

A. L. BARTLETT.

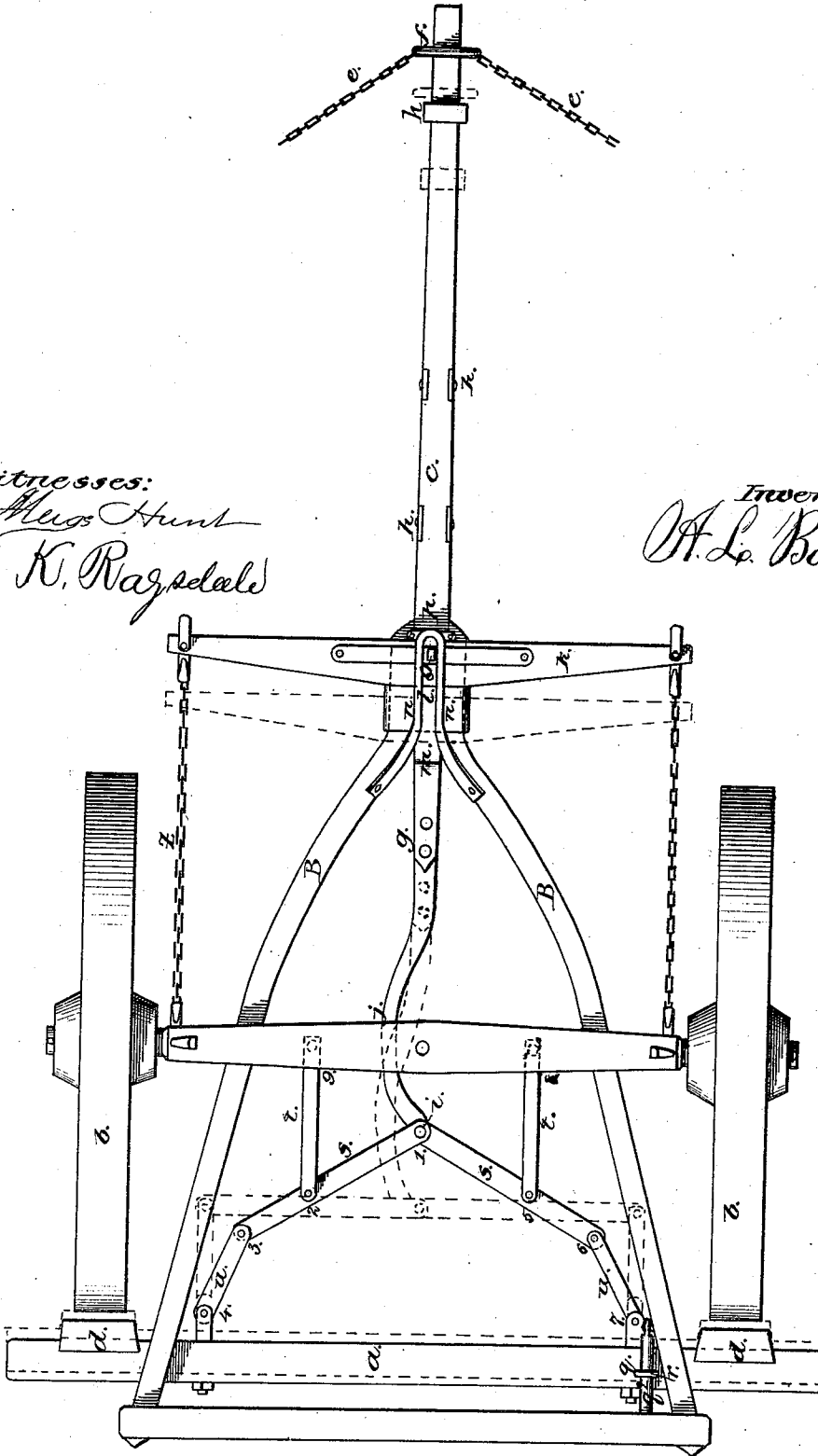
WAGON-BRAKE.

No. 170,220.

Patented Nov. 23, 1875.

Witnesses:
Meigs Hunt
E. K. Ragsdale

Inventor:
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UNITED STATES PATENT OFFICE.

A. LA FAYETTE BARTLETT, OF BROWNSVILLE, GEORGIA.

IMPROVEMENT IN WAGON-BRAKES.

Specification forming part of Letters Patent No. **170,220**, dated November 23, 1875; application filed July 15, 1875.

To all whom it may concern:

Be it known that I, A. LA FAYETTE BARTLETT, of Brownsville, in the county of Paulding and State of Georgia, have invented a new and useful Improvement in Wagon-Brakes, of which the following is a specification:

My improved brake is adapted for automatically applying the braking power by means of a sliding tongue-bar connected to the tongue-chain or breast-tree, and operating the brake-bar by means of jointed levers whenever the tongue-bar is forced backward by the pull-back of the horses in descending a grade, and in proportion to the force exerted by the pull-back. The draft of the horses upon the double-tree instantly releases the brakes by drawing the tongue-bar forward. The double-tree is carried by the draft-bar, and moves back and forth with the latter within a draft-guide iron secured to the tongue, and which serves as the fixed point of draft instead of the usual bolt passing through the tongue. The brake is applied to the rear side of the front wheels, whereby I obtain a quicker and more effective action in applying and releasing the brake, and as the braking devices are carried wholly by the tongue, the front axle, and the hounds, the turning and guiding of the wagon is not so much interfered with as when the brake is arranged to act upon the rear wheels.

The accompanying drawings represent a top view of my improved brake as applied to the tongue, the hounds, and the front wheels of the running-gear of a wagon, the dotted lines showing the position of the parts when the brake is applied.

A draft-bar, *g*, is arranged on the under side of the tongue *c*, in suitable guides *h h*, and the brake-bar *a* is arranged to bring its shoes *d d* to bear upon the rear side of the front wheels *b*, while the brake-bar *a* is jointed to the rear end of the draft-rod *g* by long and short levers *s s* and *u u*, forming a sort of toggle-joint connection, the short levers *u u* being jointed to the brake-bar, and the long levers to the end of the draft-bar, and pivoted to stay-arms *t*, pivoted to and projecting from the rear side of the axle, to allow the levers to flex in applying and releasing the brake. A collar, *f*, on the

front end of the draft-bar embraces loosely the front end of the tongue, and to this the tongue-chain *e*, or breast-tree, is attached, so that the back pull of the horses will thrust the draft-bar back, and, straightening the levers *s s*, apply the brake. For this purpose the draft-bar *g* extends back of the front axle, and passes through a guide either above or below it. The brake-bar *a* is arranged to act beneath the hounds, being held thereto by guide-irons on the under side of said bar, which allow said bar to have the proper movement toward and from the wheels. To keep the brake-bar from moving endwise it is secured by an eye, *q*, to a rod, *q²*, fixed to the hounds, and over which the eye moves with the bar. These guide-connections may be at both sides of the hounds, so that the brake-shoes *d d* will always be opposite the wheels. The double-tree *k* is not connected to the tongue by a bolt, as usual, but to the draft-bar *g* by a branch arm, *m*, overlying the tongue at its junction with the hounds *B*, and to which arm *m* the double-tree is secured by a bolt, so that it moves back and forth with the draft-bar in applying the brake. In this movement of the double-tree it is confined by a guide-iron, *n n*, secured to the hounds and the tongue, and with the double-tree between it and the arm *m*, so that the double-tree draws against the guide-iron *n*, and is held in proper relation therewith by a pin, *o*, which projects through a slot, *l*, in the guide-iron, and serves as a brace to hold the double-tree in place, and against end movement as it is moved back and forth by the action of the draft-bar. By this means the double-tree is carried back in applying the brake, and brought forward to pull against the angle-iron when the brake is off. In descending a grade the horses pull back upon the breast-chains *e*, which are attached to the front collar *f* of the draft-bar, and forcing this back straightens the long levers *s s*, as shown by dotted lines. In this action the short ends of the levers *s* are drawn forward, and the long ends are forced back, and as the short ends of these levers *s* are jointed to the short levers *u*, they therefore draw the brake-shoes against the wheels with a force regulated and controlled by the degree of force with which the team pulls back. The brake is released by the

forward movement of the horses, which, by means of the double-tree, draws the tongue-bar forward upon the tongue, and, by means of the levers, carries the brake-bar away from the wheels. Chains *z* may be used to connect the ends of the double-tree with the front axle; but the guide-draft iron is sufficient for the purpose, and avoids having a hole in the tongue and double-tree, as the latter is held in place and draws against the front end of the guide-iron, which is firmly secured to the tongue and the hounds.

I am aware that a tongue-bar has been used in connection with pivoted levers, operated by the back thrust of the tongue-bar by its connection with the neck-yoke, whereby the brake is applied automatically to the rear side of the front wheels by the pull-back of the team in ascending a hill; the features of improvement, however, which I have made will be specifically set forth in the claim.

I claim—

1. The combination, with the tongue-bar *g* and the brake *a d*, of the double-tree *k*, connected with said tongue-bar by the branch arm

m, whereby the draft upon the double-tree operates to release the brake, substantially as herein set forth.

2. The combination, with the tongue-bar *g*, having a branch arm, *m*, and the double-tree *k*, connected therewith, of a guide and pull-iron, *n*, fixed to the tongue, whereby the double-tree is allowed to move back in applying the brake, and to form the draft-pull when the brake is off.

3. The guide and pull-iron *n*, provided with a slot, *l*, and combined with the tongue-bar, branch *m*, and a projection, *o*, on the double-tree, whereby the latter is free to be moved back and forth within the guide-iron, and is braced against endwise movement.

4. The combination, with the tongue-bar *g*, the levers *s u*, and the connected brake-bar *a d*, of the guide-rod *q²* and the eye *q*, as and for the purpose herein set forth.

A. LA FAYETTE BARTLETT.

Witnesses:

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