(No Model.)

G. RIEXINGER.

ICE VELOCIPEDE.

No. 526,745. Patented Oct. 2, 1894.

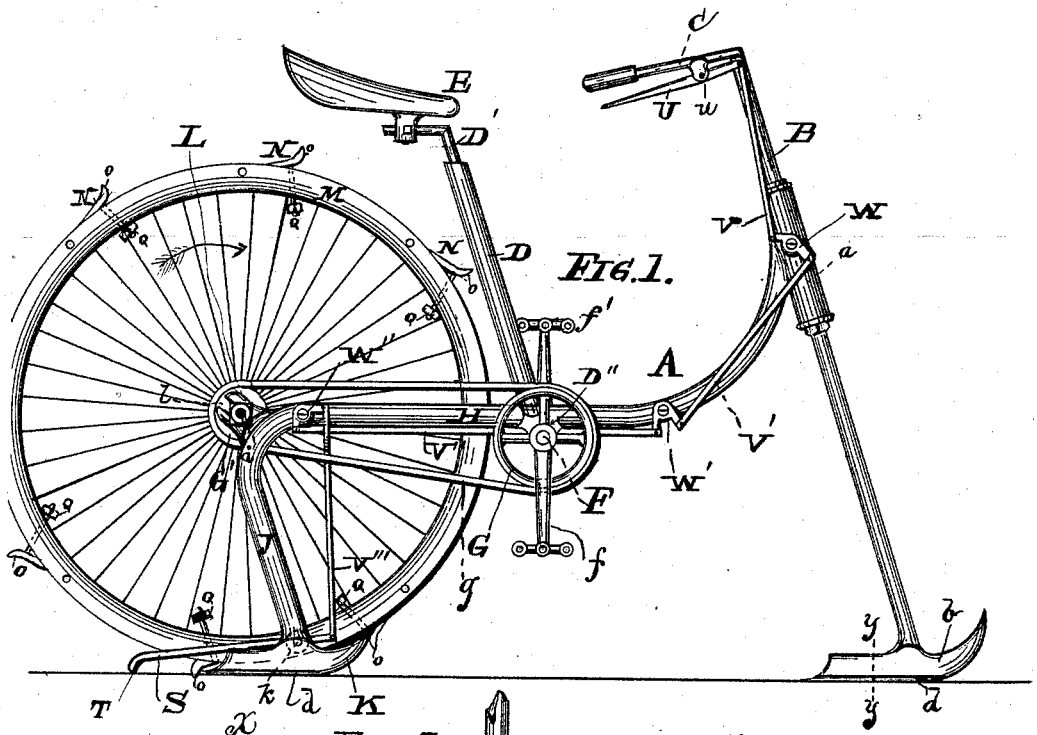

FIG. 1.

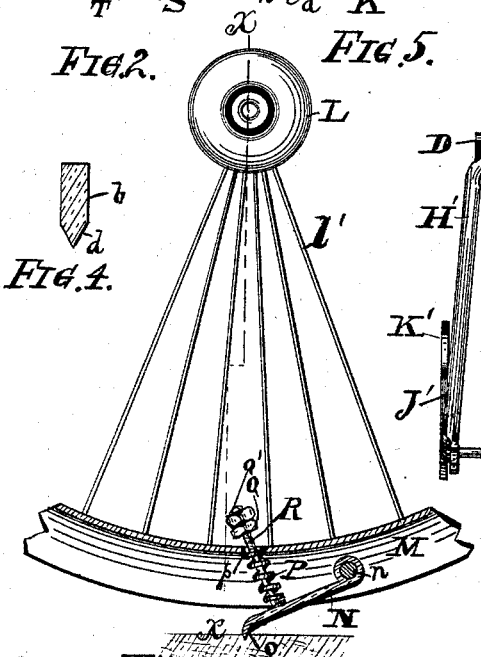

FIG. 2.

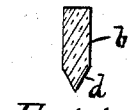

FIG. 4.

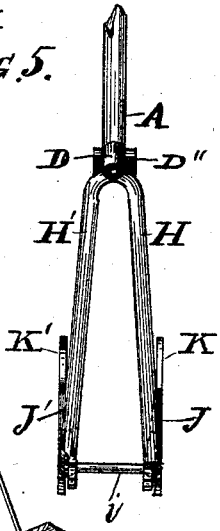

FIG. 5.

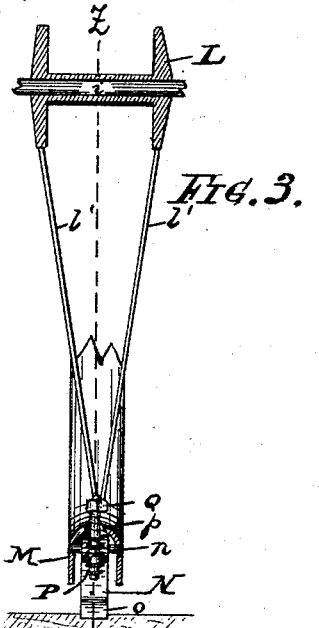

FIG. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE RIEXINGER, OF BUFFALO, NEW YORK.

ICE-VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 526,745, dated October 2, 1894.

Application filed February 1, 1894. Serial No. 498,751. (No model.)

To all whom it may concern:

Be it known that I, GEORGE RIEXINGER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Ice-Velocipedes, of which the following is a full, clear, and exact specification.

My invention has general reference to improvements in ice velocipedes; and it consists, essentially, in the novel and peculiar combination of parts and details of construction, as hereinafter first fully set forth and described, and then pointed out in the claims.

In the drawings already referred to and which serve to illustrate my said invention more fully, Figure 1 is a side-elevation of my improved ice velocipede. Fig. 2 is a sectional view of a portion of the propelling wheel, in line *z z* of Fig. 3. Fig. 3 is a sectional view in line *x x* of Fig. 2. Fig. 4 is a sectional view in line *y y* of Fig. 1. Fig. 5 is an elevation of a portion of the main frame.

Like parts are designated by corresponding letters of reference in all the figures.

The object of my present invention is the production of a light, strong, simple and efficient ice velocipede, for the use upon ice or icy surfaces. To attain this result, I construct this vehicle substantially of a main frame A, having at its forward extremity a tubular head *a*, within which is located the steering bar B. This bar has at its lower end a skate or runner *b*, the lower longitudinal edge *d* of which is beveled to a sharp edge, as shown in section in Fig. 4, so as to cut into the ice and thereby to enable the vehicle being readily steered or guided by the steering-bar C having the usual handles, as shown in Fig. 1. The main frame has, about midway, an upwardly-projecting tubular member D, for the reception of a seat-post D′, carrying on its upper end the seat or saddle E. Directly underneath this tubular member D is provided a transverse bearing D″, within which revolves the pedal-shaft F having on its outer ends pedals *f f′*, and on one side, (or both sides, if desired,) a sprocket-wheel G, of the usual construction. Behind the transverse bearing D″ the main frame divides into branches H H′, forming a fork, said branches being downwardly bent at J J′, and terminating in runners or skates K K′, the vehicle being carried upon these skates in conjunction with the runner *d*. At the bends of the branches J J′ there are provided slotted bearings G′ within which is journaled the axle *i* of the propelling wheel. This wheel consists of a hub L, Fig. 2, having a sprocket-wheel *l*, (connected with the sprocket-wheel G by a chain-belt *g*, of the usual construction,) wire spokes *l′* and a U-shaped rim M. In this rim there are pivoted, at *n*, a series of dogs N, terminating in points *o*. In the rim there are a series of holes *p*, through which pass the studs R of the dogs N and having at their outer ends lock-nuts Q Q′; spiral springs P being interposed between the rim and the dogs around the studs so as to push the dogs tangentially from said rim M.

This vehicle is provided with a brake lever S, pivoted to the lower end of one of the branches J, as shown in dotted lines in Fig. 1 at *k*, the long arm of which is downwardly bent to act as a scraper upon the ice with its point T, while the short arm thereof connects with the connecting rod V‴ with one arm of a bell-crank W″ pivoted at the bend of the fork J, the other arm of which connects with a similar rod V″, V′, and V, and bell-cranks W′ and W with the brake lever U pivoted to one arm of the steering handle C, at *u*.

The operation of this device is substantially as follows: — Assuming that the springs around the studs R of the dogs N have pushed them outwardly, as shown in Figs. 1 and 2, as soon as one of these dogs reaches the icy surface, its point *o* will catch in the ice and form an abutment for the wheel to push the vehicle forward. While this takes place the dog will move on its pivot toward the rim until its point is in line with a vertical line through the center of the wheel, when the dog will move outwardly until, in revolving of the wheel, the lock-nut Q will reach the rim M. By this time the next succeeding dog has reached a point forward of the said vertical center line to enable it to engage the ice and thus the dogs coming successively in contact with the ice surface cause the forward movement of the vehicle. It will be further observed that the driving wheel hereinbefore described may also be used on vehicles driven by steam, air, gas, electric and other motors

without change or modification and that it is admirably adapted for use upon ice and similar surfaces.

To steer or guide the vehicle the rider manipulates the handle-bar in a manner analogous to steering a bicycle, when the forward runner *b*, being deflected to the right or left causes the vehicle to follow the direction of said forward runner *b*.

It will now be observed that this device is very simple in construction and when made sufficiently light, such as bicycles and similar vehicles are now made, can be propelled upon the ice with but little effort on the part of the operator. It is cheaply manufactured and will be found a valuable and desirable means of sport and travel upon ice and icy surfaces.

Having thus fully set forth my invention, I claim as new and desire to secure by Letters Patent of the United States—

1. In an ice velocipede, a driving wheel having a U-shaped rim provided with a series of apertures *p*, of a series of dogs N, pivoted within said rim at *n*, and provided with curved points *o*, said dogs having the studs R provided with lock-nuts Q Q′ and surrounded by spiral springs P bearing with one end upon the dogs and with the other ends against the rim, as and for the object stated.

2. An ice velocipede consisting, essentially, of a frame having its rear portion bifurcated and the forks terminating in runners, and its forward end provided with a tubular head, a steering bar passing through said head and terminating in a runner as described, a driving wheel journaled in the bi-furcated portion of said frame and having a U-shaped rim provided with a series of apertures, a series of dogs pivoted within said rim and provided with curved points, said dogs having studs provided with lock nuts and being surrounded by spiral springs bearing with one end upon the dogs and with the other end against the rim as described, the sprocket wheels, the driving belt and suitable pedal mechanism, as and for the purpose specified.

In testimony that I claim the foregoing as my invention I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE RIEXINGER.

Attest:

WM. O. STARK,

MICHAEL J. STARK.