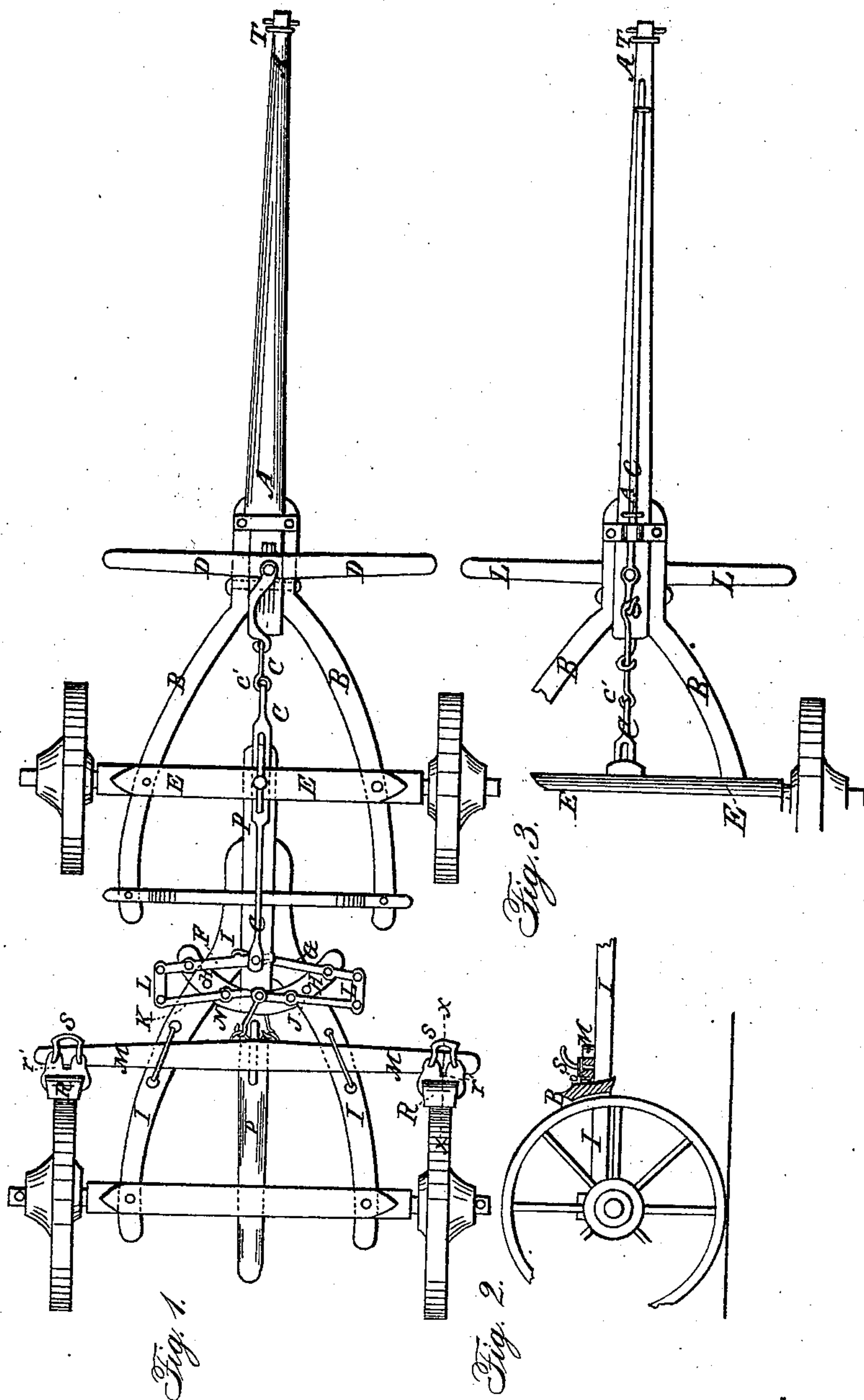


A. DOWNER.

Wagon-Brake.

No 68,493

Patented Sept. 3, 1867.



Witnesses:

Geo. Smith
Wm. Swain

Inventor:

A. Downer
Per mump &
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United States Patent Office.

ANDREW DOWNER, OF HAMMONDSVILLE, OHIO.

Letters Patent No. 68,493, dated September 3, 1867.

IMPROVEMENT IN WAGON-LOCK.

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, ANDREW DOWNER, of Hammondsville, in the county of Jefferson, and State of Ohio, have invented a new and improved Wagon-Lock; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those 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 top view of the running part of a wagon to which my improved lock has been applied.

Figure 2 is a detail sectional view of the same, taken through the line *x x*, fig. 1.

Figure 3 is an under side view of the tongue, forward hounds, and part of the forward axle.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved lock or brake for attachment to wagons, with which the action of the horses in holding back and drawing will apply the brake to and remove it from the wheels, and with which the reverse movement of the wheels, in backing the wagon, will remove the brake-shoes or rubbers out of the way; and it consists in the combination of the system of levers, with the jointed and slotted rod, and with the bar to which the brake-shoes are attached, and in the manner in which the brake-shoes are attached to said bar.

A is the tongue, which is attached to the forward hounds B in the ordinary manner. C is a rod running along the under side of the tongue A, and working longitudinally in staples or keepers attached to said tongue. D is the double-tree, which is secured to the rod C by a bolt passing through a slot in the rear end of the tongue A, as shown in fig. 1. *c'* is a joint formed in the rod C, between the rear end of the tongue and the forward axle E, so that the rod may not interfere with cramping the wagon in turning. For the same purpose a slot is formed in the rod C, through which the king-bolt passes, as shown in figs. 1 and 3. The rear end of the rod C is connected to the ends of the long arms of the levers F and G by a pin or bolt passing through the forked end of said rod, and through slots in the ends of said levers. The levers F and G are pivoted to a curved supporting-bar, H, attached to the rear hounds I, and the ends of their short arms are connected to the ends of the long arms of the levers J and K by the links or bars L. The levers J and K are pivoted to the curved bar H, and the ends of their short arms are connected to the bar M, to which the brake-shoes are attached, by short connecting-rods N and O. The levers F G J K have their short arms one-half the length of their long arms. Each pair must be of the same length, or they may all be of the same length. This latter construction I prefer.

The bar M slides back and forth along the rear hounds I, either above or below said hounds, as may be desired, and is kept from longitudinal movement by a guide-pin passing through the said bar and working in a groove or slot in the reach P. To enable the wagon to be backed without applying the brakes, the shoes or rubbers R have ears *r'* attached to them through holes, in which pass the curved staples S, by which the said shoes are attached to the brake-bar M, so that when the wheels are revolved backward in backing, the friction of said wheels will lift the said shoes out of the way, and their own weight, as soon as the movement of the wheels is stopped or reversed, will bring them back to their places. If desired the levers J K, instead of extending inward and being connected to the middle part of the bar M, may extend outward and be connected to said bar near its outer ends.

By this construction, as the wagon is forced forward against the horses, the forward end of the rod C, or a projection formed upon it, is forced forward against the neck-yoke or pole-strap ring T, applying the brakes with a force regulated by the forward pressure of the load. As soon as the forward pressure of the wagon ceases the draught upon the double-tree D draws the brakes away from the wheels and holds them away as long as the said draught is continued.

I claim as new, and desire to secure by Letters Patent—

1. The combination of the system of levers F G J K with the jointed and slotted rod C, and with the brake-bar M, substantially as herein shown and described, and for the purpose set forth.
2. Attaching the brake-shoes R to the brake-bar M, by the ears *r'* and curved staples S, substantially as herein shown and described, and for the purpose set forth.

The above specification of my invention signed by me this 3d day of May, 1867.

ANDREW DOWNER.

Witnesses:

J. N. BEANS,

WILLIAM STARKEY.