

(No Model.)

T. MCGREGOR.
VELOCIPEDE.

No. 253,739.

Patented Feb. 14, 1882.

Fig. 1.

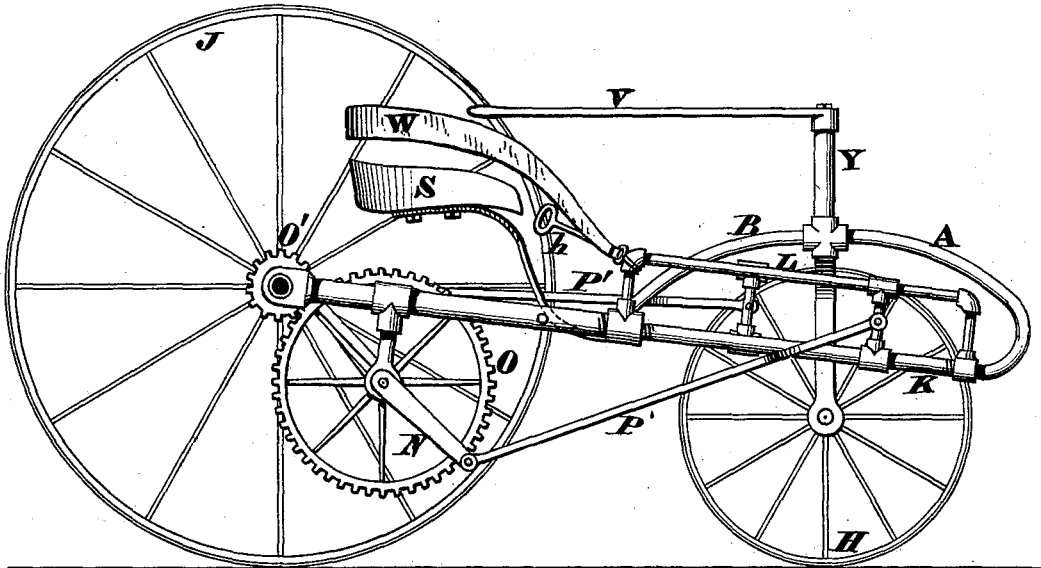


Fig. 2.

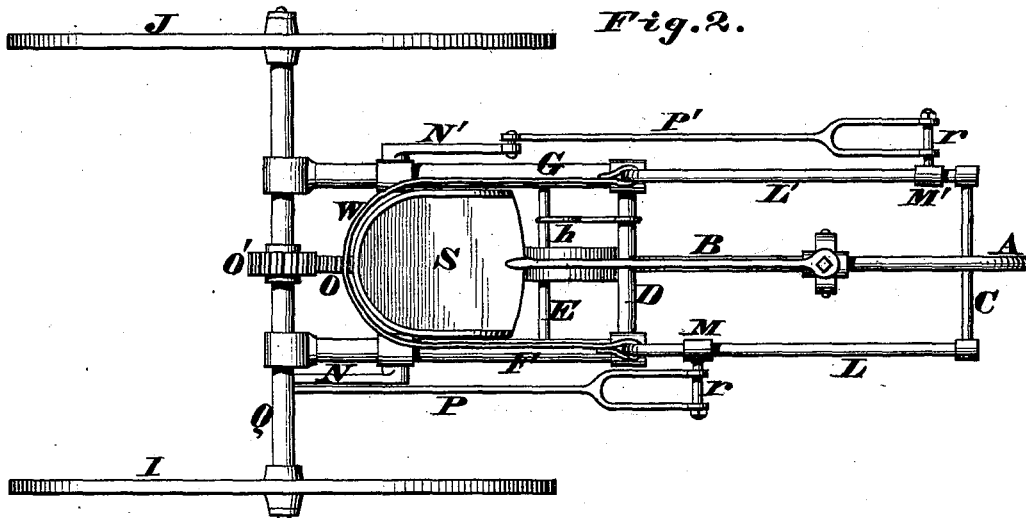
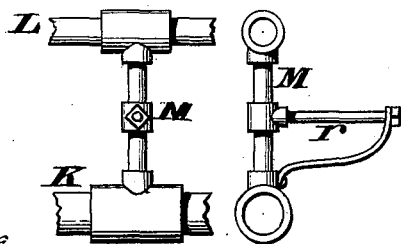


Fig. 3.



Attest.
Eus A Meyer
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Inventor,
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UNITED STATES PATENT OFFICE.

THOMAS MCGREGOR, OF DAYTON, OHIO, ASSIGNOR TO ANNA MARIA
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VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 253,739, dated February 14, 1882.

Application filed April 8, 1881. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MCGREGOR, of Dayton, Montgomery county, Ohio, have invented a new and useful Improvement in Velocipedes, of which the following is a specification.

My invention relates to that class of velocipedes known as "tricycles;" and the novelty consists in the construction and combination of the parts, all as will be herewith set forth and specifically claimed.

In the accompanying drawings, Figure 1 is a side elevation of a tricycle having the rear hind wheel removed in order to allow all the mechanism to be clearly seen. Fig. 2 is a plan view of the tricycle having both rear wheels attached. Fig. 3 shows respectively side and end views of the cross-head to which the foot-rest and pitman are attached.

Similar letters refer to similar parts throughout the several views.

The arches A B, cross-pieces C D E, and side pieces, F and G, compose the frame-work. S is the seat upon which the rider sits. H is the front guiding-wheel; I and J, the rear wheels. K and L L' are guide-pieces attached to the both sides of the tricycle. To the side guides are attached cross-heads M and M' in such a manner that they can slide back and forth, as desired. These cross-heads have projecting from them a short horizontal rod, r, at right angles to the guides K L, and to this rod are fastened pitmen P and P', which are forked at the point of attachment, as shown, thus forming a foot-rest for the rider. The rear end of this pitman is fastened to cranks N and N', which operate the pinion O under the seat S. This pinion meshes into and in turn operates the smaller pinion, O', rigidly attached to the axle Q, carrying the rear wheels, J and L.

W is a strap, of any suitable material, fastened to the cross-piece D, or other part of the machine, by snap-hooks or other desirable means. This strap is designed to be placed around the back or hips of the person operating the tricycle. By this the operator can so brace himself between the back and his work as to secure much more power, and conse-

quently speed, than heretofore, and this without any extra expense to the muscles of his body. The handle h on the cross-piece D can also be used with the hand that is free in order to obtain additional bracing.

V is a hand-lever connected to the front wheel, H, by means of the upright Y, and is used for directing the course of the machine.

The operation is as follows: The rider having taken his position on the seat, rested his feet upon the foot-rests or stirrups, and placed the band or strap W around his back or hips, propels the velocipede by alternately working his feet backward and forward. In thus working he, by means of the foot-rests, forces the cross-heads M back and forth upon the guides K and L and L', and the pitman P, acting conjointly with the cross-head, revolves the pinion O, and this in turn gears into and revolves the smaller pinion, O', on the axle Q, and carries with it said axle and the rear wheels, I and J, thus moving forward or backward, as desired. Now, the rider by bracing himself against the band W can exert much more power and acquire more speed than could be obtained if the same were detached from the machine. And as additional means of bracing I employ the handle h, which can be used with the unemployed hand, the other being used to steer the apparatus. Of course if it should be desirable to have the steering-wheel in the rear instead of in the front, as shown, it can be so constructed, the only difference being the change in the position of the rider and adapting the connections to the change.

The material of which I make the frame of my tricycle and its various other connections, as shown, is gas-pipe, that being light and easily put together; but I do not limit myself to this alone, as any other suitable material may be used. I also do not limit myself to the form of the band or strap W and the way it is connected to the apparatus, as the same result may be accomplished in other ways, as by fastening a belt around the hips, and by snap-hooks, or otherwise attaching separate straps to the belt, and in turn fastening them to the machine.

If desired, a double arrangement of sliding

cone-gears may be employed upon the driving-axle with a handle under control of the rider, whereby he can by shifting the gears, as in the head of a lathe, increase or diminish the speed of the machine without varying the stroke of his legs.

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

1. In a tricycle, the combination, with the substantially horizontal frame, of the cross-heads M, arranged to slide back and forth on the guides K L L', and provided with stirrups r, and the pitmen P P', connected at their forward forked ends to said stirrups, and at their rear ends to cranks upon the driving-shaft, substantially as and for the purpose specified.

2. In combination with a tricycle, the guides K, L, and L', along which the cross-heads slide and by which they are supported, as and for the purpose specified.

3. In a tricycle having substantially horizontally-sliding driving pedals or stirrups, the arrangement and combination, with such pedals, of the seat S and band W, whereby a firm bracing is provided for the driver, substantially as described.

In testimony whereof I have hereunto set my hand.

THOMAS MCGREGOR.

Witnesses:

WM. H. EVANS,

PATRICK H. GUNCKEL.