J. F. KLINGLESMITH.

WAGON-BRAKE LEVER.

No. 189,750. Patented April 17, 1877.

FIG. 1.

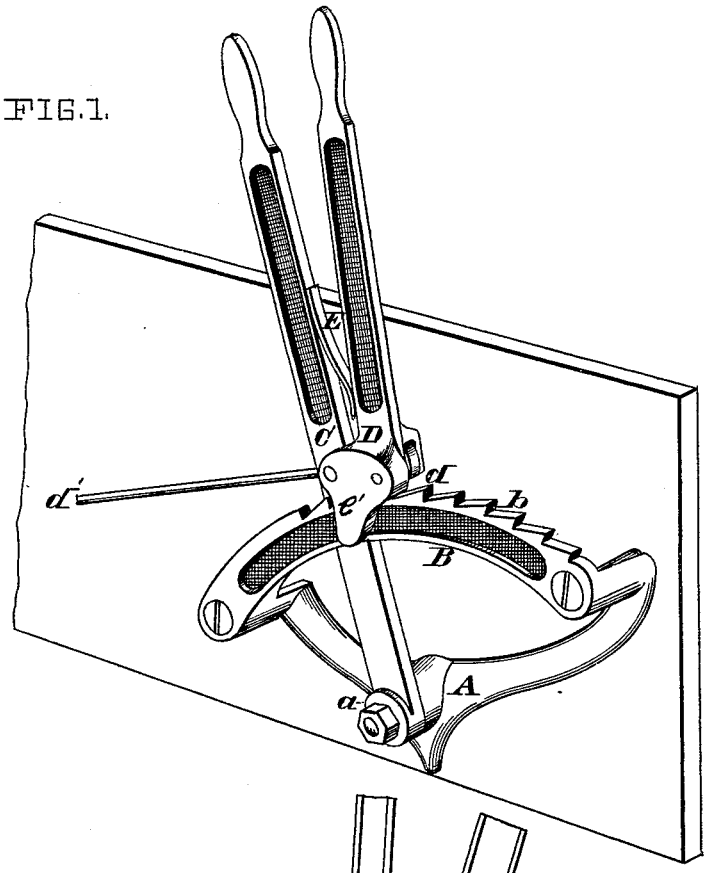
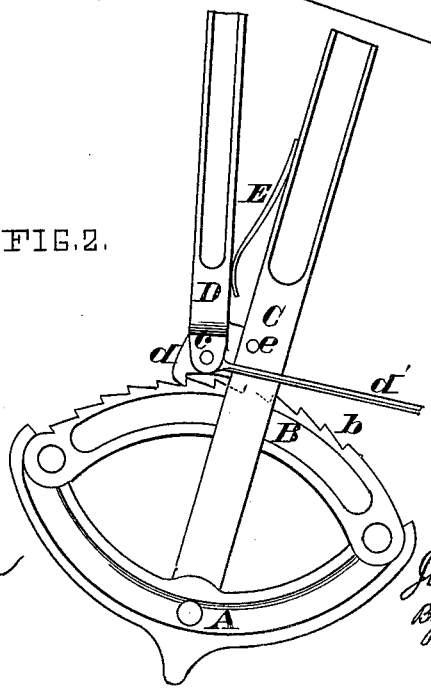


FIG. 2.



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JOHN F. KLINGLESMITH, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF HIS RIGHT TO CONRAD FARNER, OF SAME PLACE.

IMPROVEMENT IN WAGON-BRAKE LEVERS.

Specification forming part of Letters Patent No. **189,750**, dated April 17, 1877; application filed February 14, 1877.

To all whom it may concern:

Be it known that I, JOHN F. KLINGLESMITH, of St. Louis, Missouri, (assignor to myself and CONRAD FARNER,) have invented a new and useful Improvement in Wagon-Brakes, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to provide a safe and improved brake for operating the shoes, which are intended, by frictional pressure, to retard or check the wheels of vehicles on sloping ground, through an arrangement of the brake-lever C, in its relation to the catch or dog *d*, which I use as a detent, to check the backward tendency of the brake-lever during such a strain as is both constant and severe while a vehicle is descending a more or less steep slope.

I attach at a convenient distance from its fixed end of the brake-lever the catch-bar D, which has a solid head, shouldered, and extended backward, to permit firm attachment to the lever C by a pivot. This shoulder, when pivoted to said lever, affords a fixed center to the catch-bar, as shown, *e*, Fig. 2. On the sunken face of the head of the bar D, as shown, Fig. 2, is cast or wrought the catch or detent *d*, through a hole in the catch-head. The brake-rod *d'* is attached by a pin or bolt to the catch-head, causing this head to become an intermediate part of the connection between the brake-bar and the catch. The fixed center of the lever C is on the socketed projection *a*. Through this socket a bolt is passed. The socket is slightly longer than the depth through the lever, to afford a slight shoulder, upon which the nut and washer may close without tightening the lever or impeding its free action. To the inverted arch-piece A, and sufficiently set out to allow clear action to the levers and the brake-rod *d'*, the rack or angular toothed segment is set on posts, through which holes are bored for the reception of bolts or screws, whereby the whole apparatus is attached to the side-board of a wagon. This racked segment is a segment of a circle, the teeth of which will engage with the catch *d* whenever the brake-lever is thrown forward.

The strain caused by the passage of a heavy vehicle down a steep and rough slope is violent; and, in conjunction with the tendency of the brake-rod as set by me to hold the catch firmly in contact with the ratchet-tooth, I insert between the brake and catch-bars the spring E, in an inverted position, so as to avoid failure in its action through the dropping in between the bar and the spring of straw, chips, ice, snow, or any other substance.

An excellent guarantee toward the faithful action of the catch *d* is found in my manner of connecting the coupling-point of the brake-rod with the catch-head, by the pivot through the catch-head being on a horizontal plane with the pivot *c* of the brake-lever when but one-quarter set. When, therefore, the brake-lever is thrown well forward, the strain upon the brake-rod is, in effect, to hold the catch in contact with the lever-tooth, as may be more fully seen in Fig. 2.

I place the connection of the brake-rod inside of the levers C and D, as thereby I avoid bending the brake-lever. The torsive effect that may thus arise from side strain I meet by the plate *e'*, which slides along the front face of the ratchet-segment.

My invention is illustrated more in detail in the perspective view, Figure 1, and in the back view, Fig. 2, in which—

A and B are the frame to which the brake-lever C is pivoted by the nutted bolt *a*. C is the brake-lever, the catch-bar being secured thereto by the pin *e*; D, the catch-bar; *b*, ratchet; *c*, coupling-pivot for attachment of brake-rod *d'* to the catch-head *d*; E, auxiliary spring, to co-operate with the brake-rod in holding the catch *d* in positive contact with the rack-tooth. *e* is the pivot on which works the catch-bar. *c* is the pin in the catch-bar head, to which the brake-rod is attached, by which the catch

is, as a jointed extension of the brake-rod, in the straightest practicable line from the catch to the brake-bar.

I am aware that other brakes with some points of similarity to mine are used.

What I claim as my invention is—

1. The lever provided with catch-head D, pivots *e c*, and detent *d*, substantially as described.

2. The lever provided with catch-head D, pivots *e c*, and detent *d*, in combination with lever C, brake-rod *d'*, and ratchet-sector B, substantially as described.

JOHN F. KLINGLESMITH.

Witnesses:
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