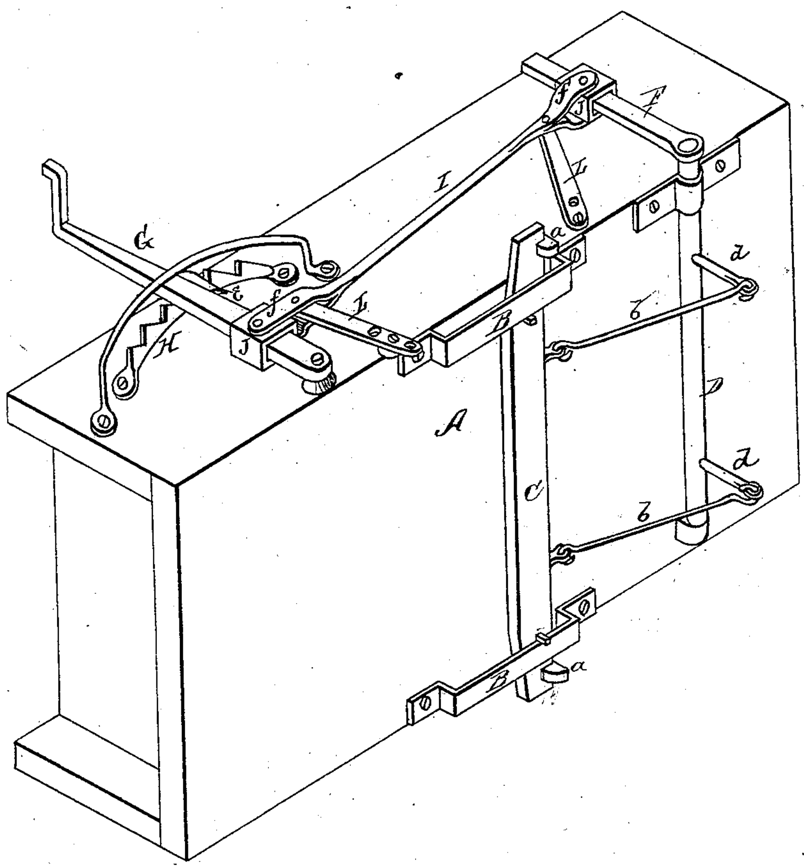
J. YENNE.

Brake-Lever for Vehicles.

No. 213,025. Patented Mar. 4, 1879.



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UNITED STATES PATENT OFFICE.

JOSEPH YENNE, OF SHOALS, INDIANA.

IMPROVEMENT IN BRAKE-LEVERS FOR VEHICLES.

Specification forming part of Letters Patent No. **213,025**, dated March 4, 1879; application filed January 21, 1879.

To all whom it may concern:

Be it known that I, JOSEPH YENNE, of Shoals, in the county of Martin and State of Indiana, have invented certain new and useful Improvements in Wagon-Brakes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which forms part of this specification.

The nature of my invention consists in the construction and arrangement of a lever-power for brakes for wagons, railroad-cars, and other purposes, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a perspective view from the under side of a wagon-body with brake and my lever-power applied thereto.

A represents an ordinary wagon-body, on the under side of which are suitable guides B B, in which the brake-bar C moves back and forth, said brake-bar being provided with the shoes *a a*. The brake-bar C is, by rods *b b*, connected with arms *d d*, projecting from a rocking shaft, D, which has its bearings in suitable boxes attached to the under side of the wagon-body A.

To one end of the rocking shaft D is attached an arm or lever, F, which extends up along the side of the wagon-body A.

G represents the operating-lever for the brake, which lever is pivoted to the side of the wagon-body A, and is provided with a suitable projection, *e*, to take into a ratchet-bar, H, secured to the wagon-body.

The two levers F and G are connected by a rod, I, which is formed or provided at each end with a fork, *f*, in which is pivoted a sleeve or collar, J, and these sleeves or collars are placed over the two levers and slide thereon.

The forks *f f* have links or bars L L pivoted in them, and the lower ends of these bars or links are pivoted to the side of the wagon-body, as shown. The lower ends of the bars or links L are provided with several holes, so as to change the pivots, as desired, for the purpose of regulating the stroke of the operating-lever, as may be desired.

As the operating-lever G is moved forward or back its collar J moves up or down on the same, thereby continually changing the power or leverage. For example, when the lever is thrown forward to tighten the brake the collar slides down lower and lower, giving additional power as the brake presses on the wheel. The movable collar at the other end of the connecting-rod I operates on the lever F in the same manner, except that as one collar moves down toward the short end of its lever the other collar moves up toward the long end of its lever. For a heavy wagon or car this double or compound lever is necessary, while for a light wagon one lever will probably be sufficient.

While this device gives a great power, at the same time, when the operating-lever G is thrown back, it throws the brake off a good distance away from the wheels. With an ordinary lever having a fixed fulcrum close to the short end of the lever, so as to get the greatest amount of power, it is impossible to entirely clear the wheel of the brake. The lever being so short below the fulcrum, in throwing it back it gives but little motion to throw off the brake beyond what is lost by the springing of the material, and the consequence is that the wheel will be rubbing the brake a little all the time.

With my improvement the lever throws off the brake sufficiently far to entirely clear the wheel.

The rocking shaft D is shown and described as connected to the body A, but it may equally as well be connected to the hounds, and in this latter case, when it is necessary to lift off the body, the connection on the lever G will slide off the end of the same, leaving the brake on the wagon.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a wagon or other brake, the combination, with the hand or operating lever G, of a brake or connecting rod provided with a loose collar sliding upon said lever, and also

with a pivoted link or bar for the purpose of automatically operating the connecting-rod and thus giving a variable leverage, substantially as described.

2. In a wagon or other brake, the combination, with levers F G, of connecting-rod I, furnished with a loose collar at each end and sliding upon said levers, and links or bars L L, all constructed and arranged to operate substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOSEPH YENNE.

Witnesses:

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