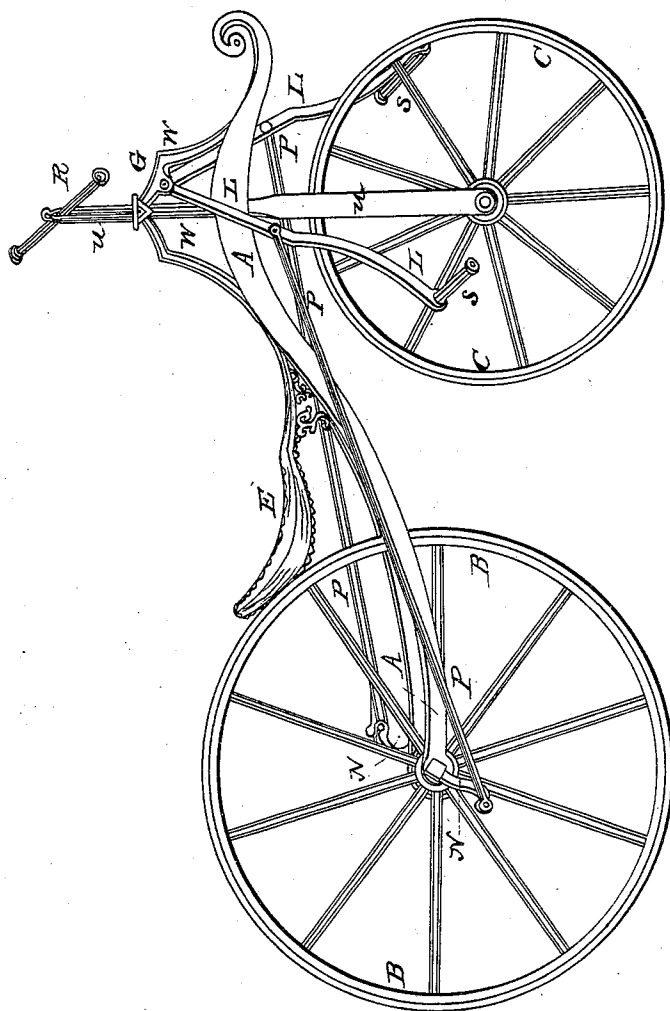


S. F. ESTELL.

Velocipede.

No. 87,033.

Patented Feb. 16, 1869.



WITNESSES
A. S. Newton
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SAMUEL F. ESTELL, OF RICHMOND, INDIANA.

Letters Patent No. 87,033, dated February 16, 1869.

IMPROVEMENT IN VELOCIPEDES.

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, SAMUEL F. ESTELL, of Richmond, in the county of Wayne, and State of Indiana, have invented a new and useful Improvement in Velocipedes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

The nature of my invention relates to an improved method of constructing velocipedes, whereby the propelling-power is communicated to the hind wheel by means of cranks and shafts, or pitman-rods, the latter being connected at their forward ends with levers, that are worked with the feet.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

The coupling-bar A is divided, and embraces the larger wheel, B, either limb of said bar being provided with suitable boxing, in which the axle of the wheel revolves.

The vertical shaft U is in like manner divided, and embraces the forward wheel, C.

The upper end of said shaft passes through the coupling-bar A, and is further stayed by means of the curved brace W, which is firmly riveted to the bar A.

The pendent levers L L are pivoted to the brace W at G, and are provided at their lower ends with the pins or stirrups S S.

Below the points of attachment of the pitman-rods P P, the pendent levers L L are curved outward, to allow greater freedom, in turning, to the front wheel C.

The cranks N N are rigidly attached to the axle of the wheel B, and are pivoted to the pitman-rods P P. E represents the seat, and R, the tiller; by means of which the vehicle is guided when in operation.

Having thus fully described my said invention,

What I claim, and desire to secure by Letters Patent, is—

The velocipede, in which the brace W is secured to the front part of the reach forming part of the bearing for the vertical shaft U, and supports for the pendent levers L L, secured to the brace, one on each side, in combination with rods P P, connected with cranks N, and attached to the pendent levers L L, by means of pivots, all combined as herein shown and described.

SAMUEL F. ESTELL.

Witnesses:

ARTEMAS ROBERTS,
W. P. ESTELL.