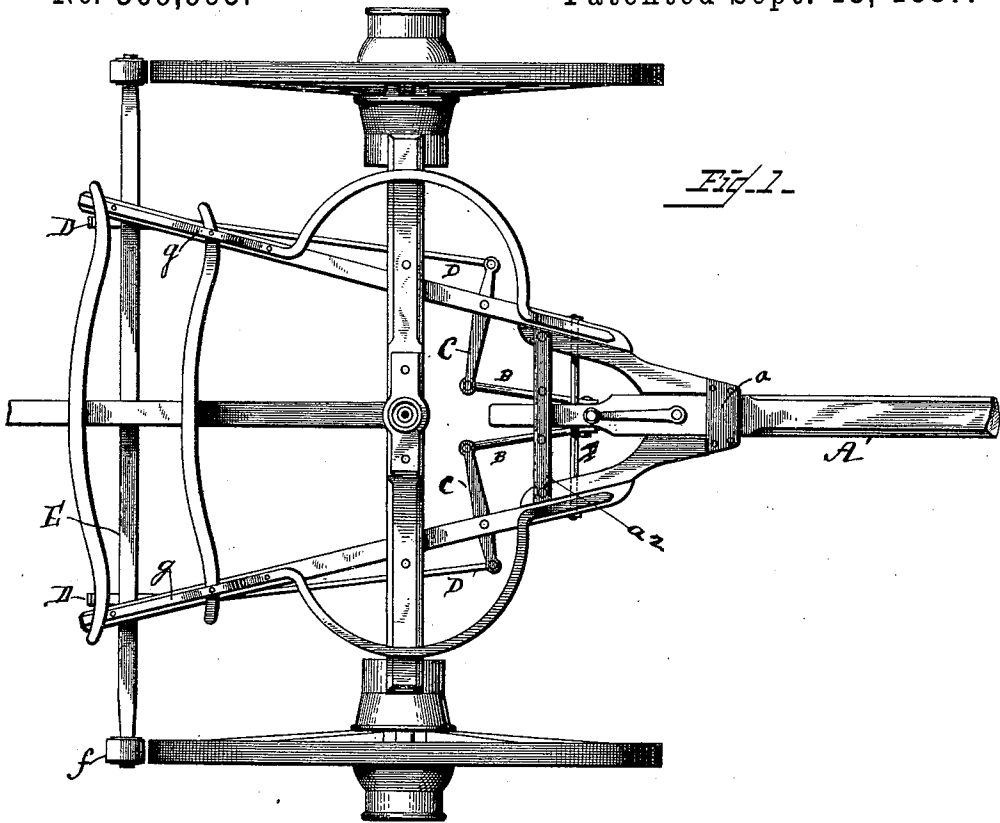


Fig. 1.

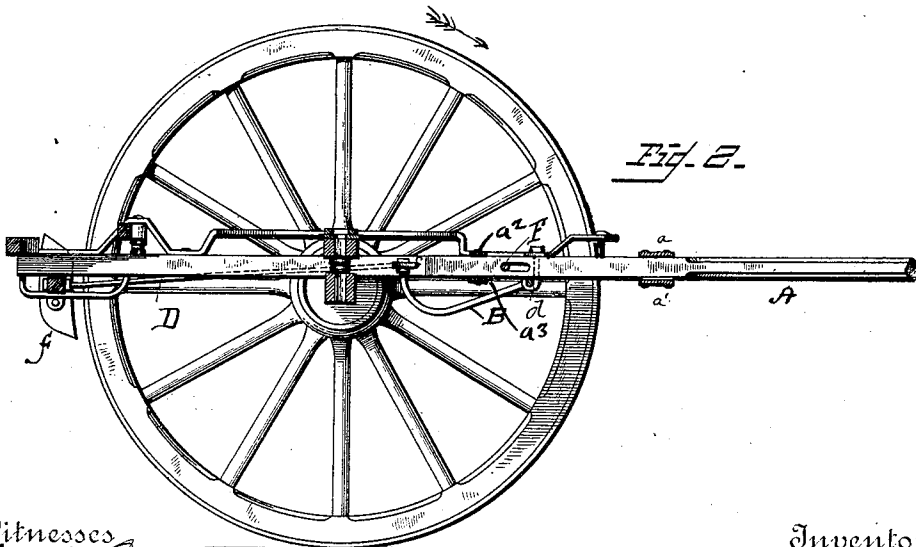


Fig. 2.

Witnesses
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M. Johnston

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Theodore Rood
By his Attorney
J. H. Macdonald

(No Model.)

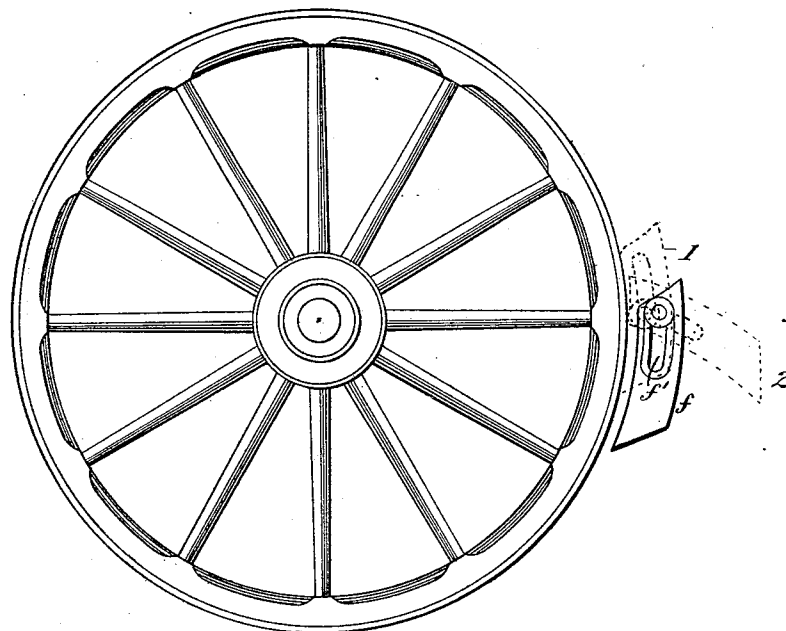
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Fig. 3.



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UNITED STATES PATENT OFFICE.

THEODORE ROOD, OF WESTFIELD, ASSIGNOR OF ONE-HALF TO C. P. NORTHROP, OF WARREN, PENNSYLVANIA.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 369,995, dated September 13, 1887.

Application filed November 3, 1886. Serial No. 217,872. (No model.)

To all whom it may concern:

Be it known that I, THEODORE ROOD, a citizen of the United States, residing at Westfield, in the county of Tioga and State of Pennsylvania, have invented certain new and useful Improvements in Wagon-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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to the class of wagon-brakes which are operated by the backward movement of the tongue, caused by the horses holding back when going down a hill.

It consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed, and as illustrated in the accompanying drawings, in which—

Figure 1 represents a plan view, and Fig. 2 a sectional elevation, of the front part of a wagon with my invention applied thereto.

Fig. 3 is a side elevation of one of the wheels and its brake-blocks, showing in dotted lines the position assumed by the block in backing.

The tongue-hounds are united at their ends by top and bottom plates, $a a'$ and $a^2 a^3$, and are connected with the axle-hounds by a cross rod or bolt, F, in the usual manner. The tongue fits between the tongue-hounds and the plates $a a'$ and $a^2 a^3$, and has a backward and forward sliding movement between same, which movement is permitted by an elongated opening near the rear end of the tongue, (shown in Fig. 2,) through which the cross rod or bolt F passes.

To the lower side of the tongue are attached by a staple or hinge bent bars or rods B, the inner ends of which are pivotally connected with the inner ends of levers C, which are pivoted to the axle-hounds, as shown in Fig. 1. The said bars, being curved or bent, as shown in Fig. 2, permit the tongue to be raised without the rear end of it coming in contact with or interfering with the rods or levers.

The outer ends of the levers C are pivotally connected with rods D, which at their rear ends are adjustably connected with a cross-bar, E,

which carries the brake-blocks. The bar E slides backward and forward, and is supported by the rear ends of the axle-hounds either upon the rods g on the top or within oblong stirrups beneath the hounds. Thus, when the team is holding back, as in going downhill, the tongue is moved backward relatively to the axle and axle-hounds, carrying with it the rods B, turning the levers C on their pivots, drawing the rods D and cross-bar E forward, and causing the brake-blocks to impinge against the wheels, as shown by dotted lines I, Fig. 3. When the bottom of the hill is reached, the draft of the team draws the tongue forward, and by the reverse movement of the parts carries the brake-blocks away from the wheels.

It is obvious that without some provisions for preventing the blocks from impinging against the wheels they would be brought into operation by the backing of the team as well as by holding back in going downhill, which would be objectionable, for the reason that it would prevent the wagon from being backed. This I provide against by forming longitudinal slots f' in the brake-blocks, as shown in Fig. 3, which slots receive the journals on the ends of the cross-bar E. These slots are for the purpose of permitting the blocks to rise and fall relatively to the bar E. They extend from the centers of the blocks to within a short distance of the upper ends of the same, the distance between the impinging surfaces of the blocks and the slots being greater than that between the ends of the slots and the upper ends of the blocks. Now, when the wheels are moving forward in the direction of the arrow, Figs. 2 and 3, as in going downhill, as soon as the blocks are brought into contact with the wheels they are raised by the friction between the parts to the position indicated by dotted lines 1 in Fig. 3, with the journals of the brake-bar E at the center of the block, where they have a central bearing and cause a uniform friction over the entire bearing-surface, which is not the case if the slot terminates either above or below the center, and are held there until the parts are restored to their normal position. When, however, they are brought into contact with the wheels by the backing of the team, which causes the wheels to turn backward in a direc-

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tion opposite to that indicated by the arrow, they are turned by the friction between the parts into the position indicated by dotted lines 2 in Fig. 3, in which position they exert
5 no pressure against the wheels beyond that due to their own weight, the parts being so adjusted that the bar E cannot move forward far enough to bring them into operative contact while in this position. When the team again
10 moves forward, they drop into their normal position, as before.

I am aware that automatic brakes have been constructed wherein the brake-bar is controlled by the tongue. I am also aware that slotted
15 brake-blocks adapted to rise and fall on the ends of the brake-bar have been heretofore used, and I do not claim these broadly; but

What I claim, and desire to secure by Letters Patent, is—

In an automatic wagon-brake, the combination, with a tongue adapted to slide horizontally forward or back between its hounds or braces, and a movable brake-bar supported by the axle-hounds, of the levers C, pivoted to the axle-hounds, their outer ends being connected
25 with the brake-bar by the rods D and their inner ends to the sliding tongue by the bent or V-shaped rods B, whereby the brake is readily operated and the tongue may be raised without interfering with the brake mechanism, substantially as and for the purpose described.
30

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

THEODORE ROOD.

Witnesses:

E. F. RADEKER,
F. D. MCNAUGHTON.