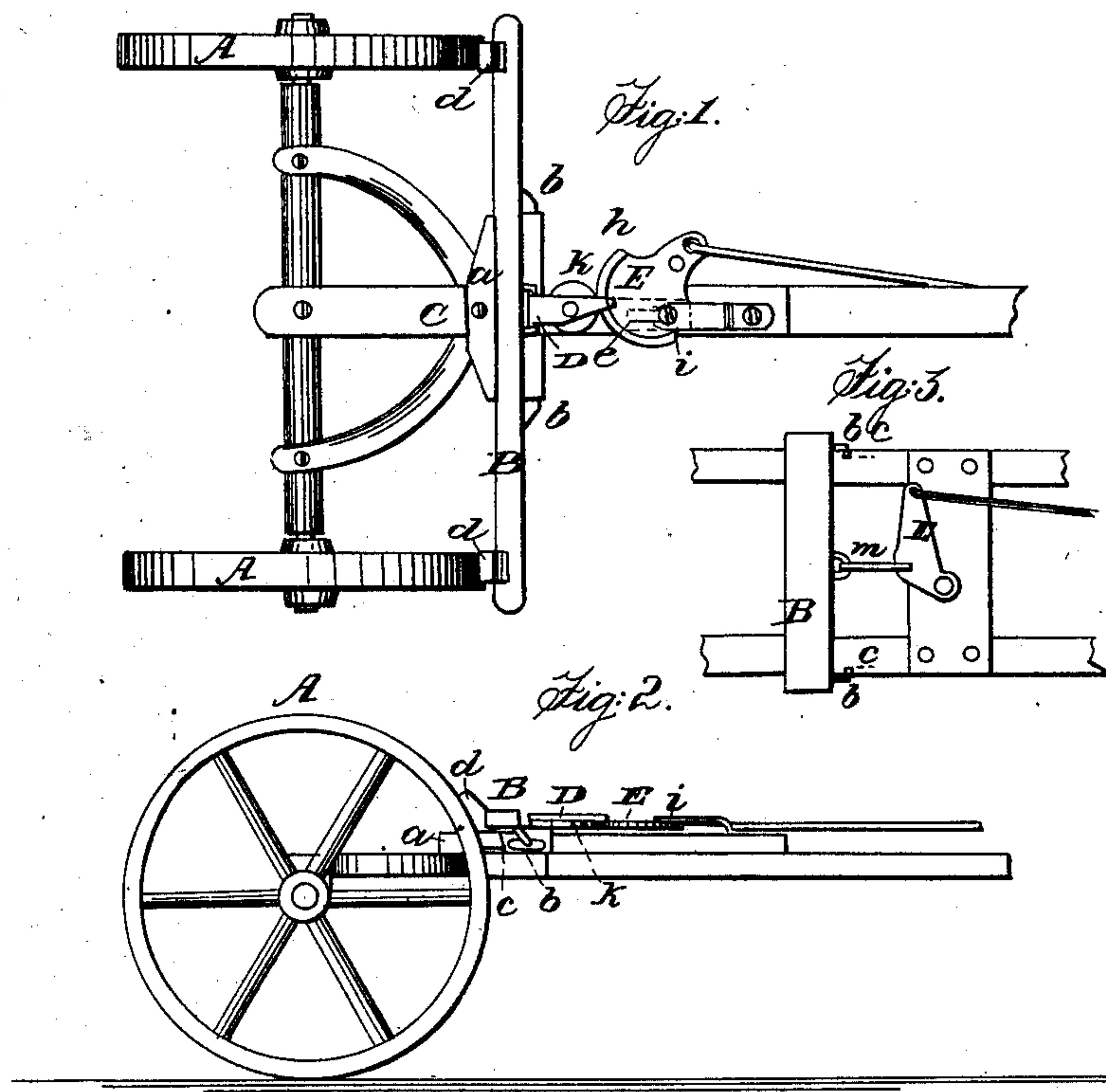


L. E. WOODARD.

Wagon-Brake.

No. 69 886.

Patented Oct. 15, 1867.



Witnesses  
Theo. Tusche,  
J. A. Service

Inventor  
L. E. Woodard  
Per *Henry C. [Signature]*

# United States Patent Office.

L. E. WOODARD, OF OWASSO, MICHIGAN.

Letters Patent No. 69,886, dated October 15, 1867.

## IMPROVEMENT IN WAGON-BRAKE.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, L. E. WOODARD, of Owasso, in the county of Shiawassee, and State of Michigan, have invented a new and useful Improvement in Wagon-Brake; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of my improved brake on a wagon.

Figure 2 is a side view of the same.

Figure 3 a plan view of a modified form of my invention.

Similar letters of reference indicate like parts.

This invention relates to an improvement in the construction of brakes for wagons and other vehicles; and consists in attaching a brake-bar to the reach, to act upon the wheels by means of an eccentric, headed lever or cam, in such manner that the brakes may be quickly and powerfully applied and instantly disengaged from the wheels to relieve them from pressure by a slight movement of the eccentric lever.

In fig. 2, A A represent the wheels of a wagon to which is applied the brake-bar B, which is placed upon a cross-bar or block, *a*, that is fastened to the reach C. The ends of the cross-bar *a* are bound with iron having slots *c* in them, and in each slot works the end of a pin, *b*, that is fastened to the brake-bar B in such a manner that when the bar is moved in one direction to operate the brakes it shall slide forward horizontally and press the brakes or shoes *d d* fairly against the wheels, but when it is moved in the opposite direction to relieve the pressure of the brakes, then they are drawn away from the wheels by a canting movement of the brake-bar, which has the effect of disengaging the brakes instantly and lifting them out of the way of the wheels entirely. The brake-bar B is connected in the middle by a staple to a horizontal metal slide piece, D, that lies forward on the reach, on one end of which slide piece is a slot, *e*, that allows it to play back and forth on a screw-bolt, *i*, as seen in fig. 1. The bolt *i* serves as the fulcrum or pivot of an iron eccentric, E, that acts as a lever to operate the brake-bar when moved either way by a connecting-rod, indicated in red lines, and running to the front end of the wagon, to be acted on in any convenient manner. The slide piece D is turned over through the staple that connects it with the brake-bar B, in such manner that it shall extend back to the curved side of the eccentric piece E, and the end shall hook upon a flange, *h*, on the upper edge of the eccentric, as shown clearly in fig. 1. A friction-roller, *k*, is pivoted to the slide piece D to bear upon the periphery of the eccentric E, and the operation of the parts in combination is such that when the eccentric piece is moved, the slide piece D is moved with it by means of the hooked end on the flange *h*, by which means the brake-bar B is acted on, and made to operate on the brakes *d d* in the manner before described. The brake-bar B may be connected with a double-reach wagon or coach, having the pins *b* working in slots *c* on the outside of the reaches, as shown in fig. 3, and the bar may be connected with the eccentric piece E by a link, *m*, instead of the slide piece previously described, to act on the brakes.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The brake-bar B connected by pins *b*, working in the slots *c*, in the ends of the cross-bar *a*, all constructed and arranged as described for the purpose specified.

2. The slotted metallic slide piece D upon the wagon-reach, connected at one end to the bar B, and in which the friction-roller *k* is pivoted, constructed as described, and operated by means of the eccentric piece E, as herein set forth for the purpose specified.

L. E. WOODARD.

Witnesses:

W. A. WOODARD,

D. FRANK.