C. M. DAY.

Ice-Velocipede.

No. 165,481. Patented July 13, 1875.

Fig. 1.

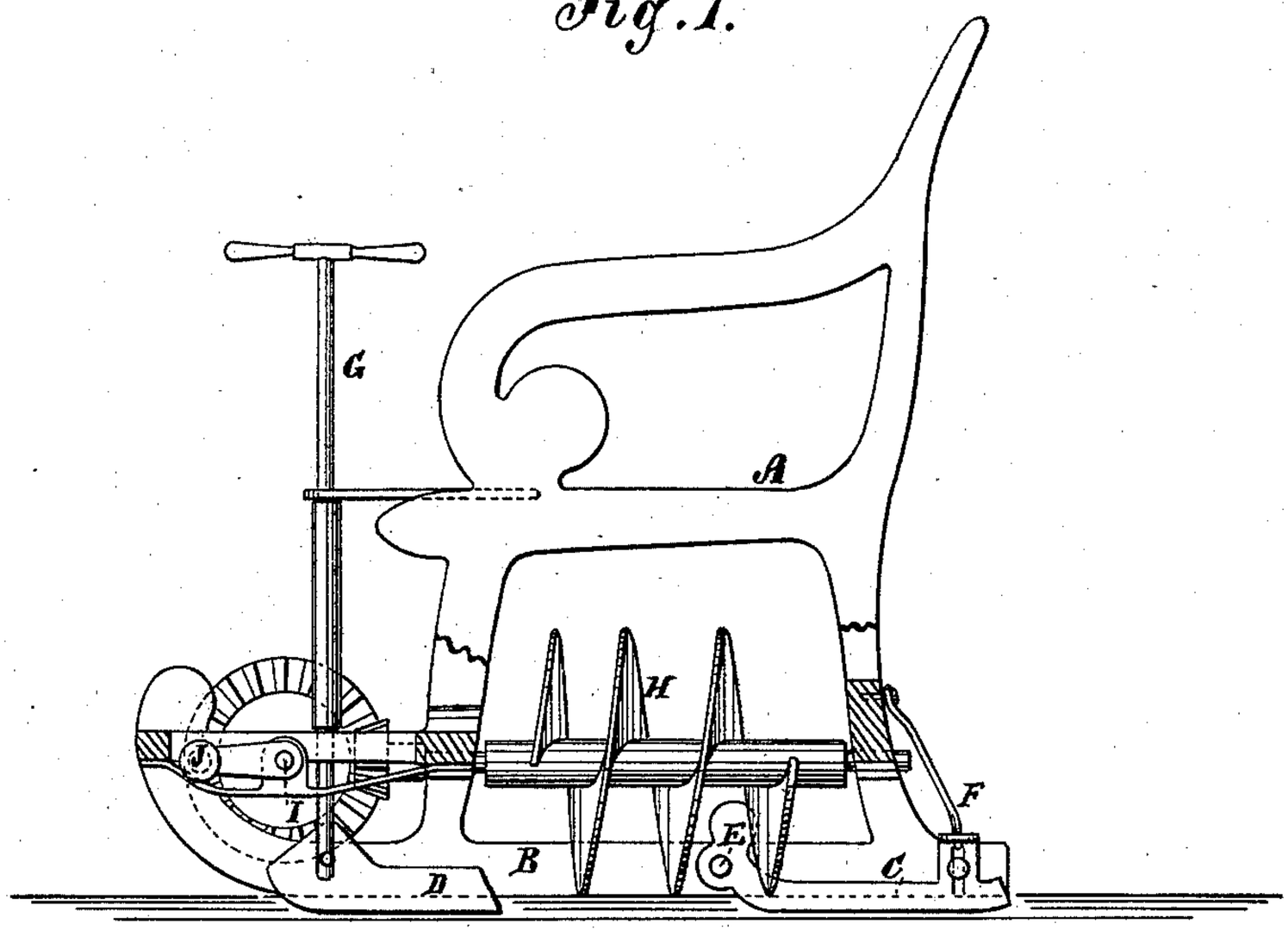
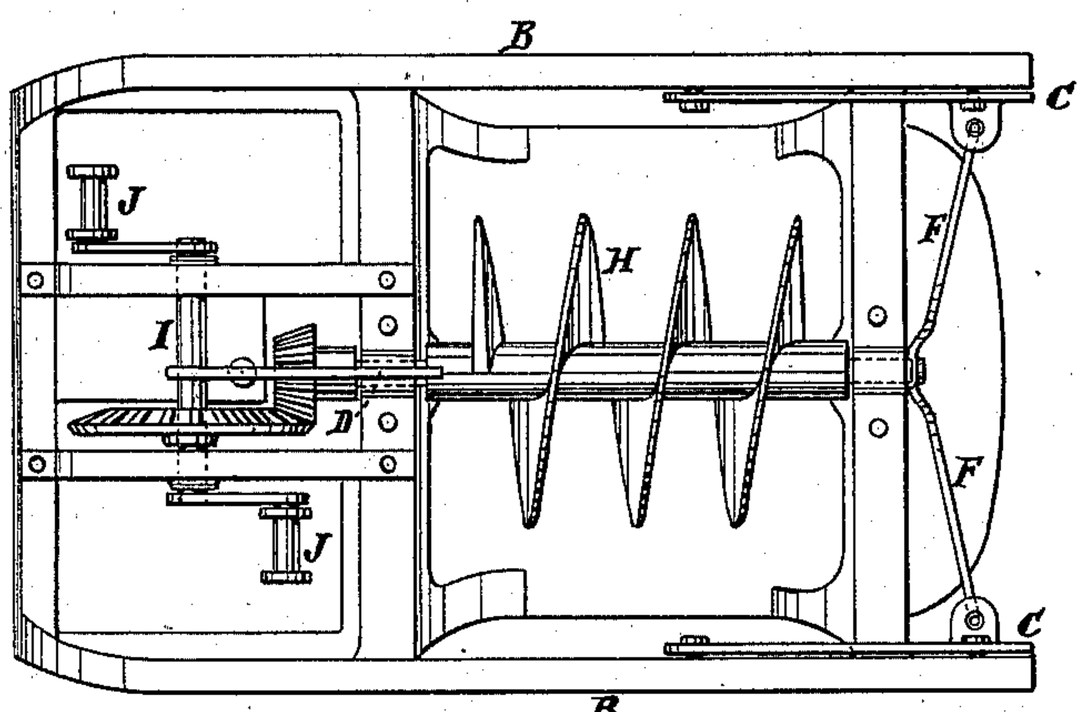


Fig. 2.



WITNESSES:

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INVENTOR:

Chas. M. Day

BY

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UNITED STATES PATENT OFFICE.

CHARLES M. DAY, OF ELIZABETH, NEW JERSEY.

IMPROVEMENT IN ICE-VELOCIPEDES.

Specification forming part of Letters Patent No. **165,481**, dated July 13, 1875; application filed April 17, 1875.

To all whom it may concern:

Be it known that I, CHARLES M. DAY, of Elizabeth, Union county, New Jersey, have invented a new and Improved Ice-Carriage, of which the following is a specification:

My invention consists of a screw-propeller combined with a chair, boat, sleigh, or other conveyance for running on the ice, and so arranged that the edges of the vanes or blades run in contact with the ice to impel the carriage, the screw being turned by foot, hand, steam, or other power.

My invention also consists in the employment of springs to connect the carriage to the runners, in order to allow the blades of the propellers to run in contact with the ice at all times, and yet not permit it to sustain the weight of the load at any time.

Figure 1 is a longitudinal sectional elevation of a carriage contrived according to my invention; and Fig. 2 is a plan view of a carriage inverted.

Similar letters of reference indicate corresponding parts.

A represents an ice-chair with ordinary runners B, and also having runners C and D, but the runners B, or the forward portion, may be dispensed with. The runners C are connected by pivots E and springs F, to sustain the load mainly, but at the same time to allow the body of the carriage to spring down a little. In practice the forward runner D will also be connected in the same way. In this example it is connected to the guiding-staff G, for directing the carriage in the way in which it is to go. H represents the propelling-screw. It is arranged on a shaft ranging fore and aft along the middle, under the seat, and so that when the rider is seated in the chair and presses it down on the springs F, the edge of the blade will cut the surface of the ice sufficiently to drive the chair along when the screw is revolved.

At the front end the screw gears with the double-cranked shaft I, contrived suitably to be worked by foot-power, the feet being applied to the crank-pins J.

Hand-cranks, or other driving contrivances appropriate to the power to be used will be employed.

I propose in some cases to dispense with runners altogether, or at any rate the hind runners, and employ two propelling-screws, both for driving and supporting the carriage, using one runner in front or behind for steering, but a propeller may also be used in place of the guiding-runner.

I am aware that it is not new to propel a sled by a revolving wheel having pivoted claws, but what I claim is—

1. The combination, with sled, of revolving spiral propeller H, extending from front to rear, and the shaft I, having treadle-cranks J, the said shaft being connected with propeller-shaft by bevel-gears, as shown and descriked.

2. The body of the carriage, connected to the runners by springs, in combination with a screw-propeller, arranged to run at the edge of the blades or vanes on the surface of the ice, substantially as specified.

CHARLES M. DAY.

Witnesses:
T. B. MOSHER,
ALEX. F. ROBERTS.