

J. H. HAYNES.

Velocipede.

No. 98,592.

Patented Jan. 4, 1870.

FIG. 2.

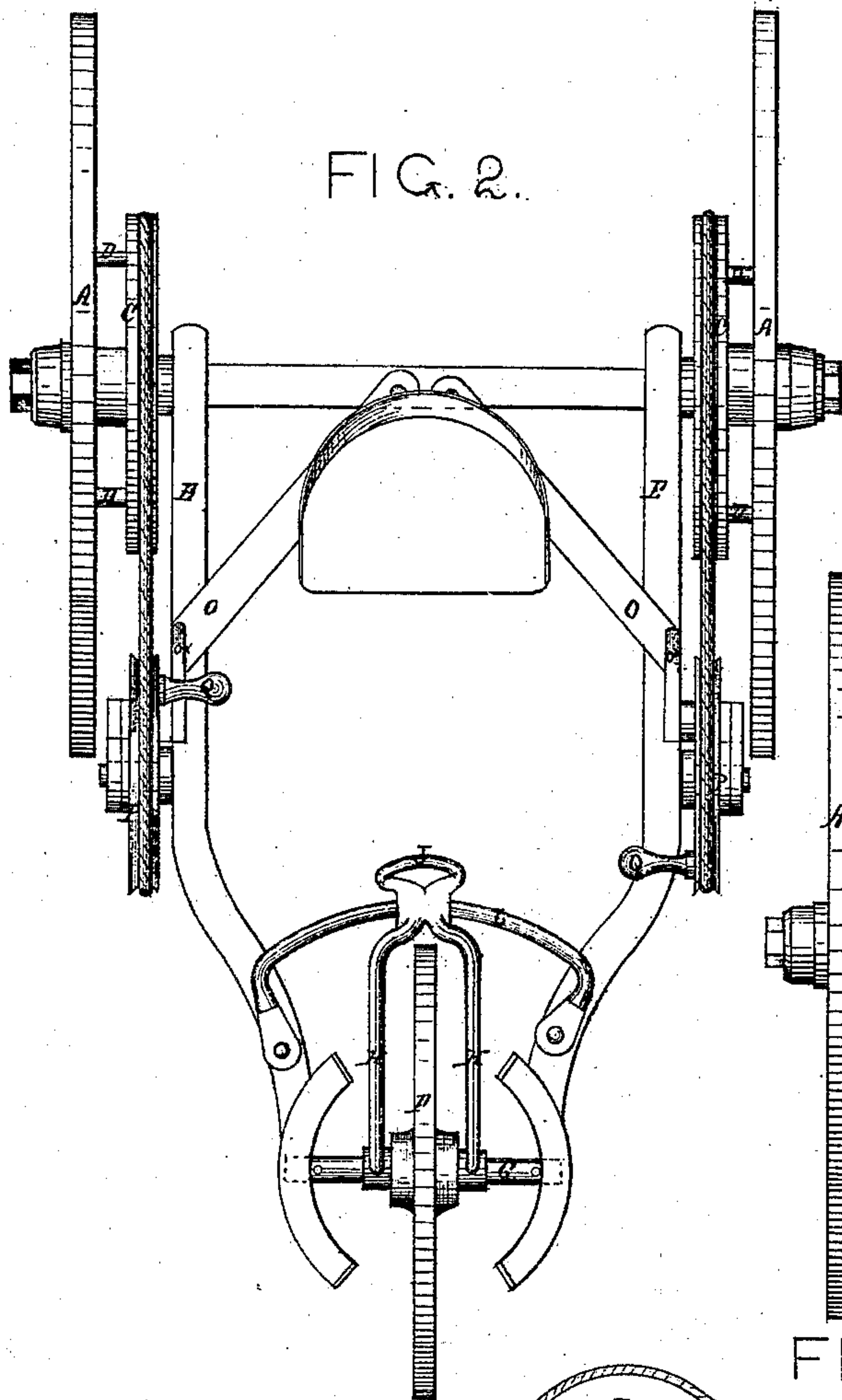


FIG. 3.

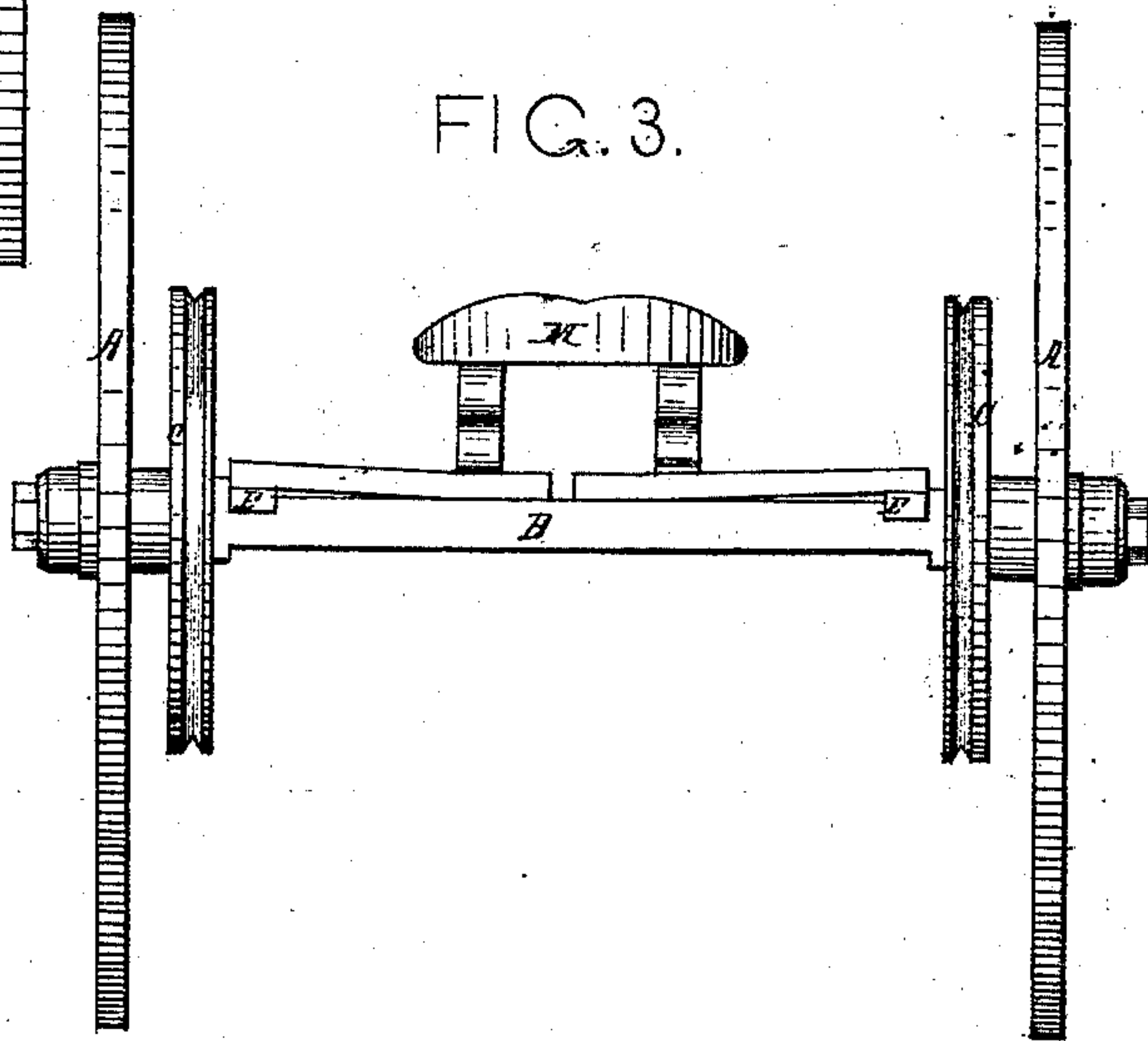
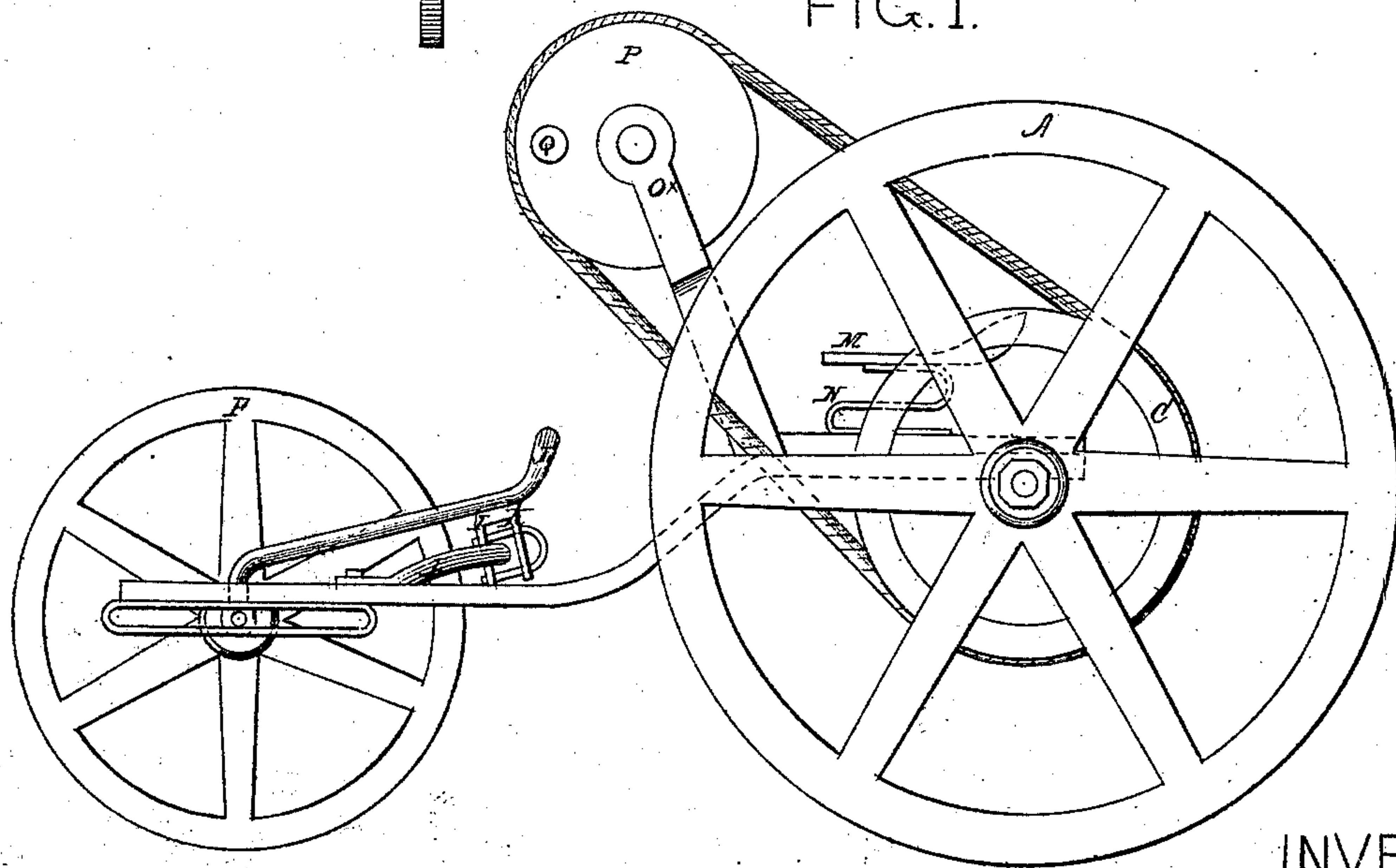


FIG. 1.



WITNESSES.

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IMPROVEMENT IN VELOCIPEDES.

Specification forming part of Letters Patent No. 98,592, dated January 4, 1870.

To all whom it may concern:

Be it known that I, JOHN H. HAYNES, of the city of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Vehicle, which I call a "Veloci-mane;" and I do hereby declare that the following is a full and exact description of the same, reference being had to the drawings annexed, with letters of reference marked thereon.

The nature of my invention is that of a three-wheeled vehicle, for the locomotion of the operator, to be actuated by the hands and guided by the feet.

In the drawings, Figure 1 is a side view of the device. Fig. 2 is a view from the top. Fig. 3 is a partial view from the rear end, showing the bearing-wheels, with their pulleys, the main axle, and the rear side of the seat.

In the drawings, A A, Figs. 2 and 3, (A, Fig. 1,) are the bearing-wheels, which bear the main or seat axle B, Figs. 2 and 3. These wheels also bear, respectively, a grooved pulley, C C, Figs. 2 and 3, (C, Fig. 1,) called the "wheel-pulleys." These are fastened to the wheels by three rivets, which pass, respectively, through three spokes of each wheel. (Two on each wheel are seen in Fig. 2, marked D D D D.)

Fastened to the upper side of the seat-axle, close to each wheel, respectively, as seen in Figs. 1, 2, and 3, are two bars of metal, E E, Figs. 2 and 3, called the "frame-bars," which proceed, horizontally, nearly to the periphery of the bearing-wheels, (see Fig. 1,) then incline downward at an angle of forty-five degrees, or thereabout, for nearly an equal distance, till they reach the level of the hub of the guide-wheel F, Figs. 1 and 2, and then proceed again, horizontally, to a point a short distance beyond the center of the guide-wheel. At the point where the frame-bars bend downward they are connected by a cross-bar, (seen in Fig. 2,) and beyond this cross-bar they are bent (at an angle of twenty-two degrees, or thereabout) toward each other, till the distance between them is about three-fifths of the original distance. Their ends are then bent into a curved shape, forming arcs of a circle whose center is the center, looking from above, (see Fig. 2,) of the guide-wheel. The rear end of the arc is completed by a spur on each frame-bar, constructed as seen in Fig. 2. Beneath these two arcs, respectively, lying parallel with and firmly

fastened to them, are two devices, (one seen in Fig. 1,) best described as two horizontally-slotted curved bars, of the same width, horizontally, and twice the thickness, vertically, with the frame-bars. Into the slots of these bars pass, respectively, the ends of the axle-shaft G, Fig. 2, of the guide-wheel F, as seen in Figs. 1 and 2, the slotted bars thus carrying the guide-wheel. Two pegs—one at each end—passing vertically through the axle-shaft G (see Fig. 2) prevent the shaft from penetrating on either side too far into the slots named.

At each side of the guide-wheel are fastened, in the guide-wheel shaft, (see Figs. 1 and 2,) the two ends, respectively, of a round bar, H H, Fig. 2, (H, Fig. 1,) called the "guide-bar," which passes, nearly horizontally, parallel with the wheel to beyond the rim of the same, the two portions of the bar there being bent to meet each other at the point I, Figs. 1 and 2, and then separating and forming a loop, J, Figs. 1 and 2, called the "guide-loop," which projects upward at a slight inclination backward from the perpendicular. Nearly at the bottom of the loop, and beneath it, are attached, to the underside of the guide-bar, two flat bars, I and K, which make what I call the "slide." These two bars of the slide pass downward, one on each side of a curved round bar, L, Figs. 1 and 2, called the "slide-bar," which bar extends from one frame-bar to the other, just behind the wheel, being firmly fastened to the frame-bars. The slide bears two pegs, (seen in Fig. 1,) passing through it in a direction parallel with the guide-bar, one above and the other below the slide-bar. These serve to hold the slide to the slide-bar.

M, Figs. 1, 2, and 3, is the seat of the operator. Its shape is seen in the drawings. It is supported by two springs, N N, Fig. 3. The manner in which these are curved is seen in Fig. 1. The lower ends of the springs are fastened to two bars, O O, Figs. 2 and 3, called the "seat-bars," which pass diagonally from the center of the axle B to (respectively) the frame-bars E E.

O^x O^x, Fig. 2, (O^x, Fig. 1,) are continuations of the seat-bars, which seat-bars proceed up (perpendicularly when seen from the rear end of my device, and diagonally at nearly an angle of twenty-two degrees when seen from the side, as in Fig. 1) a short distance, and at their

ends bear, respectively, a grooved pulley-wheel, P P, Fig. 2, (P, Fig. 1,) called the "driving-pulleys," which bear each a handle, Q Q, Fig. 2. These wheels P P bear each a belt or cord, (see Figs. 1 and 2,) by which they are connected, respectively, with the wheel-pulleys C C. I sometimes have a slot in these driving-pulleys, running radially, in which the handles Q Q slide, being secured by a nut on the other side, to increase or diminish the rotary play of the handles; and I sometimes have a platform behind, fitted to carry a valise. Sometimes I substitute two upright rods for the guide-loop J. Sometimes I provide my vehicle with a brake or brakes on the driving-wheels or the guide-wheel. Sometimes I provide the seat with a high back. Sometimes I provide the slide-bar I with one or more notches, into which the upper peg of the slide I K enters and rests.

The operation of my device is as follows: The operator seats himself on the seat M, and resting one foot on the bar which connects the frame-bars E E, places the top of the other foot in the guide-loop J. Then taking hold, by each hand, of the driving-pulley handles Q Q, he rotates these pulleys, so rotating the wheel-pulleys C C, and thus rotating the driving-wheels. To change the direction of the velocimane, the foot in the guide-loop is moved side-wise to the right or left. This action is assisted, also, by checking the rotation of one driving-wheel and continuing the motion of the other, as they move independently. To

stop the vehicle entirely, it is necessary only to stop, by the hands, the rotation of the driving-pulleys, a reversal of the motion of which readily backs the vehicle.

What I claim herein as of my own invention, and desire to secure by Letters Patent, is—

1. The construction of the frame, being the axle B, the frame-bars E E, with their guide-wheel bearing ends, the bar connecting the frame-bars, and the seat-bars O O, with their upright continuations, when in combination, all substantially as described.

2. The combination and arrangement of the guide-wheel and its frame, being the two curved slotted bars bearing the wheel, the slide-bar L, the guide-bars H H, the slide I K, and the guide-loop J, all substantially as and fitted for the purpose described.

3. The combination and arrangement of the driving-pulleys P P, with the handles, the wheel-pulleys, and the guide-wheel F, when constructed and arranged substantially as described.

4. The combination and arrangement of the bearing-wheels A A, with their pulleys C C, the driving-pulleys P P, the seat M, the frame-bars E E, the guide-wheel F, the guide-bars H H, and the slide-bar L, with its slide, all substantially as and fitted for the purpose described.

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Witnesses:

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