

F. D. LADENBERGER.

Wagon Brake.

No. 81,382.

Patented Aug. 25, 1868.

Fig. 1.

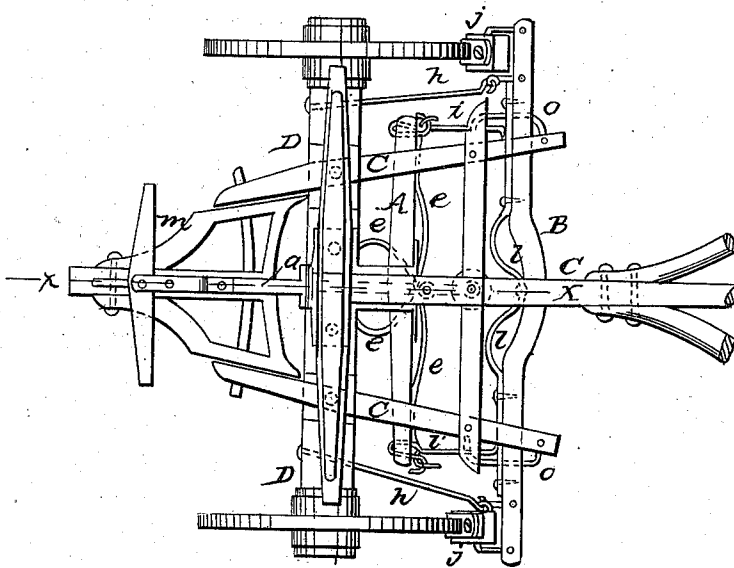
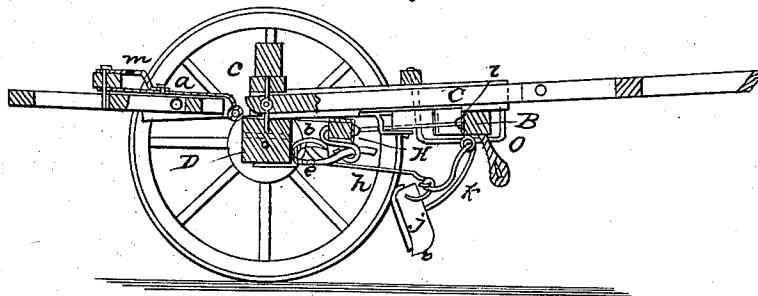


Fig. 2



WITNESSES

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F. D. LADENBERGER, OF GLENBEULAH, WISCONSIN.

Letters Patent No. 81,382, dated August 25, 1868.

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, F. D. LADENBERGER, of Glenbeulah, in the county of Sheboygan, and State of Wisconsin, have invented a new and improved Wagon-Brake; 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 plan view of my improvements.

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

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide an effective wagon-brake.

It consists of the mechanism herein set forth.

In the drawings, *m* is the double-tree, which is connected with a plate, *a*, by a bolt in the usual manner. The said bolt passing downward through a longitudinal slot, in the tongue, which slot acts as a guide to keep the movement of the double-tree in a line.

The plate *a* is pivoted or loosely hinged to the plate *b*, which is slotted to enclose the king-bolt passing through the axle *D*.

The plate *b* is affixed to a cross-bar, *A*, and plays to and fro with the bar and the sway-bar *B*, which latter is not affixed to the hounds, *c*, but plays loosely in the irons, *o*, affixed to the said hounds, as shown.

The cross-bar *A* and the sway-bar *B* are under the rack *C*, and are connected by rods *i i*, and are kept backward to the extent of their play by springs *e*, arranged as shown, or in any other suitable manner.

The brake-shoes *j j* are suspended from the extremities of the sway-bar by metal stirrups, *k*, which pass through the rounded ends of the shoes in such a manner that, when the said shoes are brought in contact with the wheels in going forward, they will catch against the tires and clasp them in a manner to retard the progress of the vehicle.

The bringing forward of the shoes is accomplished by means of rods *h h*, attached to the stirrups and to the axle, so that when the sway-bar is thrown backward by the spring *e*, the heel or rounded end of the shoes will be brought in contact with the tires, and the friction of the latter, when rolling forward, will draw up the faces of the shoes in breaking contact throughout their length.

In backing, the shoes will be actuated away from the tires by the reverse motion, as will be obvious.

A friction-roller, *n*, is hung in suitable bearings under the reach, and so arranged that it will come in contact with the concave iron *l* affixed on the sway-bar when the draught-strain is sufficient to take up the force of the spring *e*, which will be the case in drawing ordinary loads.

The sway-bar then becomes the means of governing the tongue from undue vibration when passing over stony or other rough ground.

When the sway-bar iron is thus brought in contact with the roller, the latter takes a portion of the draught-strain, and the lengths of the slot in the plate *b* and in the tongues are so arranged, with reference to the position of the friction-roller, that the draught-strain will be distributed proportionately upon them all, instead of being sustained wholly by the king-bolt or double-tree bolt.

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

1. The combination, in a wagon-brake, of the cross-bar *A*, loose sway-bar *B*, connected by any suitable rods *i i*, and kept back to the extent of their play by a spring, *e*, of any suitable form or arrangement, with brake-shoes, *j j*, suspended by stirrups or links, *k k*, connected with the axle-tree by rods, *h h*, all arranged to operate as brakes by being connected with the double-tree *m* by the plates *a* and *b*, all substantially as shown and described.

2. The combination, in a wagon-brake, of the concave iron *l* on the sway-bar *B* with the friction-roller *n*, the slotted plate *b*, slotted tongue, and double-tree bolt, all arranged to take the draught-strain proportionately when the sway-bar and cross-bar are drawn forward to the extent of their forward movement, all substantially as herein shown and described.

The above specification of my invention signed by me, this day of , 1868.

F. D. LADENBERGER.

Witnesses:

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