(No Model.) 4 Sheets—Sheet 1.

N. T. QUEVEDO.

VELOCIPEDE.

No. 427,110. Patented May 6, 1890.

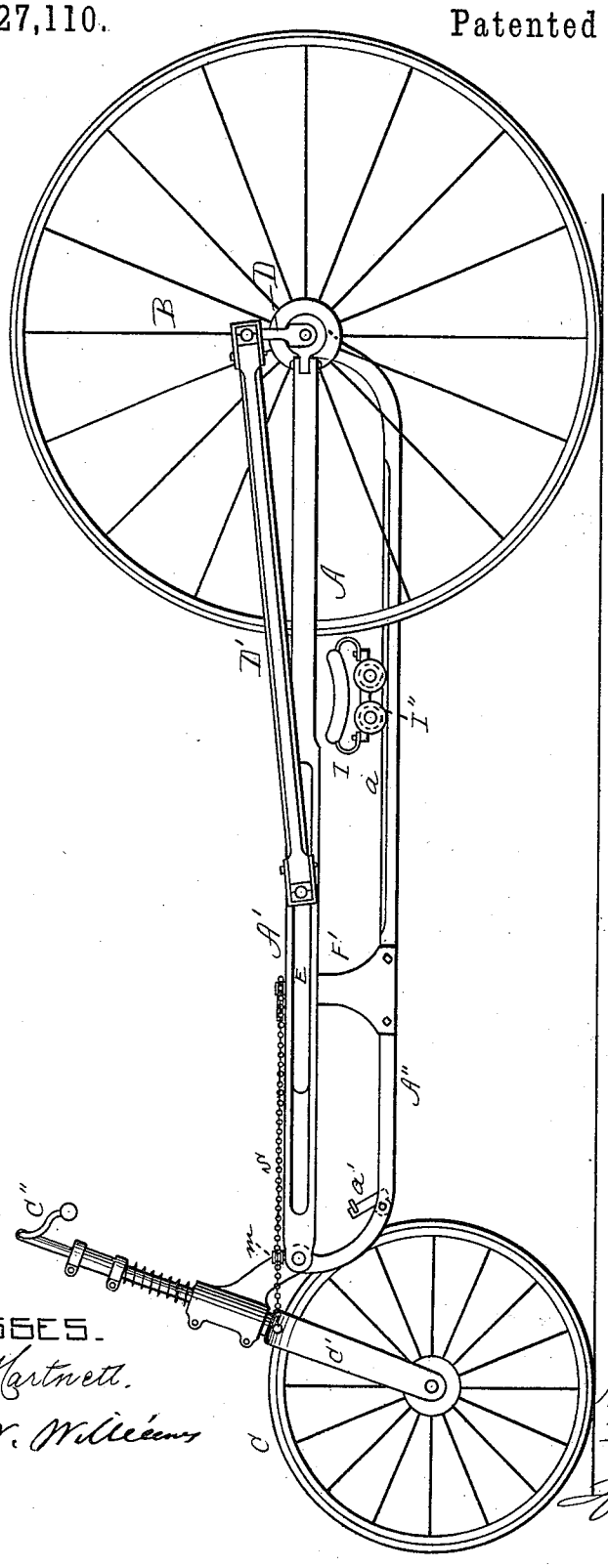


FIG. 1.

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N. T. QUEVEDO.

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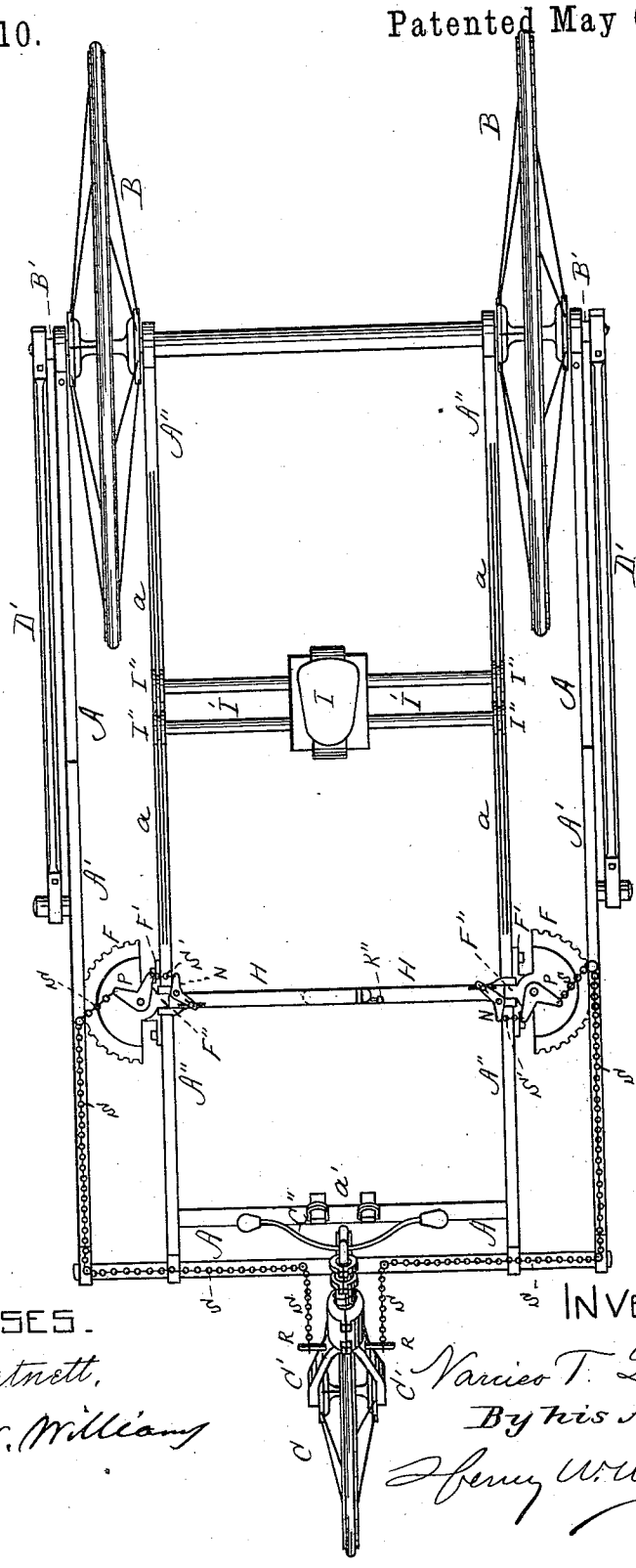


Fig 2.

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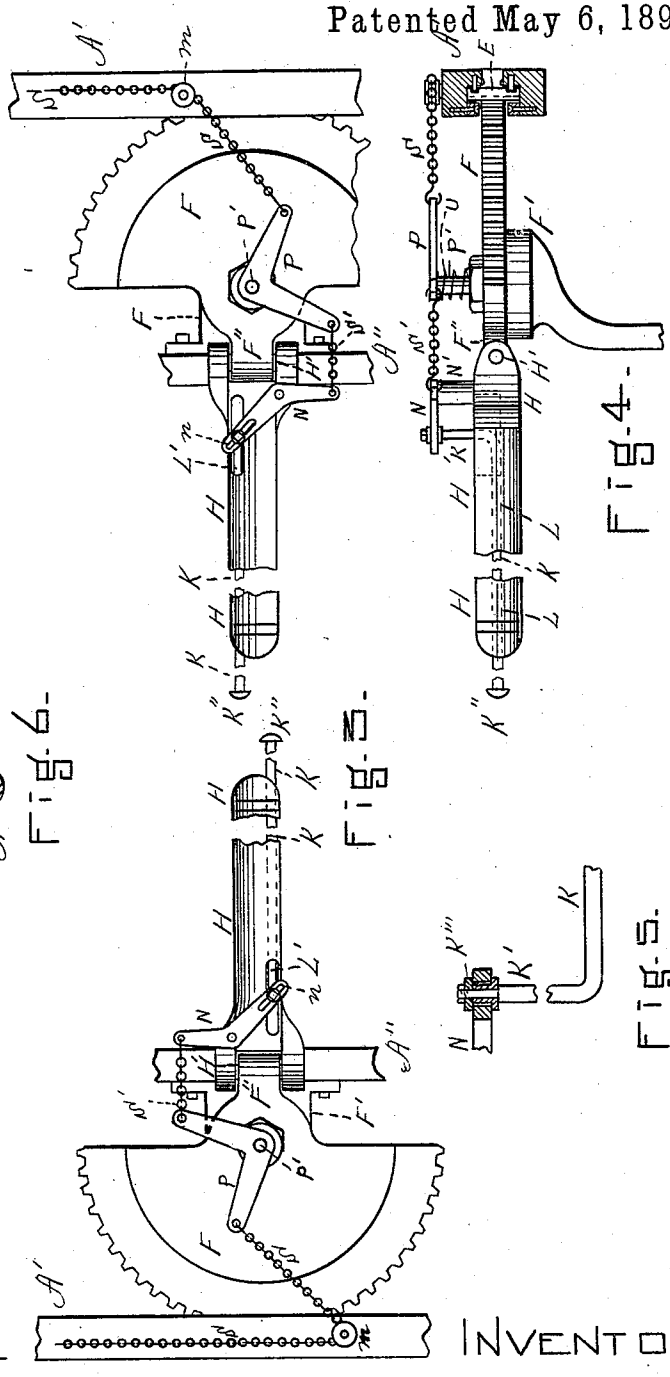
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VELOCIPEDE.

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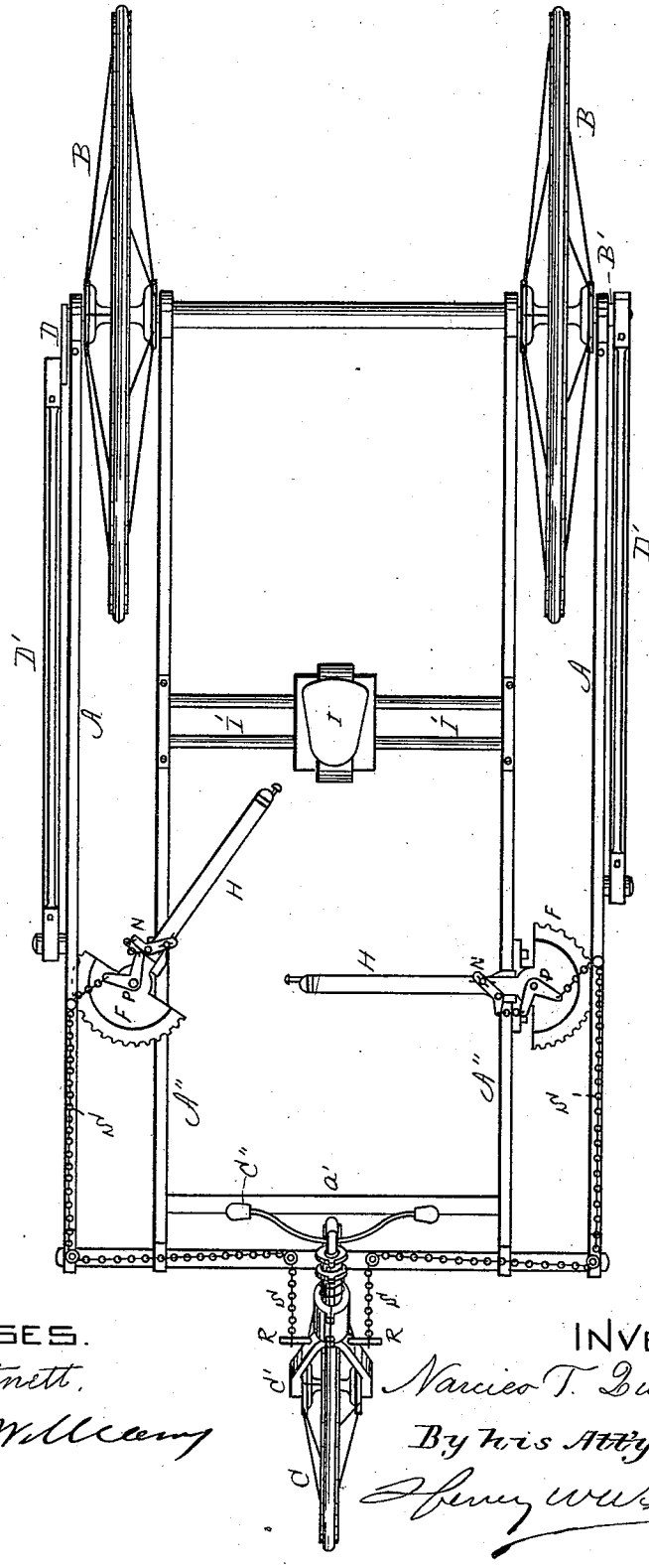


Fig. 7.

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UNITED STATES PATENT OFFICE.

NARCISO T. QUEVEDO, OF WORCESTER, MASSACHUSETTS.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 427,110, dated May 6, 1890.

Application filed December 31, 1889. Serial No. 335,540. (No model.)

To all whom it may concern:

Be it known that I, NARCISO T. QUEVEDO, a citizen of the Republic of Guatemala, residing in Worcester, in the county of Worcester and State of Massachusetts, have invented new and useful Improvements in Velocipedes, of which the following is a specification.

This invention relates to that class of velocipedes termed "rowing-velocipedes" or "rowing-tricycles," in which the machine is propelled by levers in the hands of the rider, the action of which is similar to that of a pair of oars.

The nature of the invention is fully described below and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a rowing-tricycle embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a detail plan showing the connection of the steering apparatus with the actuating levers or oars, &c. Fig. 4 is a detail elevation showing the same. Fig. 5 is a sectional detail of a portion of the steering mechanism below described. Fig. 6 is a sectional detail showing one of the wheels supporting the seat and the track on which it rolls. Fig. 7 is a plan view of a modification, showing the device adapted especially for a paddling movement of the actuating levers or oars.

Similar letters of reference indicate like parts.

A represents the frame; B B, the driving-wheel; B′, the driving-shaft; C, the steering-wheel; C′, the fork of the steering-wheel, and C″ the handle or steering-bar, all constructed in accordance with well-known principles in velocipedes.

Attached to each end of the driving-shaft B′, outside the wheel, is a crank D, which is connected by the pitman D′ with the rear side of a rack E, sliding in the slotted portion A′ of the frame. (See Figs. 1 and 4.) Engaging each rack is a segment-gear F, pivoted to a bracket F′, supported by the bars A″, which form a part of the frame and sustain the seat. The levers H are pivotally secured by horizontal pivots at H′ to projections F″, integral with the segment-gears, said levers operating like the oars of a boat, and being, by means of said pivots, capable of being swung up at will.

I is the seat supported on bars I′, whose ends are provided with rollers or wheels I″, grooved so as to run on tracks *a* on the bars A″, (see Fig. 6,) which also supports a foot-rest *a*′, of any suitable construction. As the rider sits on the seat, which operates like a sliding seat in a boat, his feet being on the rest *a*′, he grasps the levers or oars H, and, by operating them as ordinary oars are handled, gives reciprocating semi-rotation to the segment-gears, reciprocating the racks E and rotating the driving-shaft B′ by means of the pitmen and cranks.

The provision for steering is as follows: The upper sides of the oars or levers H are provided with longitudinal slots L′, which connect with longitudinal passages, the shape of which is shown at L in broken lines in Fig. 4, which extend to the ends of the oars.

K K are horizontal push-rods, provided with heads or thumb-pieces K″, and lying in said passages, the ends being bent up at K′ and extending through the slots L′. (See Figs. 3, 4, and 5.) These ends, which are preferably provided with rollers K‴, lie in the slots *n* in the bell-crank levers N, pivoted on the posts N′, supported by the oars. The opposite ends of the bell-cranks N are connected by the chains S′ with the bell-cranks P, pivoted on the posts P′, which are the pivoted centers of the segment-gears, and to the outer ends of these bell-cranks are secured chains S, which extend to and are secured to the horizontal projections R, extending from the fork of the steering-wheel, said chains extending along the frame, as shown, and over pulleys, as *m*, wherever they diverge from a straight line.

To steer the machine to the right, the right thumb-piece K″ is pressed, thus pushing in its push-rod K, and, by means of the bell-cranks N P and chains S′ S, pulling the right projection R back and turning the steering-wheel toward the right. To steer toward the left, the left thumb-piece is pressed. Springs U around the posts P′ serve to keep the chains taut. Of course bands, cords, or other equivalent mechanical connections may be substituted for the chains S S′, if desired.

In Fig. 7 slight modifications are made, by means of which the machine may be driven by a paddling instead of a rowing motion. The seat is stationary, it being supported by

bars I′, which are rigidly secured to the frame A″, and the cranks D are relatively arranged so as to avoid the dead-point.

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

1. In a velocipede, the combination of the driving-shaft, crank, and pitman D D′, rack E, supported by the frame, segment-gear F, engaging said rack, and lever or oar H, arranged to operate said gear, substantially as set forth.

2. In a velocipede, the combination of the driving-shaft, crank, and pitman D D′, rack E, supported by the frame, segment-gear F, engaging said rack, and lever or oar H, pivotally secured to said gear, as shown, whereby said oar or lever operates said gear, and has also an independent substantially vertical movement of its free end, substantially as described.

3. The levers or oars H, slotted at L′, the bent push-rods K K′, playing in said oars and slots, and a system of levers and connections, as N P S′ S, extending to the opposite sides of the fork of the steering-wheel, whereby by pressing on a push-rod the machine is steered, substantially as set forth.

4. The combination of the frame, oars H, slotted at L′, bent push-rods K K′, bell-cranks N, chains S′, bell-cranks P, chains S, pulleys, as *m*, rods R, and fork of the steering-wheel, substantially as described.

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Witnesses:
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