

(No Model.)

W. V. SNYDER.  
TRICYCLE.

No. 492,060.

Patented Feb. 21, 1893.

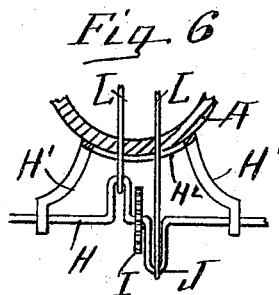
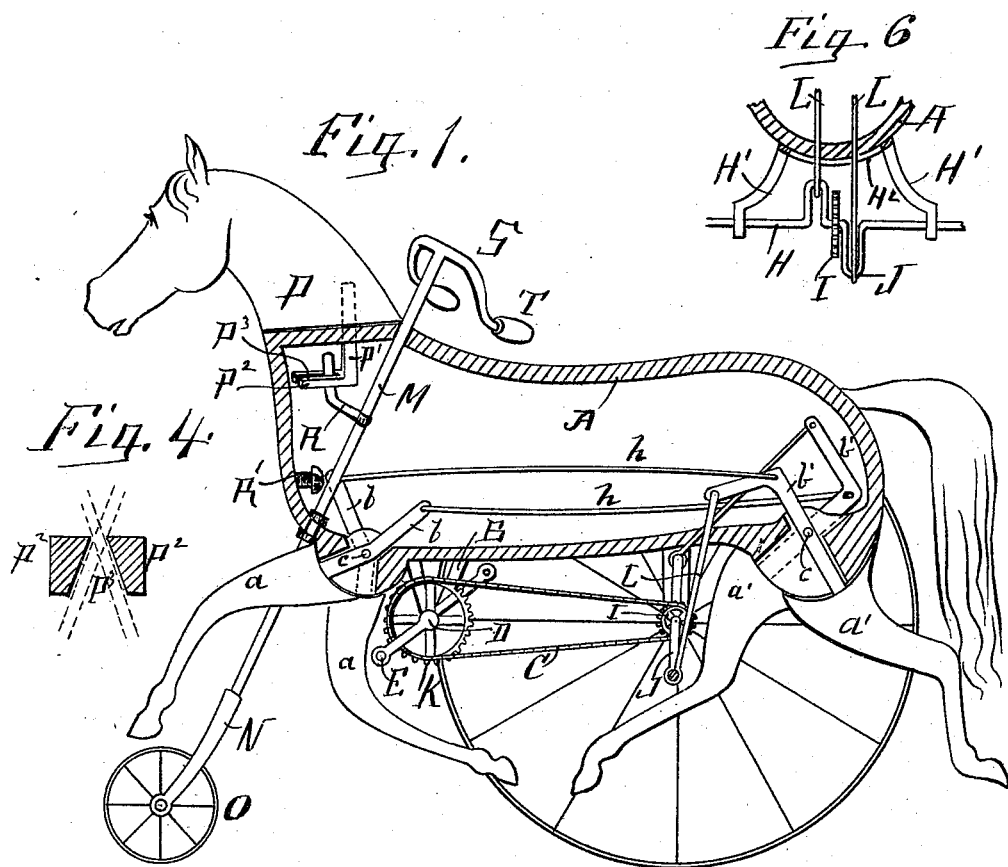


Fig. 4.

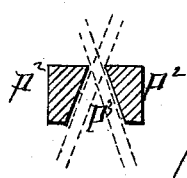


Fig. 3.

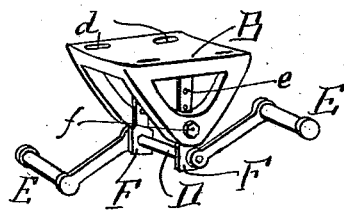


Fig. 2.

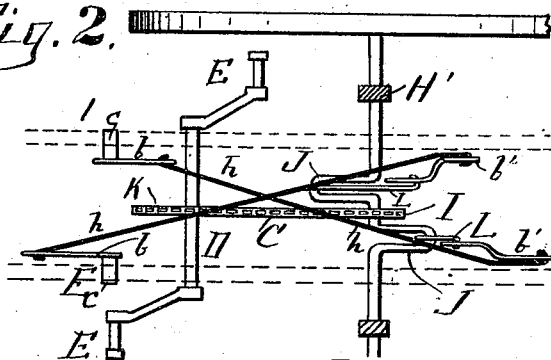


Fig. 5.



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# UNITED STATES PATENT OFFICE.

WALDO V. SNYDER, OF CANTON, OHIO.

## TRICYCLE.

SPECIFICATION forming part of Letters Patent No. 492,060, dated February 21, 1893.

Application filed August 1, 1892. Serial No. 441,807. (No model.)

*To all whom it may concern:*

Be it known that I, WALDO V. SNYDER, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Tricycles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1, is a longitudinal section. Fig. 2, is a longitudinal section showing the location of the pedal shaft and its attachments together with the connecting wires. Fig. 3, is a detached view of the pedal shaft bracket, showing the pedal shaft properly located, and its sprocket wheel removed. Fig. 4, is a transverse section of the horizontal portion of the head connecting arm, and illustrating the different positions of the operating-arm. Fig. 5 is a transverse section of a portion of one of the sides of the bracket, illustrating the position of one of the adjusting arms. Fig. 6, is a view of the crank shaft showing the same properly attached to the body of the horse.

The present invention has relation to tricycles, and it consists in the different parts and combination of parts hereinafter described and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents the body of the animal, which in this instance is the body of a horse and may be of any desired size, reference being had to the size of the tricycle designed to be constructed.

To the body A, are pivotally attached the legs *a*, and *a'* by means of the bars or arms *b*, and *b'*; all of said bars being held in position by means of cross rivets or bolts *c*, which cross rivets or bolts pass through the arms *b*, and *b'*, which rivets or bolts are securely fixed to the body of the animal in any convenient and well known manner.

To the bottom or under side of the body A, and the forward portion thereof, is attached the adjustable bracket B, the top or upper part thereof, being formed concave, for the

purpose of fitting the bottom or under side of the body A.

For the purpose of adjusting the bracket B, back and forth upon the body A, the elongated slots *d*, are provided, which elongated slots receive the clamping bolts.

The object and purpose of adjustably attaching the bracket B, to the body A, are to provide a means for tightening the drive chain C.

The pedal shaft D, is provided with the pedals E, which may be of any desired style or kind, and is journaled in vertically adjustable bars F. The bars F, are each provided with a series of apertures such as *e*, which apertures are for the purpose of receiving the clamping bolts *f*, which clamping bolts pass through apertures formed in the sides of the bracket B.

For the purpose of holding the pedal shaft D, in proper alignment, with reference to its bearings, the apertures *e*, are formed the same distance apart in each of the bars F.

The object and purpose of vertically adjusting the pedal shaft D, together with the pedals E, are to provide a means for adjusting the tricycle proper to different sized riders.

For the purpose of assisting in holding the bars F, in proper position, and preventing the same from trembling, when power is applied to the pedal E, the inner sides of the bracket arms B, are provided with the grooves *g*, which grooves receive and assist in holding the bars F. The crank shaft H, is preferably journaled to the arms H', which arms may be united at their top or upper ends by means of the bent or curved bar H<sup>2</sup>, which bent or curved bar is securely attached to the bottom or under side of the body A. The crank shaft H is provided with the sprocket wheel I, which sprocket wheel is located upon the shaft H between the oppositely timed cranks J; said sprocket wheel being for the purpose of communicating rotary motion to the shaft H, by means of the drive chain C and the sprocket wheel K. To the cranks J, are properly journaled the pitmen L, which pitmen extend up into the body A, and are pivotally connected to the angled portions of the arms *b'*. To the arms *b'*, are pivotally connected the connecting wires *h*, which connecting

wires extend forward, and their front or forward ends pivotally attached or connected to the top or upper ends of the arms *b*. For the purpose of causing the legs *a*, and *a'* to assume the movements of a living animal, the wires *h*, are crossed as illustrated in Fig. 2. The front or forward end of the body *A*, is supported at the required height by means of the inclined bar *M*, the bottom or lower end of said bar being provided with the yoke *N*, to which yoke is properly journaled the wheel *O*. To the body *A*, is pivotally attached the head by means of the connecting bar *P'*, said connecting bar extending a short distance into the head *P*, and also downward a short distance into the body *A*, substantially as illustrated in Fig. 1: The bottom or lower end of the connecting bar *P'*, is provided with the horizontal portion *P<sup>2</sup>*, which horizontal portion is provided with the slot or opening *P<sup>3</sup>*, which opening is formed wider at the bottom or under side, as illustrated in Fig. 4 for the purpose hereinafter described.

To the bar *M*, is securely attached the arm *R*, which arm extends up through the slot *P<sup>2</sup>* as illustrated in Fig. 1. It will be understood that as the rod *M*, is rotated, the arm *R* will oscillate and carry with its oscillation the connecting bar *P'*, which in turn communicates movement to the head *P*.

For the purpose of preventing the bar *R*, from binding as the rod *M* is rotated, the slot *P<sup>3</sup>* is formed with a wider opening upon its bottom or under side, thereby permitting the arm *R* to oscillate without binding, and at the same time without causing any slack motion.

For the purpose of producing a clicking noise as the tricycle is propelled, and thereby produce the natural sound of the horse striking upon the ground or pavement, the studs *R'* are provided, which metal studs are screw threaded for the purpose of adjusting their heads to or from the body of the animal, and are so adjusted that as the arms *b* are brought forward they will strike against the heads of the studs *R'*.

In the drawings, but one stud is shown, but it will be understood that two studs should be employed, one for each of the arms *b'*, or if desired a plate may be formed of such a length

that the arms *b*, and I prefer to form a separate stud or pin for each arm *b*, thereby providing a better means for adjusting the studs to each respective arm *b*.

To the top or upper end of the rod *M*, is securely attached the cross bar *S*, which cross bar is provided with the ordinary guide handles *T*, said handles being for the purpose of guiding the tricycle proper. It will be also understood that a saddle may be attached to the body *A*, in any convenient and well known manner.

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

1. The combination of the body *A*, having pivoted thereto the legs *a*, and *a'* provided with the arms *b*, and *b'*, the crank shaft *H*, provided with the oppositely timed cranks *J*, the pitmen *L*, the cross wires *h*, the sprocket wheels *I* and *K*, the drive chain *C*, the pedal shaft *D*, the adjustable bracket *B*, and the vertically adjustable arms *F* substantially as and for the purpose specified.

2. The combination of the body *A*, provided with pivoted legs, the rod *M*, provided with the yoke *N*, carrying the wheel *O*, the arm *R*, fixed to the rod *M*, the connecting rod or bar *P'*, provided with the slot *P<sup>2</sup>*, having a wider opening upon its wider side, and the pivoted head *P*, substantially as and for the purpose specified.

3. The combination of the body *A*, provided with the pivoted legs *a* and *a'*, provided with the arms *b*, and *b'*, the connecting wires *h*, the crank shaft *H*, the pitmen *L*, and the studs *R'*, substantially as and for the purpose specified.

4. The combination of the adjustable bracket *B*, provided with the elongated slots *d*, and the recesses *g*, the vertically adjustable bars *F*, provided with a series of apertures *e*, and the clamping bolts *f*, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WALDO V. SNYDER.

Witnesses:

CHAS. M. STANDS,  
F. W. BOND.