S. P. WATT.

Velocipede.

No. 203,968. Patented May 21, 1878.

Fig. 1

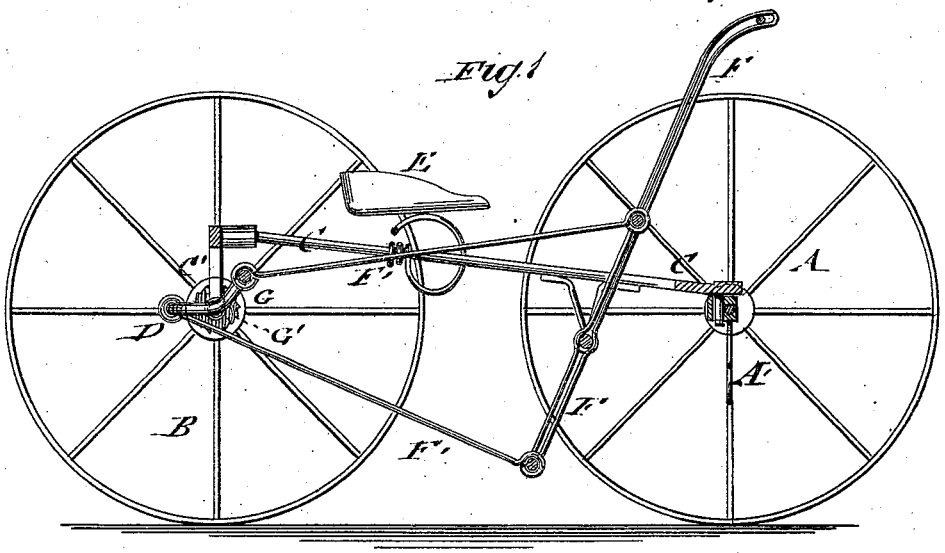


Fig. 2.

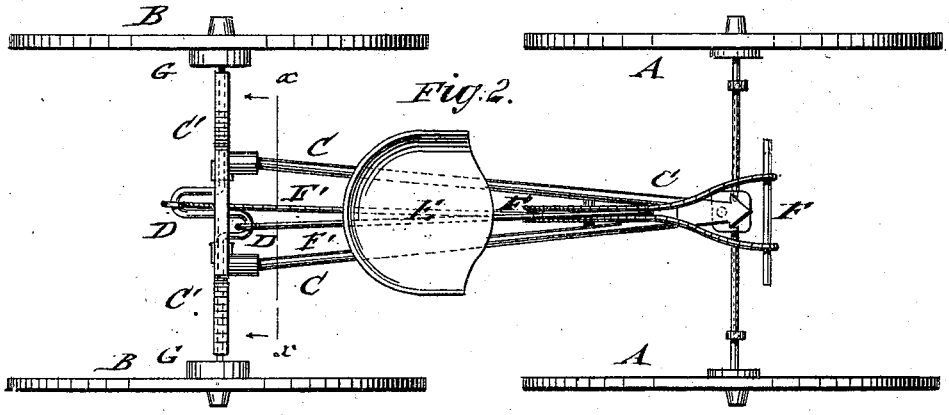


Fig. 3.

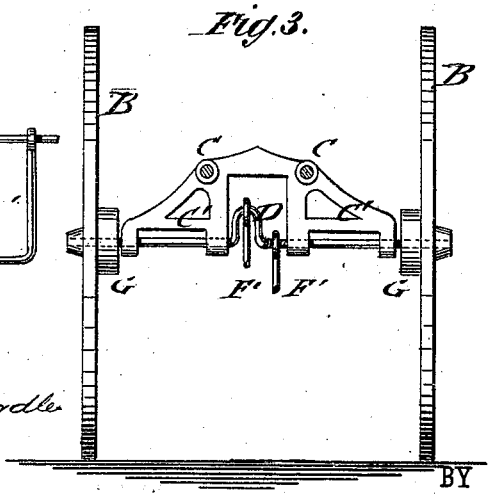
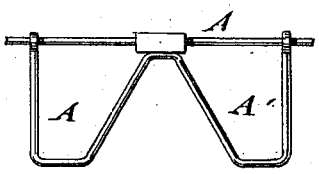


Fig. 4.



WITNESSES:

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SERN P. WATT, OF JAMESTOWN, NEBRASKA.

IMPROVEMENT IN VELOCIPEDES.

Specification forming part of Letters Patent No. **203,968**, dated May 21, 1878; application filed April 11, 1878.

To all whom it may concern:

Be it known that I, SERN P. WATT, of Jamestown, in the county of Dodge and State of Nebraska, have invented a new and Improved Velocipede, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a sectional side elevation of my improved velocipede; Fig. 2, a top view; Fig. 3, a vertical transverse section of the same on line *x x*, Fig. 2; and Fig. 4 a detail view of the stirrups of the front axle.

Similar letters of reference indicate corresponding parts.

This invention has reference to an improved velocipede of that class known as "four-wheeled" or "carriage" velocipedes, and which are operated by lever action, operated by hand, and guided by means of the feet; and the invention consists of a front axle, with stirrups for the feet, in connection with a compound-lever connection with the double crank of the rear axle. The hubs of the hind wheels have inner boxes, with ratchets that engage spring-pawls of the rear axle, to produce the revolving of the rear driving-wheels.

Referring to the drawing, A A are the front and B B the hind wheels of my improved velocipede. On the axles of the front and rear wheels is supported a frame, C, that is made of two side rods, that are arranged in **V** shape, and connected by a king-bolt to the center of the front axle, and bolted at the rear to a raised frame or casting, C′, of the hind axle. The casting C′ is open at the center part, and connected by bearings or sleeves at the lower part with the rear axle, having a double crank, D. The middle open portion of the supporting-casting C′ admits the unobstructed revolving of the double crank D.

The frame C supports a powerful spring-seat, E, which may be adjusted forward or backward on the rods of the frame to suit the rider.

The front axle is provided with pendent stirrups A′ below the axle, into which the feet are placed for giving direction to the velocipede. Between the rods of the frame C is fulcrumed to fixed brackets or hangers of the same a hand-lever, F, to which are pivoted, equidistantly from the fulcrum, the crank-rods F′, which are applied to opposite points of the double crank of the rear axle. By working the reciprocating hand-lever with the hands power is transmitted to the double crank-axle of the hind wheels, and thereby the velocipede propelled.

The hubs of the hind wheels are provided at the inside with boxes G, having interior ratchets, that are engaged by spring-pawls G′, for the purpose of turning the hind wheels and propelling the velocipede, but admitting the backward motion of the wheels.

The boxes are lined with Babbitt metal, and the rear axle preferably stiffened by strong braces and lower cross-bars.

The velocipede may be constructed with great lightness, and propelled by means of the double crank with greater facility, as the jerking of the single crank is overcome and the friction in the boxes diminished.

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

1. A velocipede having a front axle with guide-stirrups, a rear crank-axle, a connecting seat-frame, and a reciprocating hand-lever and crank-rods, connecting with double crank of hind axle, substantially as shown and described.

2. The combination of the axle-connecting seat-frame, resting on the front axle and on a recessed supporting-frame of the hind axle, with a hand-lever fulcrumed thereto, connecting crank-rods and double crank of the hind axle, substantially as specified.

SERN P. WATT.

Witnesses:

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