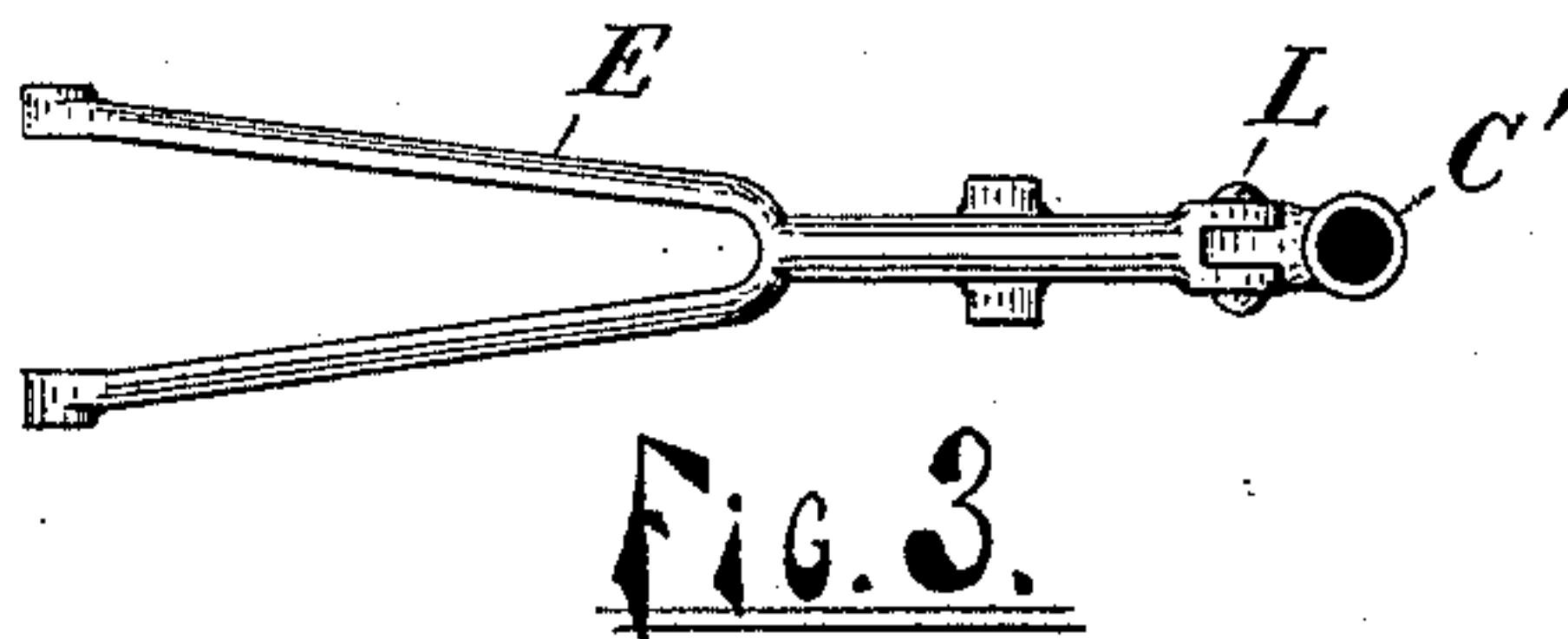
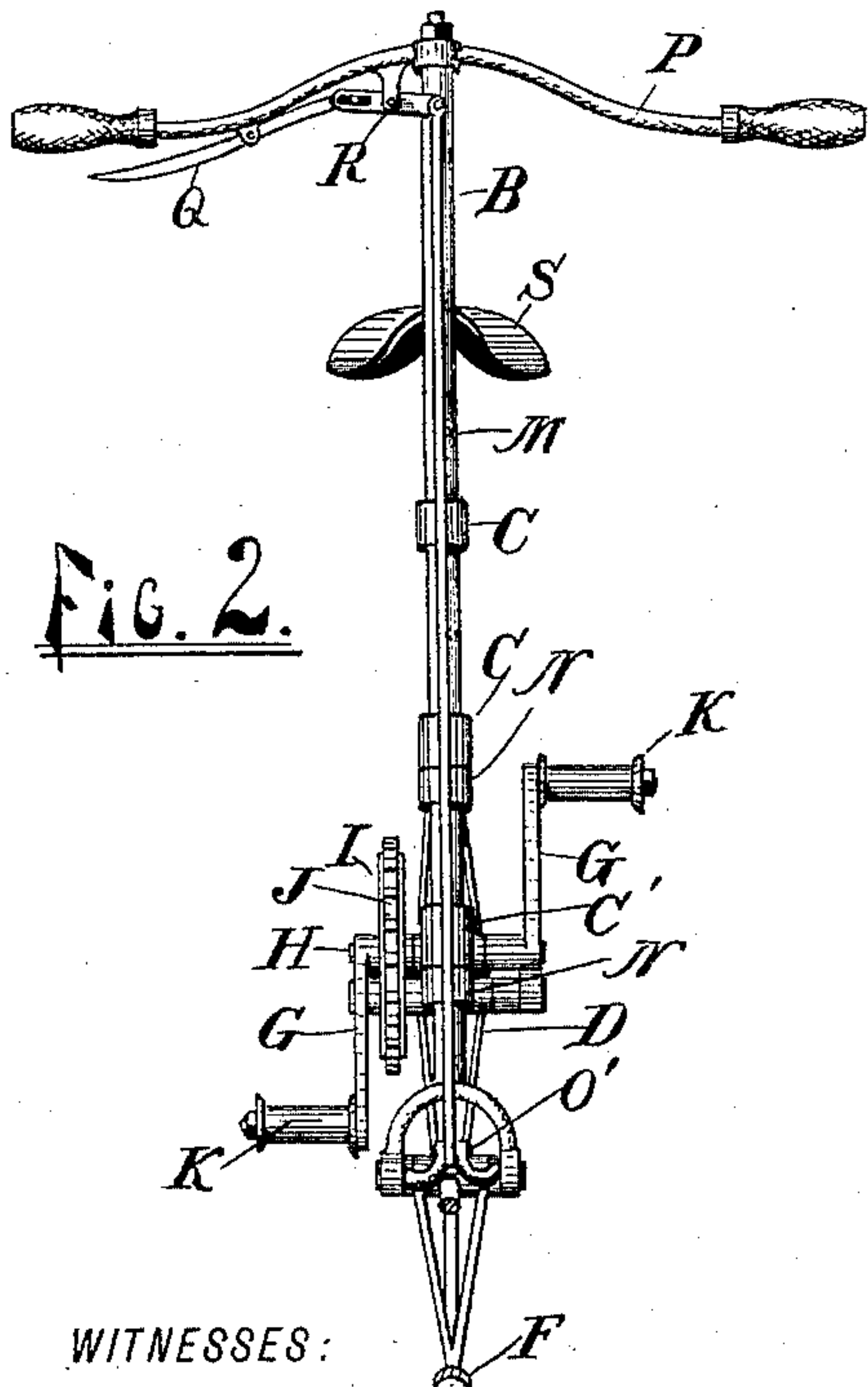
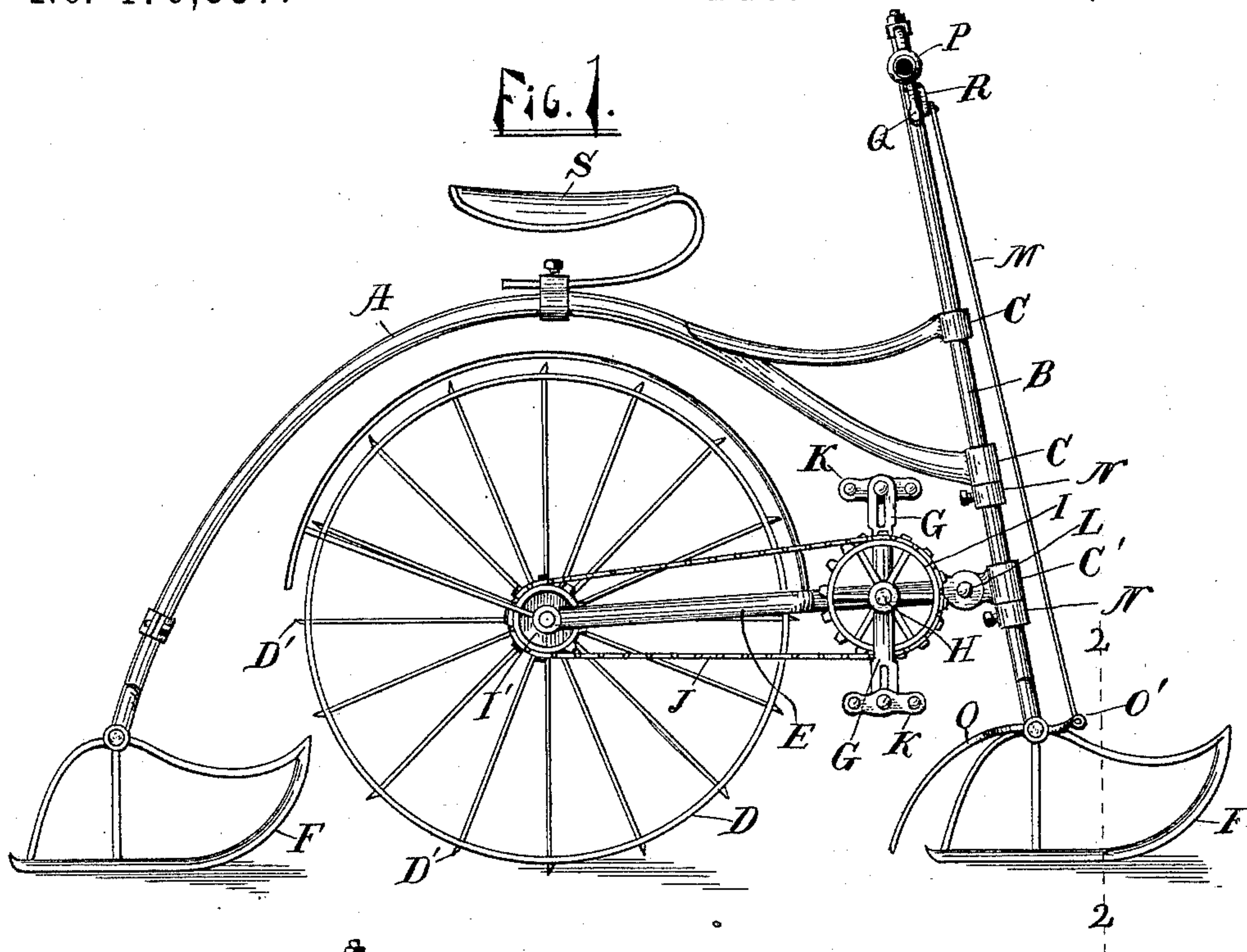


(No Model.)

J. F. ZALSMAN.  
ICE VELOCIPEDE.

No. 476,857.

Patented June 14, 1892.



WITNESSES:

INVENTOR

*John F. Zalsman*

BY

Leicester V. Moulton  
ATTORNEY.

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Love Moulton.  
George W. Shook



# UNITED STATES PATENT OFFICE.

JOHN F. ZALSMAN, OF HOLLAND, MICHIGAN.

## ICE-VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 476,857, dated June 14, 1892.

Application filed February 17, 1892. Serial No. 421,879. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. ZALSMAN, a citizen of the United States, residing at Holland, in the county of Ottawa and State of Michigan, have invented certain new and useful Improvements in Winter-Velocipedes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in velocipedes adapted to run upon ice and snow and thus rendered suitable for use in the winter season; and its object is to provide the same with certain new and useful features, hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a device embodying my invention; Fig. 2, a front elevation of the same with the front runner in vertical section on the line 2 2 of Fig. 1, and Fig. 3 a plan view of the driving-wheel frame.

Like letters refer to like parts in all of the figures.

A is the main frame, having the usual saddle S attached. Said frame is forked at the forward end and provided with collars C C, in which the post B rotates freely. Said post is provided at the top with the handles P for holding and turning the same to steer the device, and both the lower end of said post B and the rear end of the frame A are forked and provided with runners F, pivoted in said forked ends, which runners support the load and have concave under surfaces to prevent slipping laterally when turning curves.

O is a drag or brake pivoted to the lower end of the post B and engaging the ice or snow at its lower end as it is depressed by the lever Q, operating through the lever R and rod M, connected to the forwardly-projecting arm O' of the said brake O.

The device is propelled by a driving-wheel D, having spurs D'. Said wheel is journaled in the divided rear end of a frame E, the forward end of which frame is jointed to swing in a vertical plane at L to a collar C', which collar turns freely on the post B. Said frame E and the upper frame A are both vertically

adjustable at their forward ends upon the post B by means of adjustable set-collars N N on said post, which engage the respective loose collars to which said frames are attached. By adjusting said collars the distances between the saddle S and pedals K may be varied to suit persons of various stature or length of limb.

The driving-wheel D is rotated by means of the chain J, which engages a sprocket-wheel I' on said driving-wheel, and, extending forward, said chain engages a sprocket-wheel I on the shaft H, journaled in the frame E between said wheel D and the pivot L. Said shaft H is provided with cranks G and pedals K, by means of which it is rotated by the feet of the rider. The joint L permits the rear of the frame E and the driving-wheel D to rise and fall freely to maintain contact with the ice and snow and enable the spurs D' to engage the same. When no propelling-power is applied, the runners carry the entire load and the wheel D touches the surface below it very lightly and makes very little resistance to the progress of the device. As power is applied to the treadles the pressure is downward upon the frame E, which tends to force the wheel D in contact with the said surface, and thus pressure upon the wheel increases and decreases automatically as the propelling-power changes by rightly proportioning the leverage of the frame. By properly locating the shaft H on the same there will at all times be only the necessary downward pressure upon the wheel to insure against its slipping, and such pressure will vary exactly in proportion to the power applied. I am thus able to reduce the resistance due to the driving-wheel contact with the surface beneath the same to the least possible amount, which is of great advantage.

What I claim is—

1. In an ice-velocipede, the combination of a frame pivoted to swing in a vertical plane, a driving-wheel journaled on said frame, a shaft having cranks and treadles attached and journaled on said frame between said pivot and wheel, and mechanism to transmit motion from said shaft to said wheel, substantially as described.

2. In an ice-velocipede, the combination of a vertically adjustable and rotatable collar on

the steering-post, a forked frame pivoted at its forward end to said collar, and a driving-wheel journaled in the forked end of said frame, a shaft having cranks and treadles journaled on said frame, and sprocket wheels and chains connecting said shaft and driving-wheel, substantially as described.

3. In an ice-velocipede, the combination of a main frame supporting a saddle having a runner at the rear and collars at the front, a steering-post rotative in said collars and vertically adjustable therein, a collar rotative and vertically adjustable on said post, a frame pivoted at its forward end to said collar, a driving-wheel journaled upon the rear end of said frame, a shaft having cranks and pedals journaled on said frame between said wheel and collar, and sprocket wheels and

chain connecting said shaft and wheel, substantially as described.

4. In an ice-velocipede, in combination with a rotative steering-post having handles at the top and a forked lower end and a runner pivoted in said lower end, a brake, also pivoted to said lower end, having a rearward and downwardly projecting arm O and a forwardly-projecting arm O', a connecting-rod M, and the pivoted levers R and Q, substantially as described.

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

JOHN F. ZALSMAN.

Witnesses:

LUTHER V. MOUTON,  
SARAH MOULTON.