

WILLIAM ERD.

Improvement in Sleigh-Velocipedes.

No. 114,783.

Patented May 16, 1871.

Fig. 1.

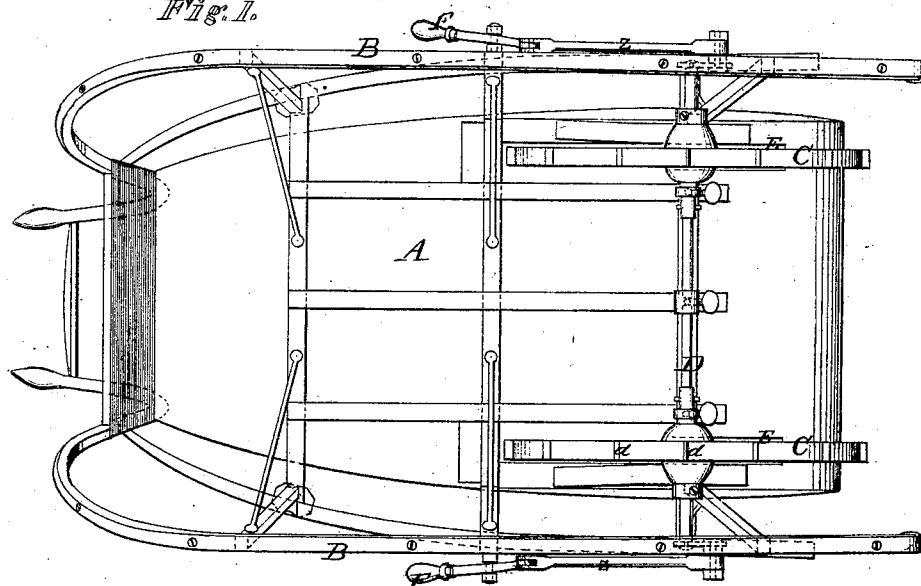
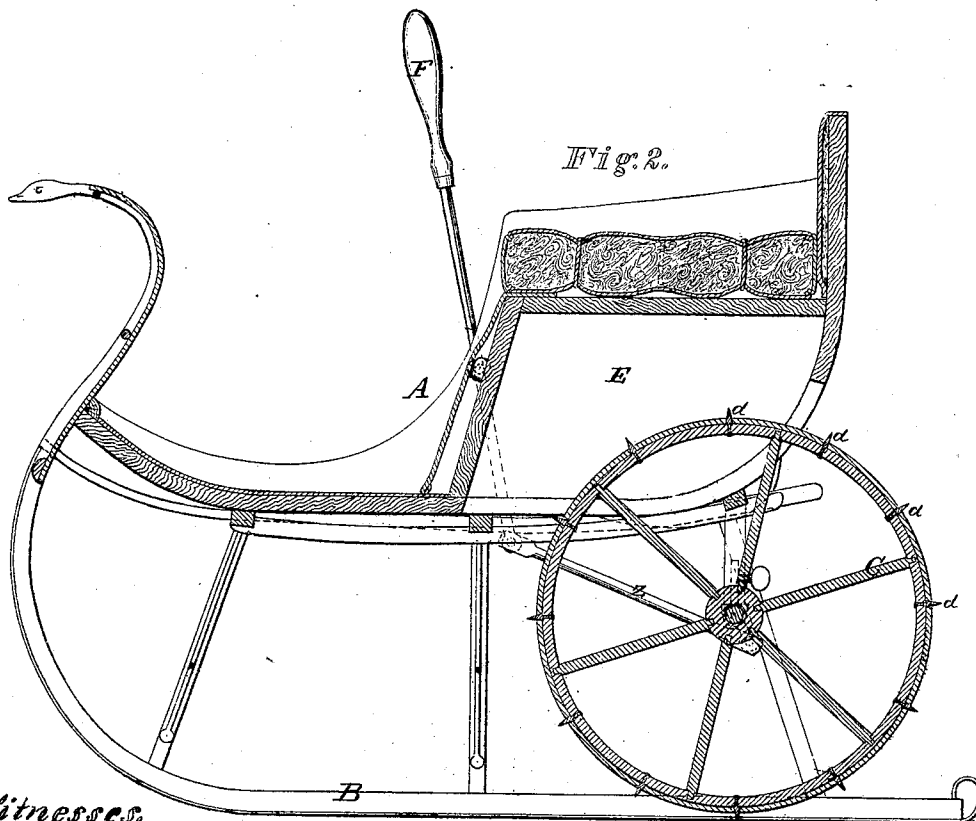


Fig. 2.



Witnesses.
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WILLIAM ERD, OF NEW ULM, MINNESOTA.

Letters Patent No. 114,783, dated May 16, 1871; antedated May 2, 1871.

IMPROVEMENT IN SLEIGH-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, WILLIAM ERD, of New Ulm, in the county of Brown and State of Minnesota, have invented a new and valuable Improvement in Sleigh-Velocipedes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a bottom view of my invention.

Figure 2 is a longitudinal vertical section through the wheel of the same.

My invention has relation to means for propelling sleighs upon ice; and

It consists in the construction and novel arrangement of driving-wheels, and in the manner of operating the same by means of levers arranged like those of a child's velocipede.

The letter A of the drawing designates a sleigh constructed in any of the usual forms.

B B are the runners thereof.

C C are the driving-wheels.

D represents the axle secured to the rear portion of the sleigh under the body thereof.

This axle is adjustable, and capable of being fixed at any desired height by means of set-screws working against sliding bars projecting upward from the axle, and inserted in suitable sockets in the standards, which descend from the rear portion of the body of the sleigh.

The spikes are wedge-shaped, and extend transversely across the tire. They are so arranged that they

will strike the ice with an edge which is nearly as long as the width of the tire, and are very effective when shaped in this manner, the ice not being chipped or broken out by the stroke.

E E represent recesses formed on each side of the box which composes the seat, and designed for the reception of the upper portion of the driving-wheels, which are usually of large size.

Each wheel is provided with spikes *d d*, projecting radially from its circumference or tire, and designed to strike into the ice when the wheels are rotated.

F F represent suitable hand-levers pivoted to the sides of the sleigh, and connected to the wheels by the connecting-rods *z z* eccentrically, in the manner of a child's velocipede.

By means of the hand-levers the occupant of the sleigh can easily rotate the driving-wheels, thereby striking the spikes into the ice and propelling the sleigh forward.

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

In combination with a sleigh having the recesses E E for the reception of the upper portions of the wheels, and the levers F F, the adjustable axle D, and the driving-wheels C C provided with the broad wedge-shaped spikes *d d*, substantially as shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM ERD.

Witnesses:

WM. S. BASSFORD,
E. S. JULIEN COX.