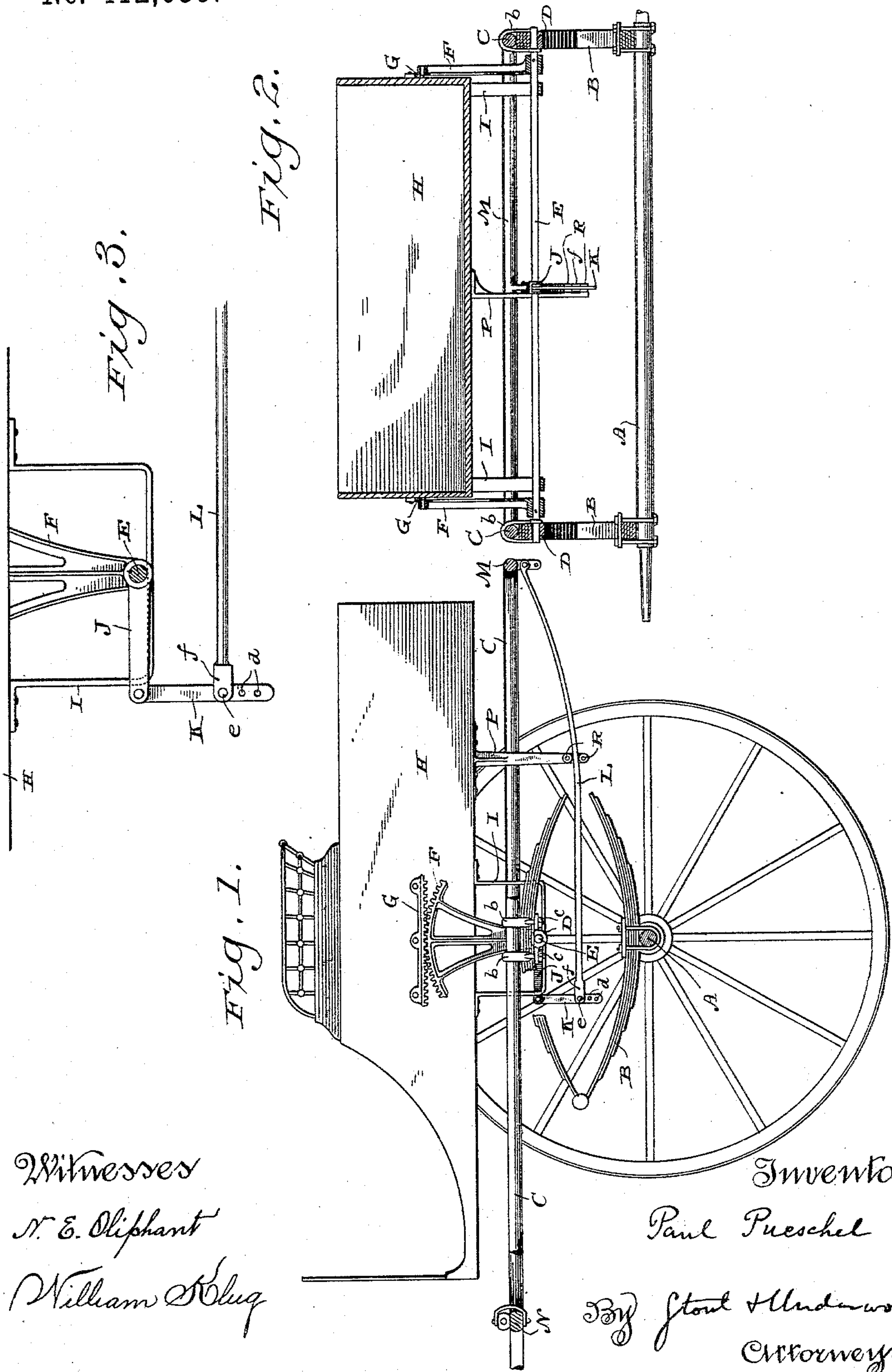


(No Model.)

P. PUESCHEL.  
TWO WHEELED VEHICLE.

No. 412,039.

Patented Oct. 1, 1889.



Witnesses  
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# UNITED STATES PATENT OFFICE.

PAUL PUESCHEL, OF MILWAUKEE, WISCONSIN.

## TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 412,039, dated October 1, 1889.

Application filed March 23, 1889. Serial No. 304,529. (No model.)

*To all whom it may concern:*

Be it known that I, PAUL PUESCHEL, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Two-Wheel Vehicles; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to two-wheel vehicles; and it consists in certain peculiarities of construction and combination of parts, to be hereinafter described with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 represents a side elevation of a two-wheel vehicle embodying my invention, the wheel nearest the observer being removed and the adjacent elliptic spring and side bar partly broken away for the purpose of better illustration; Fig. 2, a vertical transverse section of said vehicle with the wheels removed, and Fig. 3 a detail elevation of certain of the mechanism that forms part of my invention.

Referring by letter to the drawings, A represents the axle of a two-wheel vehicle; B, the elliptic springs clipped to the axle, and C the side bars clipped to said springs. The clips *b* and nuts *c*, that unite the springs B and side bars C, serve also to support plates D, provided with bearings for a shaft E, arranged parallel to the axle.

Fast on the shaft E are toothed segments F, that mesh with racks G on the sides of the vehicle-box H, as is best illustrated in Fig. 1, these toothed segments being the supports for said vehicle-box. In order to prevent disengagement of the segments and racks, loops I are secured to the under side of the vehicle-box to extend under and against the shaft E, these loops acting as stops to limit the upward movement of said vehicle-box.

Fast to the shaft E is a longitudinal arm J, and pivoted to this arm is a depending link K, provided with a series of perforations *d* for a pin *e*, that passes through the shackle end *f* of a lever L, the other end of this lever being shown as adjustably connected to the rear cross-bar M, that connects the side bars C, although it is obvious that this connection may be made with the front cross-bar N, the

latter being shown in Fig. 1. It may be found desirable to make the link K rigid with the arm J; but in either case the connection between the lever L and shaft E is a cranked one.

Depending from the bottom of the vehicle-box H is a bracket P, provided with anti-friction rollers R, arranged to impinge upon opposite sides of the lever L, as is best illustrated in Fig. 1.

The object of my invention is to permit the vehicle-box H to automatically adjust itself, so as to at all times have the center of gravity parallel to the axle A regardless of the amount or position of the load, as will be obvious from the following description of the operation of my invention.

If there be an excess of weight in the front portion of the vehicle-box H, the rear portion of the latter will tilt up, and the bracket P, drawing upon the lever L, will, through the link-connection K, actuate the longitudinal arm J to turn the shaft E in its bearings, and thereby operate the segments F with relation to the racks G to move said vehicle-box rearward until the center of gravity is over the axle A. In case the excess of weight is in the rear of the vehicle-box, the bracket is pushed down upon the lever, and the latter, through its link-connection with the longitudinal arm, actuates the shaft to turn the segments toward the front and likewise move the vehicle-box until the center of gravity is over the axle.

By having the lever L adjustably connected to the arm J and a cross-bar of the vehicle, I can vary the leverage and compensate for the height of the horse attached to said vehicle.

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

1. A two-wheel vehicle having a transverse rock-shaft connection between its box and running-gear, a longitudinal lever cranked at one end to the rock-shaft and connected at its other end to said running-gear, and a depending bracket on the box loosely connected to the lever, substantially as set forth.

2. A two-wheel vehicle having a transverse rock-shaft connection between its box and running-gear, a longitudinal lever cranked at



one end to the rock-shaft and connected at its other end to said running-gear, a depending bracket on the box loosely connected to the lever, and stops for limiting the upward movement of said box, substantially as set forth.

3. A two-wheel vehicle having its box provided with racks, a shaft journaled to the vehicle-springs, toothed segments fast on the shaft and meshed with the racks, a lever cranked at one end to the shaft and connected at its other end to a cross-bar of the vehicle, and a bracket depending from the vehicle-box to have loose connection with the lever, substantially as set forth.

4. A two-wheel vehicle having its box provided with racks, a shaft journaled to the vehicle-springs, toothed segments fast on the shaft and meshed with the racks, an arm extended from the shaft, a depending link pivoted to the arm, a lever having one end thereof shackled to the link and its other end con-

nected to a cross-bar of the vehicle, and a bracket depending from the vehicle-box to have loose connection with the lever, substantially as set forth.

5. A two-wheel vehicle having its box provided with racks, a shaft journaled to the vehicle-springs, toothed segments fast on the shaft and meshed with the racks, a lever cranked at one end to the shaft and connected at its other end with a cross-bar of the vehicle, a bracket depending from the vehicle-box, and anti-friction rollers arranged on the bracket to impinge on opposite sides of the lever, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

PAUL PUESCHEL.

Witnesses:

N. E. OLIPHANT,  
WILLIAM KLUG.