C. J. WALSER.
Vehicle-Brake.

No. 212,579. Patented Feb. 25, 1879.

Fig. 1

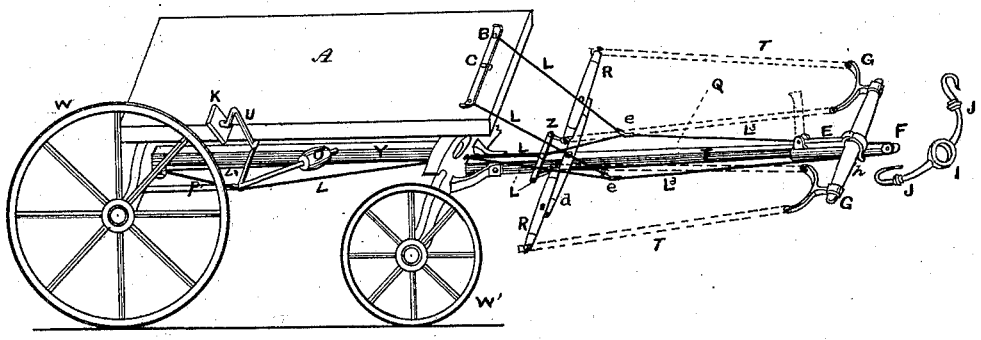

Fig. 2

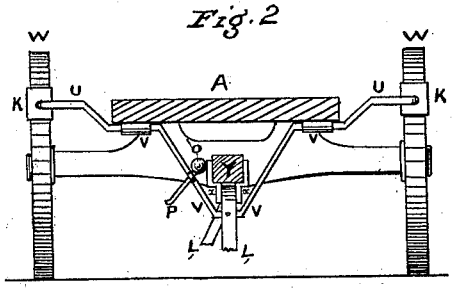

Fig. 3

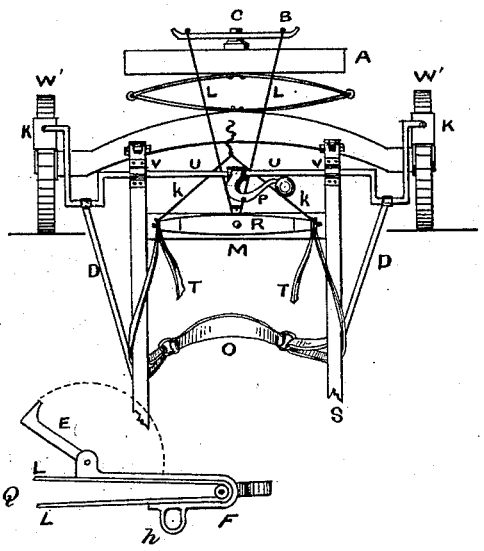

Fig. 4

WITNESSES.

W. B. Niles

Jacob Stauffer

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UNITED STATES PATENT OFFICE.

CHARLES J. WALSER, OF LANCASTER, PENNSYLVANIA.

IMPROVEMENT IN VEHICLE-BRAKES.

Specification forming part of Letters Patent No. **212,579**, dated February 25, 1879; application filed December 23, 1878.

To all whom it may concern:

Be it known that I, CHARLES J. WALSER, of Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Automatic Brakes on Vehicles, of which the following is a specification:

This invention is an improvement on my Patent No. 207,143, August 20, 1878.

In the accompanying drawings, Figure 1 is a perspective view of a vehicle and running-gear embodying my invention; Fig. 2, a vertical cross-section through the vehicle; Fig. 3, a front elevation of single-horse vehicle with my improvements, and Fig. 4 a detail view of the casing on the end of the tongue.

Y designates the reach of the wagon, to which a case, *x*, containing a pulley, is attached, the bearings for said pulley being centrally below said reach and inside the axle of the rear wheels, W.

Under the bottom A of the vehicle, and on each side, are keepers V, through which the brake-bar U passes, and by which it is supported. Said brake-bar is provided with brake-blocks K, arranged on its ends, to operate against the rear wheels. This continuous rod or brake-bar U is bent under the reach Y. On one end there is affixed to said brake-bar a lever-arm, P, extending back so as to strike the rear axle, and form a stop and support at the desired point. This lever P is continued beyond its attachment, so as to form an arm for a cylindrical weight, O′, of any desired size, said weight being adjustable by a set-screw.

To operate this brake-bar automatically, a continuous two-branched strap or chain is used. The forward portion passes under a shield on one side, to or around a pulley in the end of casing F of tongue Q, and back. At *e* it branches, and the branches L are carried up to the respective pins on the foot-lever B, to operate the brake. The said strap is attached by rivets to a plate connected to a lug, *h*, projecting through a slot in the under side of the shield or casing F aforesaid.

In the pulling back of the yoke G or collar-ring I, its action against the lug *h* necessarily draws one branch of said strap forward, while the other is made to recede. The action of said strap on the pulleys before described will then cause the brake-blocks to be applied.

The weight is chiefly to prevent the application of the brake-blocks in slackening the traces or passing over trifling inequalities of the road-bed. I also use a cross beam or arm, Z, riveted at its center to one branch of said endless strap, (the one which recedes in locking,) so that said branch will carry this arm back with it. The respective ends of said arm (which is like a small single-tree) are connected, on opposite sides of the tongue Q, to the inner ends of the respective ordinary single-trees R. The effect is to draw the ends of said single-trees backward with it (as the traces are slackened) when the brakes come into action; but when the horses draw upon the traces the single-trees are restored to their proper position. The arm Z is also drawn forward again, as well as the sliding plate on lug *h*, by the action of the aforesaid strap and pulleys. But when it is desirable to back the vehicle without locking the wheels, I have a hinged stop, E, on the front casing, which can be turned forward against the yoke G, so that it prevents its action on the lug beneath, and relieves the strap.

For ordinary road-vehicles I show a ring, I, with breast chains or straps J, which may be used and operate in like manner as the yoke of a carriage-harness.

The tongue, when hinged, is prevented from dropping when the horses are disengaged by its connection with two branch straps, L.

Brake-bar U, slightly modified, can be applied to the front wheels of single-horse vehicles. Keepers V are then attached to the shaft, as shown in Fig. 3, and straps D are attached to the cranks formed in the bent brake-bar U. Each strap D passes round a pulley, under the shaft, and thence, through a ring on the breech-band, back to the single-tree on each side.

What I claim is—

1. In combination with an endless strap or chain, L, the rear pulley under the vehicle, and the front pulley in the cap or slotted case F on the end of the tongue Q, said cap being provided with a hinged lock-piece or stay, E, as and for the purposes specified.

2. In combination with the endless strap L, or its equivalent, the lug *h* on a sliding plate affixed to said strap at its forward portion, the cross-arm Z, by its center also affixed to said strap L, its ends being attached to the inner ends of single-trees R R, the brake-bar U, affixed to the rear portion of said strap L, and having arm P, carrying adjustable weight O′, to hold the brake-blocks from the wheels under ordinary inequality of motion, the whole substantially as and for the purpose set forth.

3. In combination with the weighted lever and brake U P O′, the branch straps L, connected with the foot-lever B, for operating the brake independently from the vehicle, as herein described.

CHAS. J. WALSER.

Witnesses:
W. B. WILEY,
JACOB STAUFFER.