(No Model.)

L. TERSKI.

ICE VELOCIPEDE.

No. 455,932. Patented July 14, 1891.

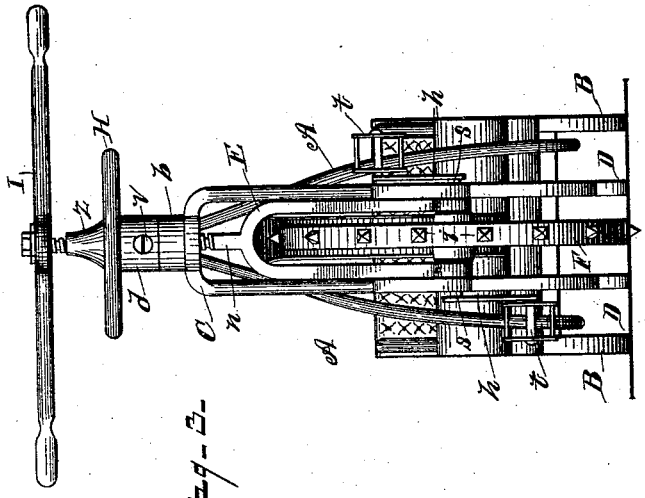

Fig. 3.

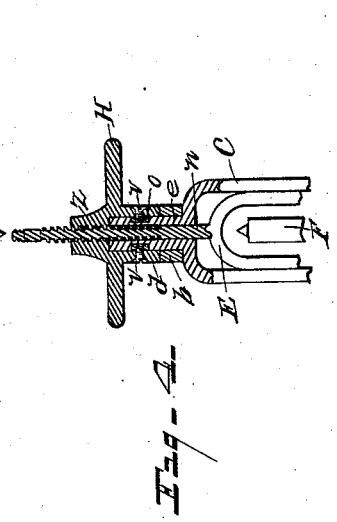

Fig. 4.

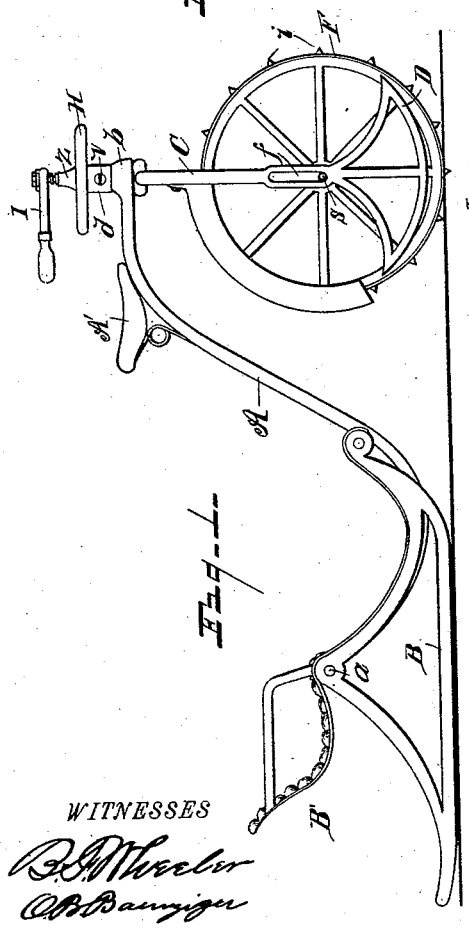

Fig. 1.

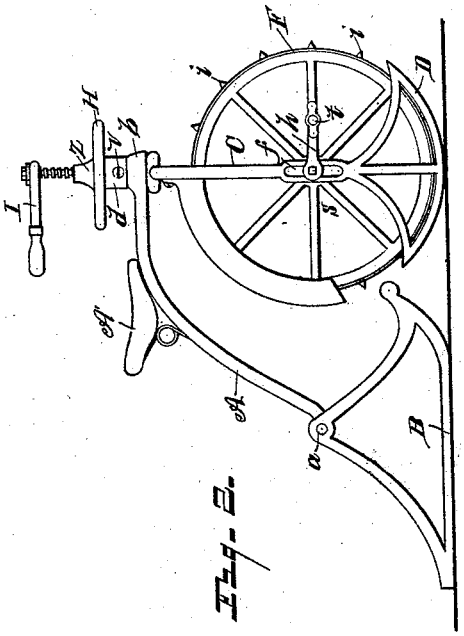

Fig. 2.

WITNESSES

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ICE-VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 455,932, dated July 14, 1891.

Application filed January 26, 1891. Serial No. 379,035. (No model.)

To all whom it may concern:

Be it known that I, LEOPOLD TERSKI, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Ice-Velocipedes; and I do declare the following to be 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in ice-velocipedes; and it consists in a certain construction and arrangement of parts, as fully hereinafter set forth, the essential features of which being pointed out particularly in the claims.

The object of the invention is to produce an ice-velocipede of simple construction, that may be readily adapted for one or two persons, and that is provided with means whereby the propelling-wheel may be adjusted vertically to raise it from contact with the ice or surface, at which time the forward end of the machine is supported on runners extending on each side of said wheel for sliding upon the ice or coasting. This object is attained by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved device as when provided for two persons, one of the crank-arms and pedals being removed. Fig. 2 is a side elevation of the device as adapted for one person. Fig. 3 is an enlarged front elevation of Fig. 1. Fig. 4 is a central vertical section through the steering-head.

Referring to the letters of reference, A indicates the backbone of the machine, which is composed of two diverging curved rods, as shown in Fig. 3, the rear ends of which are pivotally coupled to the cross-piece *a*, that connects the rear runners B, and which is provided with the seat A′. The forward ends of the backbone-rods A unite and form the annular head *b*, having a central opening that receives the neck *e* of the outer fork C, as shown in Fig. 4, which is adapted to turn therein. The arms of the fork C stand parallel, and their lower ends are provided with the runners D, formed integral therewith.

E indicates an inner fork, located within the arms of the outer fork C. Journaled in the lower ends of the fork E is a shaft, on which is mounted the wheel F, which is adapted to revolve within the fork E. The ends of the shaft on which the wheel F is mounted extend through the vertical slots *f* in the arms of the fork C, and the cranks *h* of the pedals *t* are attached thereto, as shown at *s*, by means of which the wheel F is revolved to propel the machine, the periphery of said wheel being provided with the spurs *i* to prevent it from slipping on the ice.

H indicates a hand-wheel provided with the depending sleeve *d*, that loosely receives the upper end of the neck *e* of the fork C, as shown in Fig. 4, and is secured therein by the set-screws *v* passing through the sleeve *d* and into the collar *o*, let into an annular groove in the periphery of the neck *e*, which construction securely retains the sleeve upon said neck and permits it to revolve thereon.

The fork E is provided with the vertical stem *n*, that passes loosely through the neck *e* of the fork C, and its upper end, being screw-threaded, is screwed through the hub *z* of the wheel H, which is tapped to receive it.

Fixedly secured to the upper end of the stem *n* is the handle-bar I, by means of which the machine is steered.

It will be seen from the construction above described that by turning the hand-wheel H the threaded stem *n* of the fork E may be drawn up or down, thus raising or lowering the wheel F for purposes as follows: Should it be desired to coast, or, having gained considerable headway, should it be desired to slide without revolving the wheel F, the hand-wheel H is turned so as to draw the fork E upward and raise the wheel F from contact with the surface, when the forward end of the device will be supported on the runners D and slide thereon, as shown in Fig. 2. When it is desired to again propel the velocipede by means of the wheel F, the hand-wheel H is turned to lower the fork E, which will bring said wheel in contact with the surface and raise the runners D, as shown in Fig. 1, in which position the velocipede may be propelled by the feet of the operator through the medium of the pedals, as will be readily understood. The slots *f* in the arms of the outer

fork E permit the ends of the shaft on which the wheel F is mounted to rise and fall therein, as said wheel is adjusted vertically. It will also be seen that as the wheel F is adjusted the forward end of the backbone rises and falls, which requires the rear end thereof to be pivotally coupled to the runners B, so that said runners may always have a true bearing upon the surface without regard to the change in the angle of the backbone. As shown in Fig. 1, the rear runners B may be provided with a seat B′ when it is desired that the velocipede shall accommodate two persons.

G indicates a fender or guard that is attached to the inner fork E and extends rearwardly over the wheel F.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an ice-velocipede, the combination of the outer front fork having runners on its lower ends, the inner fork located within the outer fork and having a shaft journaled in the lower ends thereof, the propelling-wheel journaled on said shaft, and the hand-wheel for raising and lowering the inner fork to adjust said propelling-wheel vertically, substantially as set forth.

2. In an ice-velocipede, the combination of the outer fork provided with an annular neck at its upper end, the hand-wheel having the tapped hub and the depending sleeve, said sleeve being adapted to receive the upper end of said neck, and which is secured thereto and in such manner as to revolve thereon, the inner fork having the shaft journaled in its lower ends, and the propelling-wheel on said shaft, the upper end of said inner fork having the vertical threaded stem that passes loosely through the neck of the outer fork and through the threaded hub of the hand-wheel, whereby the propelling-wheel may be adjusted vertically.

3. In an ice-velocipede, the combination of the backbone pivotally coupled at its rear end to the rear runners, the outer fork provided with runners and having the vertical slots therein, the forward end of the backbone pivotally coupled to said fork, the inner fork, the shaft journaled in the ends thereof, the propelling-wheel having the peripheral spurs mounted on said shaft, the ends of said shaft extending through the slots in the outer fork and having the cranks secured thereto, the hand-wheel threaded on said inner fork to adjust the propelling-wheel vertically, and means for steering the device.

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

LEOPOLD TERSKI.

Witnesses:
E. S. WHEELER,
B. F. WHEELER.