(No Model.)

J. USTER.

VELOCIPEDE.

No. 249,122. Patented Nov. 1, 1881.

Fig. 1.

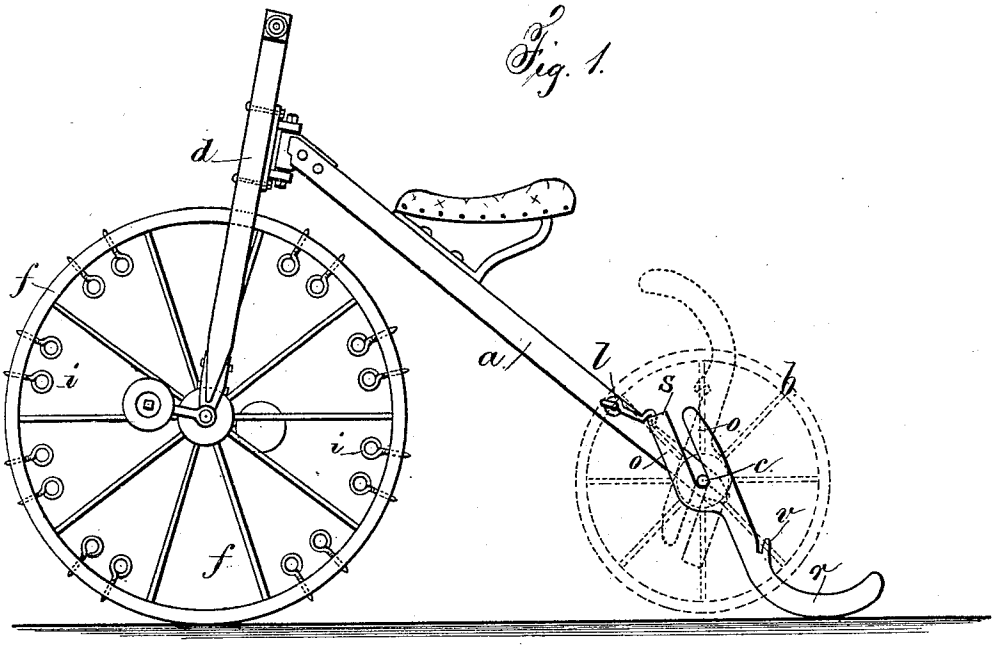


Fig. 3

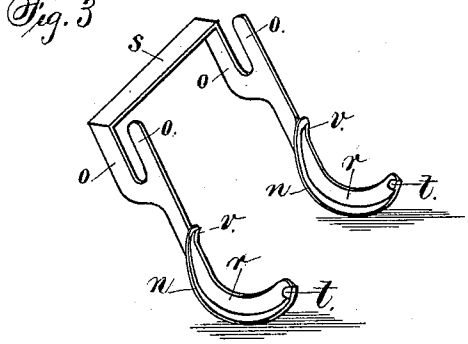


Fig. 2.

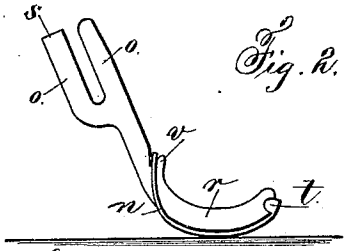
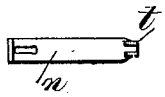


Fig. 4



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN USTER, OF NEW YORK, N. Y.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 249,122, dated November 1, 1881.

Application filed September 23, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN USTER, of the city and State of New York, have invented an Improvement in Velocipedes, of which the following is a specification.

Velocipedes have been made with shoes adapted to being connected with the wheels for running upon ice and snow, and in some instances the propelling-wheel has been made with teeth to engage in the surface.

My invention consists in a peculiar construction of movable runner, adapted to either snow or ice, and to a propelling-wheel having screw-points that can be projected for running on ice or snow, or retracted for use on ordinary walks or pavement.

In the drawings, Figure 1 is a side view of the velocipede as adapted to use as a sled, the back wheels being shown by dotted lines. Fig. 2 is a side view of the movable runner with shoes upon it. Fig. 3 is a perspective view of the same, and Fig. 4 is a plan view of the shoe.

The velocipede is composed of the body or spine *a*, back wheels, (shown by dotted lines at *b*,) the shaft *c* for the same, the hinged yoke *d*, and front wheel, *f*. These parts, except in the particulars hereinafter named, are of ordinary character, and may be of any desired size.

The front wheel, *f*, is pierced through the tire and felly with holes, into which are inserted the pointed screw-pins *i*, having round eyes or heads of suitable shape, so that the screws can be rotated by hand. When the screws are turned back so that the points do not project the wheel is adapted to use in the ordinary manner upon the pavement; but when the screws are turned so that the points project the wheel becomes adapted to use as a propeller upon ice or snow. It is not desirable to place these screw-pins close together, or at a uniform distance apart. I usually place them in the manner shown, so that there will not be any pins in contact with the ice when the treadles are horizontal. This allows the velocipede-wheel to slide along as a skate upon the ice by its momentum, when the wheel is held by the feet, so that the pins do not touch the ice.

My movable runners *r r* are made of iron, and they are connected by the cross-bar *s*, and provided with the jaws *o*, that receive the axle. The runners are to be applied to the axle in the position indicated by dotted lines in Fig. 1, so that the jaws set over the axle at each side of the spine, and near the hubs of the wheels. Then the runners are swung forward and downward until the cross bar *s* rests upon the top of the spine. In this position the runners are adapted to rest upon the snow or ice, and they project below the wheels, so as to raise them from the surface; or said back wheels may be taken off the axle by removing the end nuts.

The hook *l*, between the spine and the cross-bar of the movable runners, serves to hold the parts in position if the velocipede is run backwardly. When the hook *l* is loosened the runners can be swung downward and forward, and hooked up out of contact with the surface, if desired.

The iron runners are narrow and adapted, like skate-runners, to the surface of ice; but upon snow such runners may cut in. I therefore provide movable iron shoes *n*, that are of a shape to set beneath the bearing-surface of each runner and extend upward around the curved surface of the runner. There is a mortise in the upper end of each shoe, and this upper end is turned backwardly, so that the shoe can be slipped upon the runner and above notch or projection at *v*, and then be brought down in front of and below the runner, and spring into its place with the rear end of the runner between the two lips *t*, upon the upper surface at the rear end of the shoe. These movable shoes are adapted to the velocipede running upon snow.

I do not claim the combination, with the spline, of movable runners.

I claim as my invention—

1. The combination, with the propelling-wheel in a velocipede, of screw-pins having

heads at their inner ends, so that the points of the pins can be projected or retracted, as set forth.

2. The movable runners *r*, connected by the cross-bar *s*, and provided with jaws, in combination with the axle and spine of the velocipede, substantially as set forth.

3. The combination, with the runners, of the movable shoes having mortises through which the runners pass, and the notches or projections on the runners for receiving the front ends of the shoes, and the lips *t* upon the rear portions of the shoes, substantially as set forth.

Signed by me this 17th day of September, A. D. 1881.

JOHN USTER.

Witnesses:
HAROLD SERRELL,
WILLIAM G. MOTT.