L. WOLF.

Wagon Brake.

No. 85,715. Patented Jan'y 5, 1869.

Fig. 3

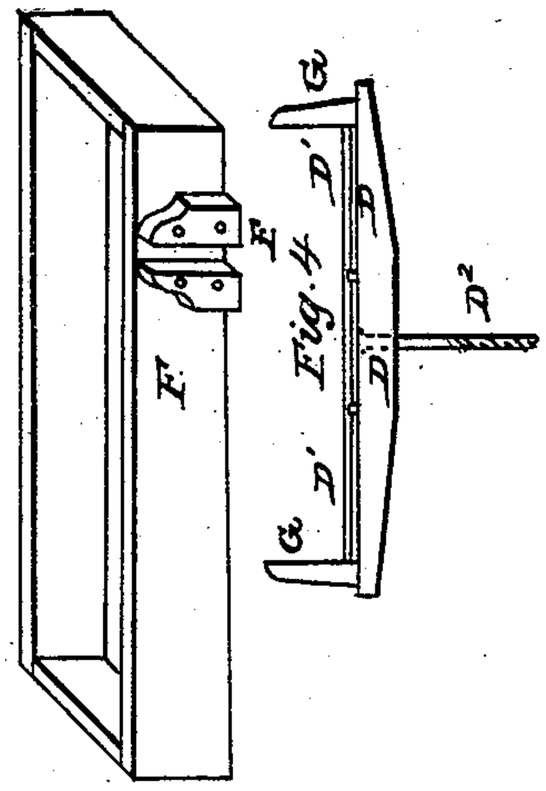


Fig. 4

Fig. 1

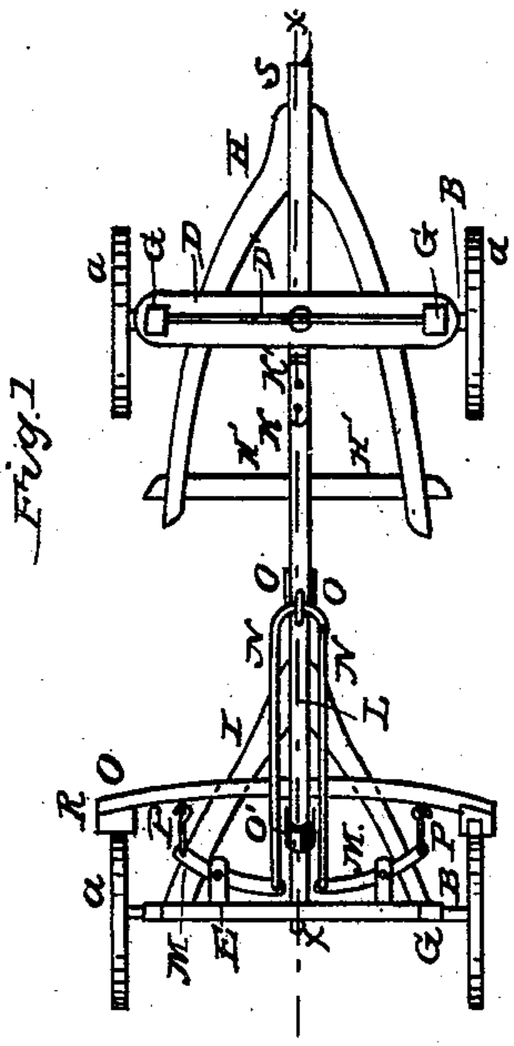
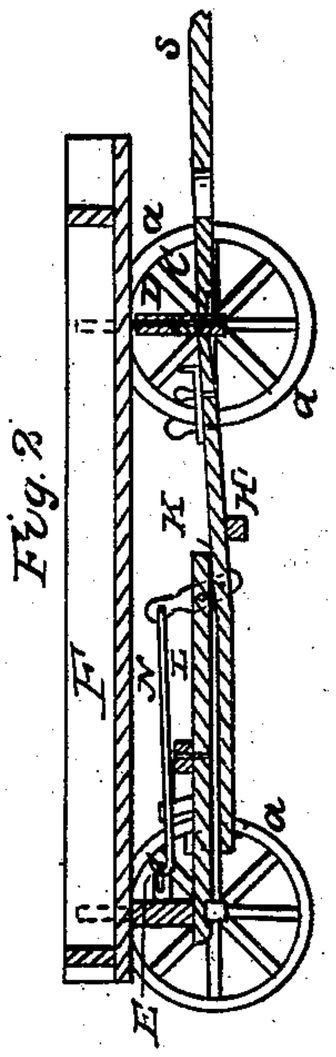


Fig. 2



Witnesses
C. Klauser
A. Ruppert

Inventor
Lewis Wolf
by P. Holloway & Co.
attys

United States Patent Office.

LEWIS WOLF, OF LOUISVILLE, KENTUCKY, ASSIGNOR TO HIMSELF AND T. E. C. BRINLEY, OF SAME PLACE.

Letters Patent No. 85,715, *dated January* 5, 1869.

IMPROVEMENT IN WAGON-BRAKES.

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, LEWIS WOLF, of Louisville, county of Jefferson, and State of Kentucky, have invented a new and useful Brake for Wagons; and I hereby declare the following to be 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, making a part of this specification.

Figure 1 is a top view of a wagon to which my improved brake is applied, the bed having been removed.

Figure 2 is a longitudinal vertical section of the same through line *x x*, figs. 2 and 3.

Figure 3 is a perspective view of the wagon-bed.

Figure 4 is a front view of swinging bolster, standards, rollers, and king-bolt.

Similar letters of reference indicate corresponding parts.

My invention relates to brakes for wagons; and

It consists in providing an improved self-acting brake, which exerts a pressure on the wheels in proportion to the inclination of the plane to be descended, and to the weight of the load carried; (that is, the steeper the descent, and the heavier the load, the more powerful the action of the brake on the wheels;) and in the device for rendering the brake inoperative, as will be hereinafter more fully described.

As my improvement can be attached to any wagon of ordinary construction, it is not deemed necessary to describe minutely more of the parts of a wagon than such as are connected directly with the operation of the brake.

In the drawings—

A are the wheels.

B are the axles.

C is the axle-cap.

D is a swinging bolster, having a roller, D^1, on its upper surface, which has its bearings in the standards. The function of said roller will be hereafter fully described.

D^2 is the king-bolt.

E is a fixed bolster.

F is the bed.

It will be observed that upright pieces, F′, are secured to the sides of the bed, near its rear end, so as to form grooves, into which the standards of the fixed bolster fit.

These standards prevent the bed from sliding on the fixed bolster.

G are the standards.

H are the forward hounds.

I are the rear hounds.

K is the forward reach.

K′ is a turn-plate, which has a small upright constructed upon its front edge. It contains two perforations, which are continued into sockets in the reach K. Two loosely-fitting pins are carried in these perforations.

Another socket is made in the reach, at such a distance from the rear pin that, when the plate is turned back, so as to lie on the face of the reach again, the foremost pin will now fit into said socket.

The upright portion of the plate comes in close contact with the front end of the rear reach, and prevents it from sliding forward.

L is the rear reach.

M are levers, pivoted to eye-bolts, which eye-bolts are secured in the fixed bolster about equidistant from its centre and its extremities.

The eye-bolts are of sufficient length to allow the levers to have full play.

N are connecting-rods, attached to the longer arms of the levers, which put the levers in communication with the top of the clevis O, in which top the curved portions of the connecting-rods culminate.

O is a clevis, which carries within it both the reaches, reach L lying on the top of reach K.

Transverse bolts pass through the clevis and the reaches, and pivot the latter to the former, thus permitting the reaches to slide backward and forward on each other.

The connecting-rods culminate in an eye at the top of this clevis, as above stated.

O′ is a duplicate of O, with the exception of the eye on its top, for the purpose above described.

P are eye-bolts, which connect the short arms of the levers and the brake-beam.

Q is a brake-beam, of the usual construction.

R are brake-blocks.

S is the tongue.

The operation of my invention is as follows:

The turn-plate being in the position shown in fig. 2, so as to allow the rear reach to slide forward, the brakes are ready for action.

As the wagon starts down an inclined plane, the weight of the reach is itself sufficient to impel it forward, but it has the additional weight of the hounds, bolster, axle, wheels, and bed to drive it in that direction.

It will be observed that the bed, being secured to the fixed bolster, and allowed to slide over the swinging one by means of the roller D^1, throws the principal part of its weight on the fixed bolster, which communicates it to the reach.

The bed is really a long arm attached to a vertical lever, which would be represented by a line drawn through the intermediate parts of the wagon between the bed and the centre of the axle, which lever drives the reach to the front, and its action is in proportion to the load the bed carries, and the weight of the rear running gear of the wagon.

The rear reach, as it slides on the other one, carries the upper portion of the clevis forward with it. The connecting-rods now pull on the long arm of the lever, and bring them to the front. This throws the

short arms back, carrying with them the brakes, exerting a pressure on the wheels proportionate to the load carried, and the sharpness of the descent.

When it is desired to back the wagon, turn back the plate K′ until its upright portion is in close contact with the end of the reach, and secure it by the pin. This renders the brake inoperative.

This improvement is not only of great value in locking the wagon as it proceeds down a hill, but, as precisely the same effect is produced on the brakes by backing the wagon, they are an effectual check to a balky animal.

Having thus described the nature and operation of my invention,

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

The combination of the reaches K and L with the clevises O and O′, connecting-rod N, levers M, and brake-beam Q, substantially as shown and described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

LEWIS WOLF.

Witnesses:

W. B. HARDIN,
H. D. HAWES.