(No Model.) 2 Sheets—Sheet 1.

J. McCOY.

VELOCIPEDE.

No. 397,015. Patented Jan. 29, 1889.

Fig. 1.

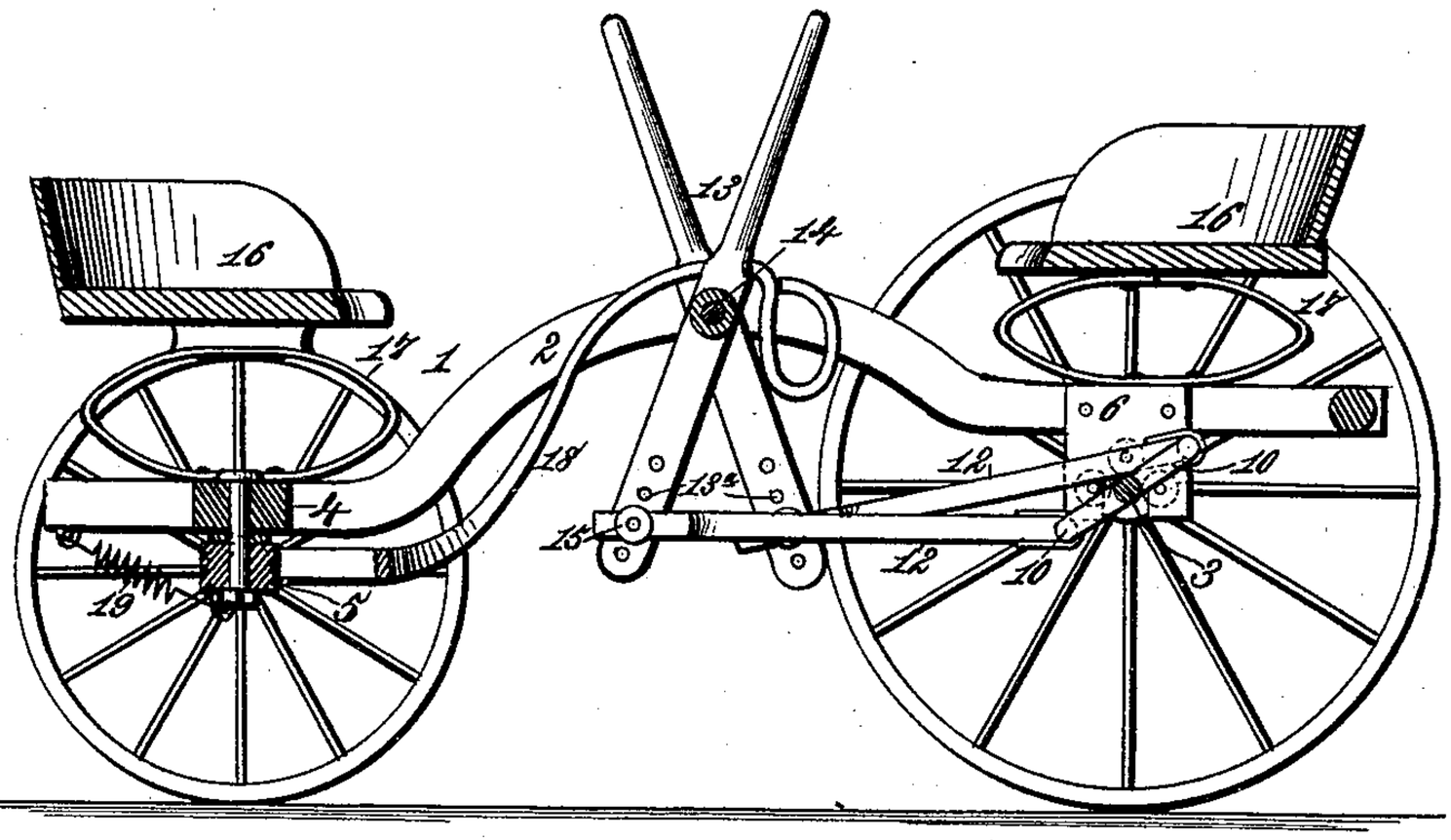
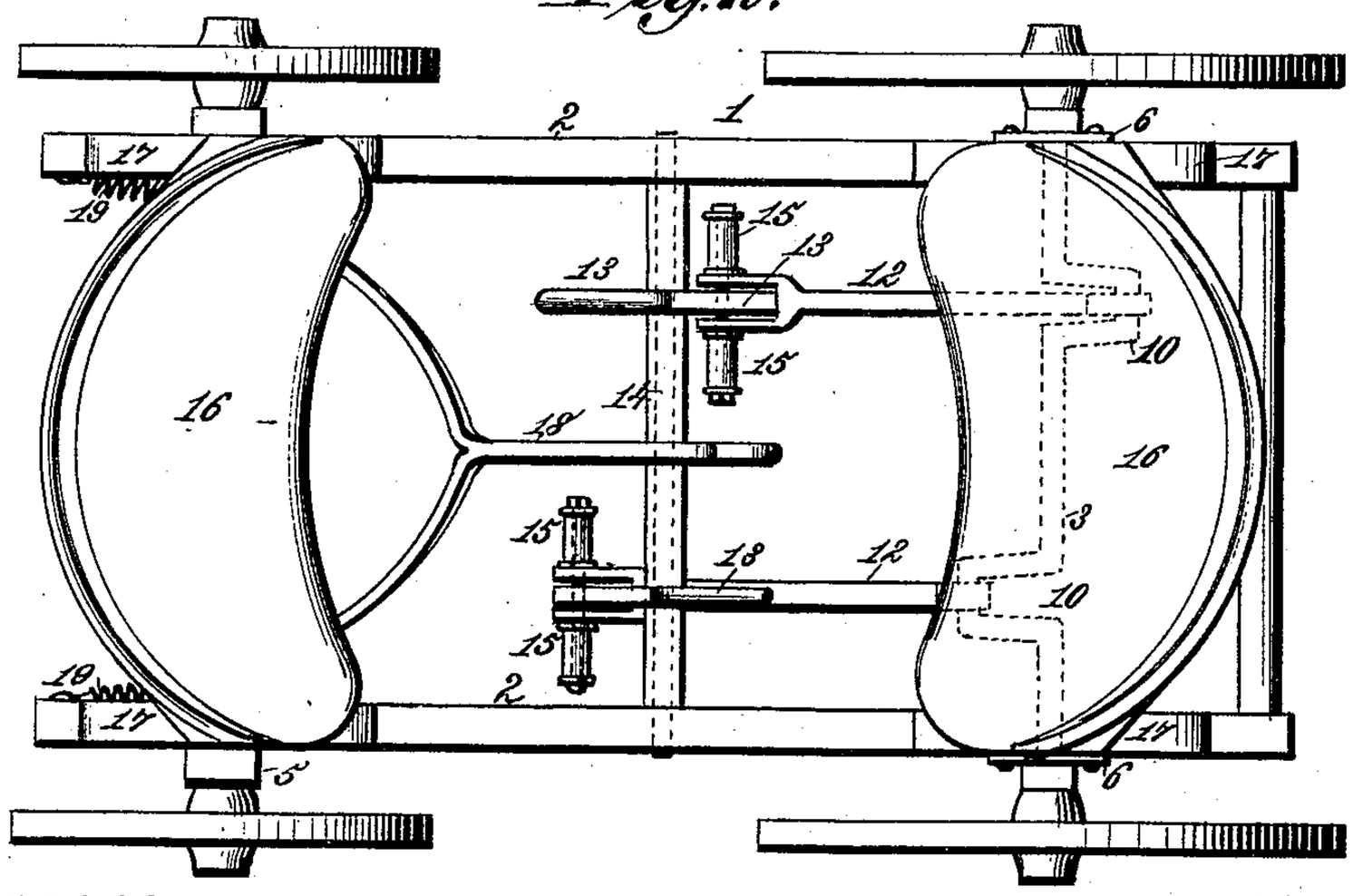


Fig. 2.



Witnesses.
Robert Ewell,
J. A. Rutherford.

Inventor.
Joseph McCoy,
By James L. Norris.
Atty.

(No Model.) 2 Sheets—Sheet 2.

J. McCOY.

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Fig. 3.

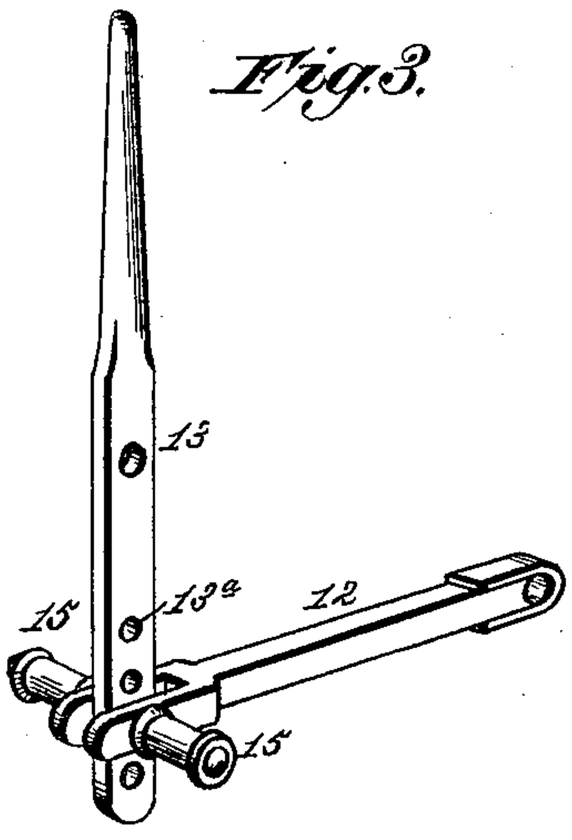


Fig. 4.

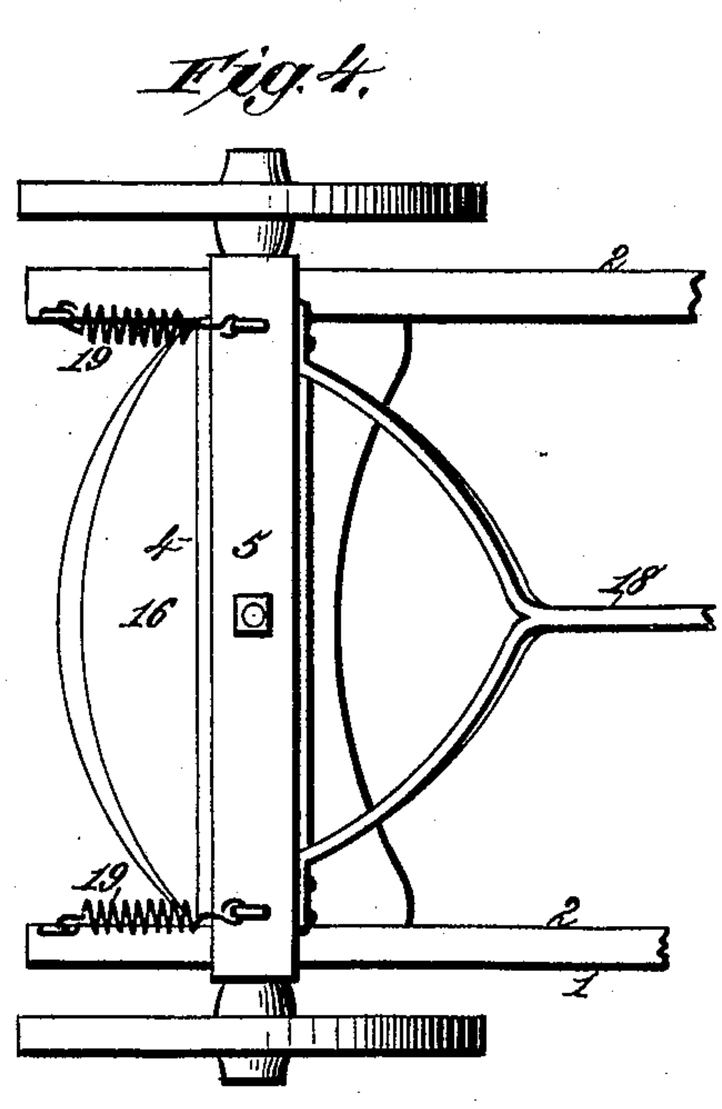


Fig. 5.

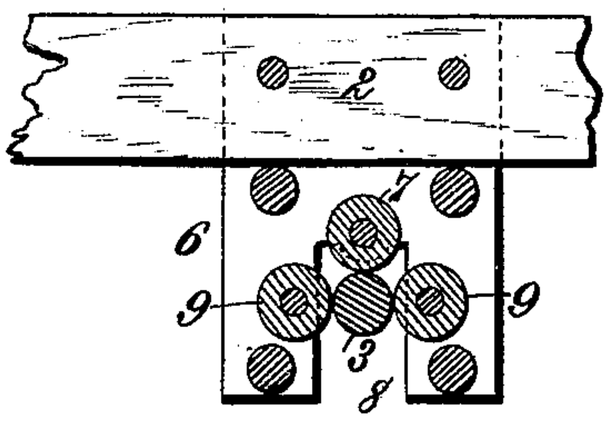
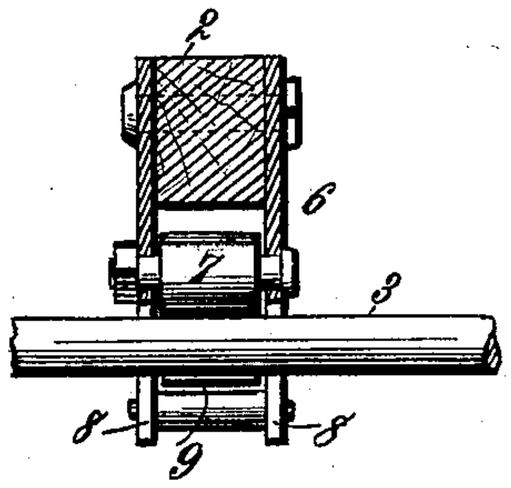


Fig. 6.



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Joseph McCoy.
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Atty.

UNITED STATES PATENT OFFICE.

JOSEPH McCOY, OF BALTIMORE, MARYLAND.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 397,015, dated January 29, 1889.

Application filed April 11, 1888. Serial No. 270,313. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH McCOY, a citizen of England, residing at Baltimore, in the State of Maryland, have invented new and useful Improvements in Velocipedes, of which the following is a specification.

My invention relates to velocipedes, and the purpose thereof is to provide a simple and easily-operated mechanism capable of propulsion by either one or two persons, using either hands or feet, or both in unison, and having such construction as to render it a novel and practical road-machine.

To these ends the invention consists in the several novel features of construction and new combinations of parts, hereinafter fully set forth, and then definitely pointed out in the claim.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of a machine embodying my invention. Fig. 2 is a plan view of the mechanism shown in Fig. 1. Fig. 3 is a detail perspective, enlarged, of one of the lever-treadles and its several connections or attachments. Fig. 4 is an inverted plan view of the forward part of the machine, showing the centering-springs. Figs. 5 and 6 are detail vertical sections showing the frictional bearings of the driving-axle.

In the said drawings, the reference-numeral 1 denotes the frame of the machine, composed of two similar parallel arms or bars, 2, mounted at the rear upon an axle, 3, and connected in front by a cross-beam, 4, upon which the front axle or steering-bar, 5, is centrally pivoted. At the rearward end the side bars of the frame are provided with housings 6, bolted to the opposite sides of each bar and provided with friction-rollers 7, centrally journaled and having their peripheries projecting beyond the ends of central vertical slots, 8, in which the axle lies to enable the friction-rolls 7 to rest thereon. Upon each side of said channel or slot is journaled a similar friction-roll, 9, having the surface projecting beyond the parallel edges of the slot and abutting against the axle in front and behind, thereby affording a perfect friction-bearing upon all sides.

Upon the rearward axle, 3, are formed two opposite cranks, 10, upon which are mounted pitmen 12, having their forward ends connected to the lower extremities of two levers, 13, fulcrumed upon a transverse bar, 14, and having their handle ends rising above said fulcrum-bar, the latter being supported in the side bars of the frame, and at or about the central point thereof. At the point of attachment of each lever to the pitman, and upon each side of each lever, is arranged a foot bearing or treadle, 15.

Upon the side bars of the frame, and at both the rear and forward ends thereof, are mounted seats 16, facing each other and preferably supported upon springs 17, this arrangement not only bringing said seats into such position as to enable the operators, one or both, to operate the levers 13 by hand, but also enabling them to place their feet upon the treadle-bearings 15 and assist the hand operation of such treadle by the action of the feet. The arrangement is such that while the rider upon the rearward seat will put his feet upon the treadle-bearings between the two levers 13 the operator upon the front seat will place his feet upon the bearings on the outside of said levers, thereby enabling both to operate in unison without interfering one with another.

Mounted upon the pivotal axle or steering-bar 5 is a rigid tongue, 18, curved upward and rearward until its end lies between the two levers 13, where it may conveniently be clasped between the knees of the rider sitting upon the rearward seat, who, by simply inclining his knees from one side to the other, can steer the machine to any point. Connecting the pivoted steering-bar 5 to the rigid axle or cross-beam 4 are two springs, 19, of equal tension and located at substantially equal distances from the pivotal center. These springs will center the steering-bar at all times when the tongue or rudder 18 is not positively operated.

By my invention the machine may be driven by one or both of the riders, who may use either hands or feet, or both. It is steered by the rearwardly-seated rider, and as all the movements are very nearly horizontal the labor of propelling the machine is comparatively small, while by the arrangement of the foot-treadles on both sides of the levers there is no possibility of one rider interfering with the other. When used upon an ordinary roadway, the speed is very considerable in pro-

portion to the power expended. A box may be attached to the rear or elsewhere for the reception of baggage, fishing-tackle, &c. The lower ends of the levers 13 are provided with openings 13ª at intervals to permit the attachment of the pitmen at different points, according to the degree of power required.

What I claim is—

A four-wheel road-machine consisting of the front and rear wheeled axles, the arched parallel side bars rigidly secured at their rear to the opposite ends of the rear cranked axle and rigidly connected at their front by a transverse beam carrying the swiveled front axle, the transverse bar connecting the arched side bars adjacent to the middle of their length, a pair of hand-levers, both hung intermediate their upper and lower ends on the transverse bar, a pair of pitmen connected, respectively, at their rear to the cranks of the rear axle and at their front ends pivoted to the lower extremities of the hand-levers, and each provided with a pair of oppositely-projecting treadles, and front and rear seats located, respectively, over the front and rear axles, all substantially as and for the purposes described.

In testimony whereof I have affixed my signature in presence of two witnesses.

JOSEPH McCOY.

Witnesses:
J. A. RUTHERFORD,
JOS. L. COOMBS.