

No. 674,954.

Patented May 28, 1901.

A. W. BLOM & A. F. NORDQUIST.
ICE VELOCIPEDE.

(Application filed Oct. 5, 1900.)

(No Model.)

Fig. 1.

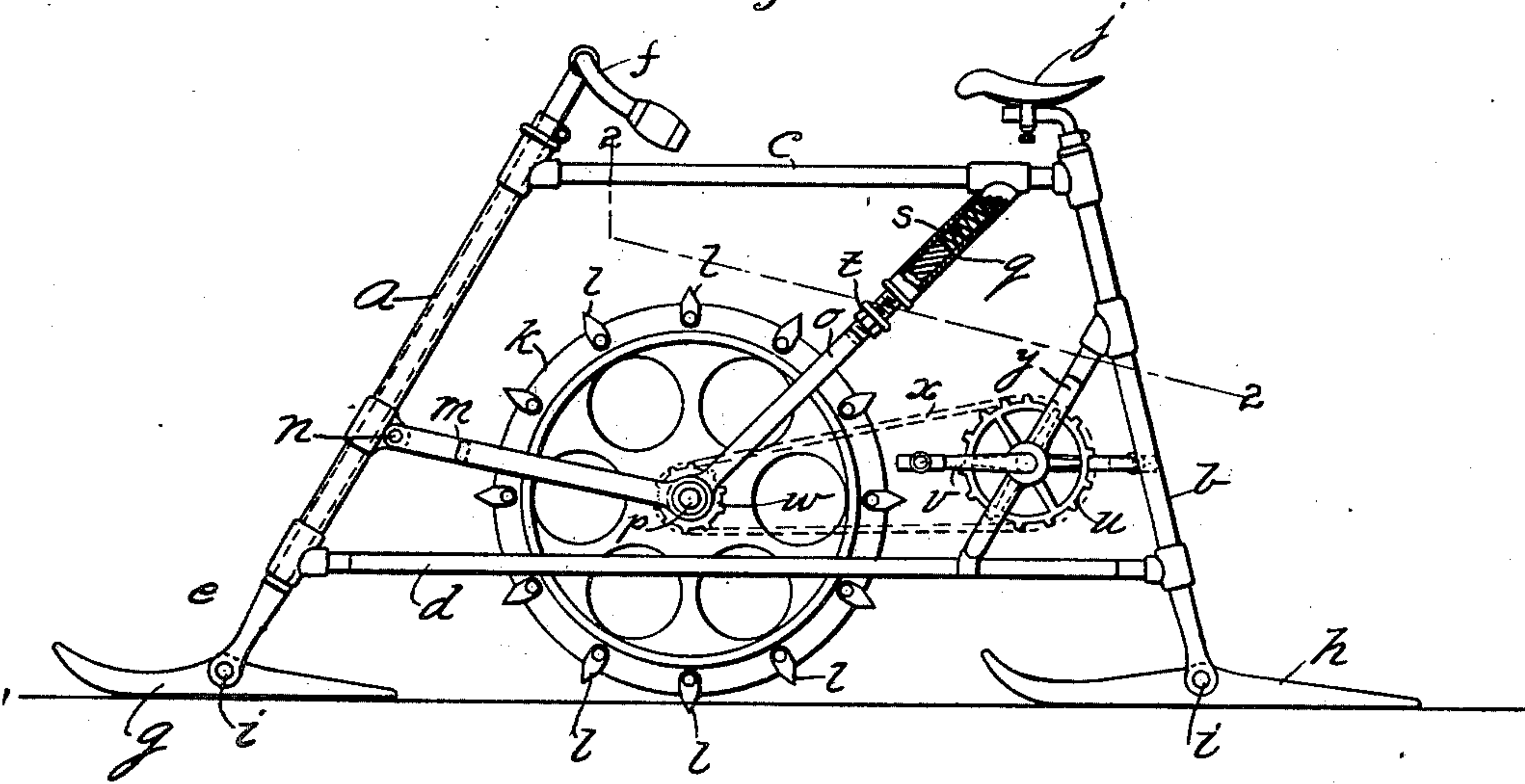


Fig. 2.

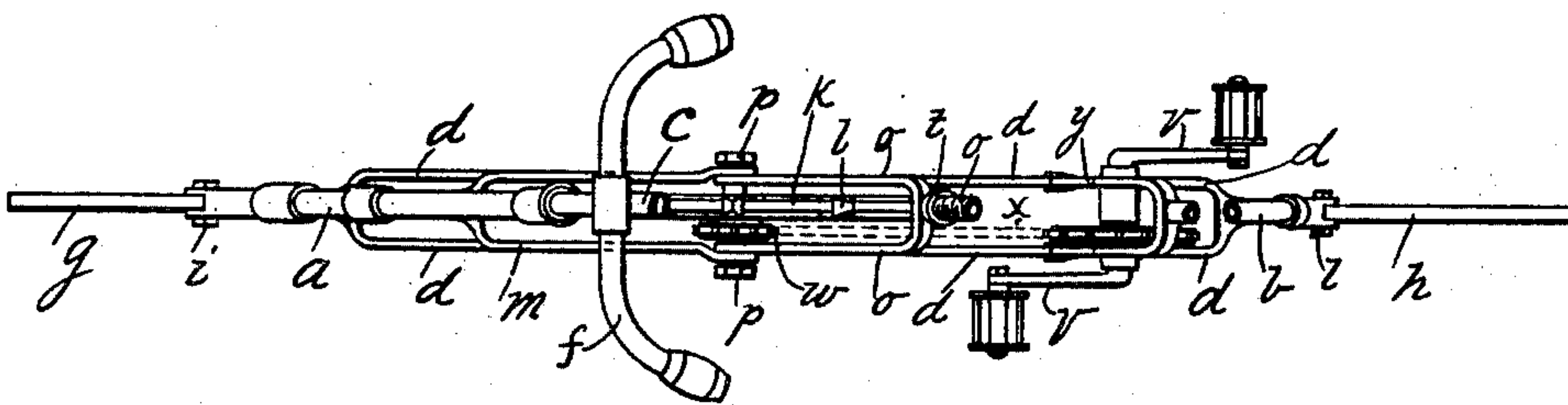


Fig. 3.

WITNESSES:

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ICE-VELOCIPED.

SPECIFICATION forming part of Letters Patent No. 674,954, dated May 28, 1901.

Application filed October 5, 1900. Serial No. 32,109. (No model.)

To all whom it may concern:

Be it known that we, AXEL WILHELM BLOM and ANDERS FREDRIK NORDQUIST, subjects of the King of Sweden and Norway, and residents of New York city, county and State of New York, have invented certain new and useful Improvements in Ice-Velocipedes, of which the following is a specification.

The object of our invention is to provide an improved vehicle for traveling on ice by manual propulsion similarly to traveling on land by means of bicycles; and it consists of the improvements in the construction of such vehicles hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of our improved vehicle with a part in section. Fig. 2 is a plan view, partly in horizontal section on line 2 2 of Fig. 1. Fig. 3 is a transverse section of one of the runners, showing the grooved bearing edge which it is preferred to employ to prevent lateral slip, particularly when turning, and wobbling.

We make a frame structure comprising a front upright tube *a*, rearwardly inclined, rear upright post *b*, forwardly inclined, and upper and lower horizontal connecting-bars *c* and *d*, with a steering-post *e*, fitted in the front tube *a*, having handles *f* attached to the upper end and at its lower end mounted on a skate-runner *g*. Rear post *b* is also mounted on a skate-runner *h*, said posts being jointed to the runners at *i* to allow the requisite vertical play of the runners. The bar *d* is for the most of its length divided in two parts, which are separated, as shown in Fig. 2, for space to locate the driving-wheel. A saddle *j* is mounted in the upper end of the hind post *b* as bicycle-saddles are usually mounted. This comprises the carrying part of the velocipede. For propelling it we provide a driving-wheel *k*, with radially-projecting driving-spurs *l* to "bite" the ice, and we mount said wheel in the said space between the divided parts of bar *d* by means of a front fork *m*, jointed at *n* to the front post *a*, so as to have limited play in a vertical plane, and another fork *o*, having its support on the rear end of upper bar *c*, the wheel-axle *p* being carried in the extremities of the prongs of both of said forks,

and fork *o* has telescopic connection with a socket *q*, forming the connection with bar *c*, allowing it limited vertical play also to compensate for inequalities in the surface of the ice. The socket *q* contains a coiled compression-spring *s* to maintain contact of the driving-wheel with the ice, and on the stem of the fork *o* a check-nut *t* is fitted to check the wheel by screwing up against the socket in case it may be desired to set the wheel positively. Behind the driving-wheel a sprocket-wheel *u*, having pedal-cranks *v*, is mounted, and a smaller sprocket-wheel *w* is mounted on the axle *p* of the driving-wheel for impelling it by a chain *x*. In this example the driving sprocket-wheel *u* is mounted in a diagonal frame-stay *y*, connecting the hind post *b* and the lower horizontal frame-bar *d*, said stay being preferably divided in two parts along its middle portion, as shown in Fig. 2, for space in which to mount the sprocket-wheel; but this is not essential, for the sprocket-wheel may be mounted on one side of a stay not so divided. The sprocket-wheel may be mounted farther back on the hind post, if desired.

The spurs *l* of the driving-wheel will in practice be detachably connected to the rim to facilitate renewal when broken or worn too blunt for use.

What we claim as our invention is—

1. The combination with the frame comprising the front rearwardly-inclined upright, rear forwardly-inclined upright, and upper and lower horizontal connecting-bars, said lower connecting-bar divided for the driving-wheel, of the steering-post in the front upright and provided with handles at its upper end and mounted on a skate-runner at its lower end, a skate-runner carrying the rear upright, the front fork connected to the front upright, rear fork supported at the rear upper part of the frame, driving spur-wheel having its axle mounted in the extremities of the prongs of both forks, driving sprocket-wheel having pedal-cranks, and mounted behind the driving-wheel, sprocket-wheel on the driving-wheel axle, driving-chain, and the seat on the upper rear part of the frame.

2. The combination with the frame comprising the front rearwardly-inclined upright,

rear forwardly-inclined upright; and upper
and lower longitudinal connecting-bars, said
lower connecting-bar divided for the driving-
wheel, of the steering-post in the front up-
5 right and provided with handles at its upper
end and mounted on a skate-runner at its
lower end, a skate-runner carrying the rear
upright, the front fork pivoted for vertical
play to the front upright, rear fork supported
10 at the rear upper part of the frame and hav-
ing telescopic play controlled by a compres-
sion-spring, and also having the positively-
setting nut, driving spur-wheel having its

axle mounted in the extremities of both of
said forks, driving sprocket-wheel having 15
pedal-cranks and mounted behind the driv-
ing-wheel, sprocket-wheel on the driving-
wheel axle, driving-chain and the seat on the
upper rear part of the frame.

Signed at New York city, New York, this 20
29th day of September, 1900.

AXEL WILHELM BLOM.

ANDERS FREDRIK NORDQUIST.

Witnesses:

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J. M. HOWARD.