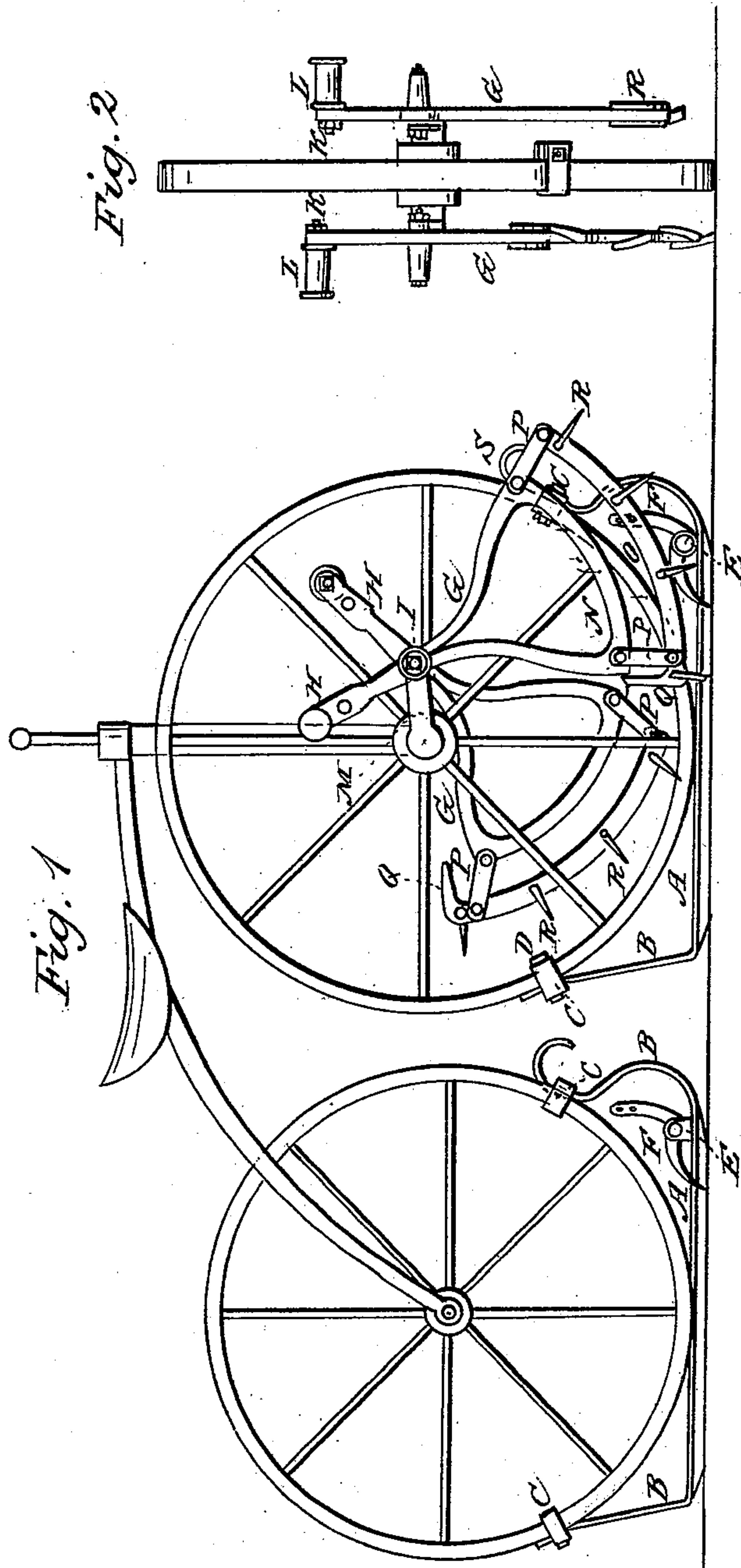


T. SEARING.
Velocipede Attachment.

No. 95,521.

Patented Oct. 5, 1869.



Witnesses:
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United States Patent Office.

THEODORE SEARING, OF NEW YORK, N. Y.

Letters Patent No. 95,521, dated October 5, 1869.

IMPROVED SLEIGH-ATTACHMENT FOR VELOCIPEDES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, THEODORE SEARING, of the city, county, and State of New York, have invented a new and improved Velocipede; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in velocipedes, having for its object to adapt them for running on snow or ice, and to provide an improved means of propelling them on runners.

The invention consists—

First, in a peculiar arrangement of runner and brake-attachment for the wheels; and

Second, in an attachment, to the propelling-cranks, of a pair of vibrators, to which are connected spiked segmental bars by pivot-joints, under an arrangement whereby the spikes will be caused to engage with the ground when moved in the direction for propelling, but will slip over it without engaging, when moving in the opposite direction, as hereinafter more fully specified.

Figure 1 represents a side elevation of a velocipede, with my improved attachment, a part being shown in red, and

Figure 2 represents a front elevation of the same.

A represents short runners, having thin metal plates B, turned up at the ends so as to bear at the said ends against the wheels before and behind, to be clamped by the bent plates C and bolts D, the said plates being arranged to bear upon three sides of the wheel-rim, taking the bars B between them and one of the said sides, while the bolts D pass along the other side, and clamp the bars and wheels together.

F is a crotched and bent brake, pivoted to a crotched stand, E, rising up from either the front or hind runner, preferably the latter, and arranged to have a cord connecting it with the guiding-handle.

G represents a pair of vibrating propeller-beams, journaled to the crank-pins, on which the foot-treadles are commonly attached, but which I remove for the attachment of these propellers, which I arrange to fit the same wrist-pins.

The said vibrating propellers have short arms H rising above the wrist-pins, and provided with the wrist-pins K, for the reception of the same treadles commonly used, or similar ones, by which vibrating motion is to be imparted to them by the feet of the rider, who sits on the saddle, as when the wheels revolve.

In this case, the two cranks M are adjusted to the same radial line from the axis of the hub, which is,

preferably, a horizontal line in advance, but may be above or below the said line.

These propellers have broad curved lower ends N, a short distance above the ground, to which are jointed curved bars O, having radial heels Q, by links P at each end.

These curved bars have spikes R rigidly attached to them, and projecting downward as low or a little lower than the bottom of the runners.

The front parts of the propellers have springs S rigidly connected to them, and bearing against the links P, so as to throw them back from the radial lines.

In operation, the arms H of the vibrating bars are pushed forward, thereby swinging the spiked bars toward the rear, which causes the spikes to engage with the ground, to hold them, so that the impelling-force is delivered on the wrists I, the said bars rolling on the spikes as the machine moves forward.

When the foremost spikes have passed behind the vertical line of the axis of the propelling-wheel, the said vibrators are turned forward again by the action of the feet, to take a new hold.

During this forward movement, the curved bars O swing back with the links P, by the resistance of the points of the spikes on the ground, and by the action of the springs S, so that they slide over the ground in returning, without resisting the return-movement.

When encountering the ground in the propelling-movement, the heels Q of the bars O strike against the vibrators G, forming a rigid connection of the two, by which the impelling-force is delivered to the wrists I.

For adjusting the vibrators higher or lower, to cause the teeth to take into the ground more or less, the front wheel may be shifted in position on the runner by loosening the clamps C and turning it so as to move the wrists I higher or lower.

The arms H of the vibrators may be curved backward and upward from the wrists I, to permit the rider to sit further behind, and the vibrators may be curved inward below the wrists, to bring the spikes close to the side of the wheel.

The vibrators may be moved simultaneously in the same direction, or alternately, as preferred. They assist the rider materially in balancing the two-wheel machines.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the wheels of a velocipede, of the runners A, clamps C, and brakes F,

when all constructed and arranged substantially as specified.

2. The combination, with a velocipede provided with runner-attachments, of the vibrating propellers G H, arranged for attachment to the crank-pins I, substantially as specified.

3. The combination, with the vibrating propellers G H, of the segmental spiked bars O, links P, heels Q, and springs S, substantially as specified.

4. The combination, with the driving-wheel of a

velocipede, of vibrating propeller-arms G, when arranged for adjustment as to height, by shifting the wheel on the runner, substantially as specified.

The above specification of my invention signed by me, this 16th day of August, 1869.

THEODORE SEARING.

Witnesses:

GEO. W. MABEE,

E. TATE.