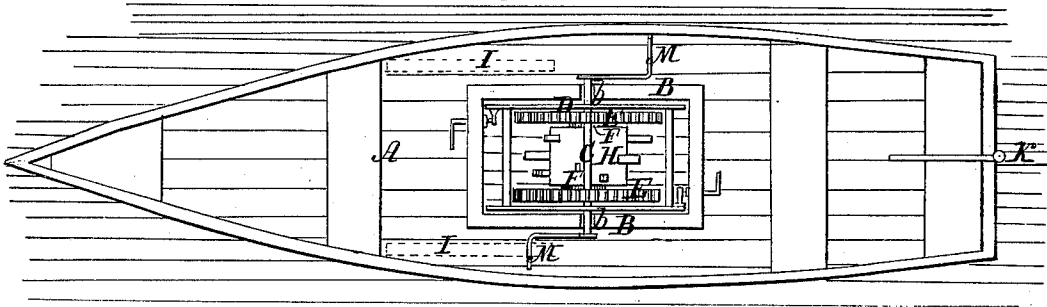


T. B. Kelley. *Ice Boat.*

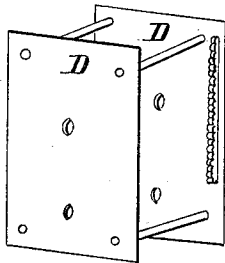
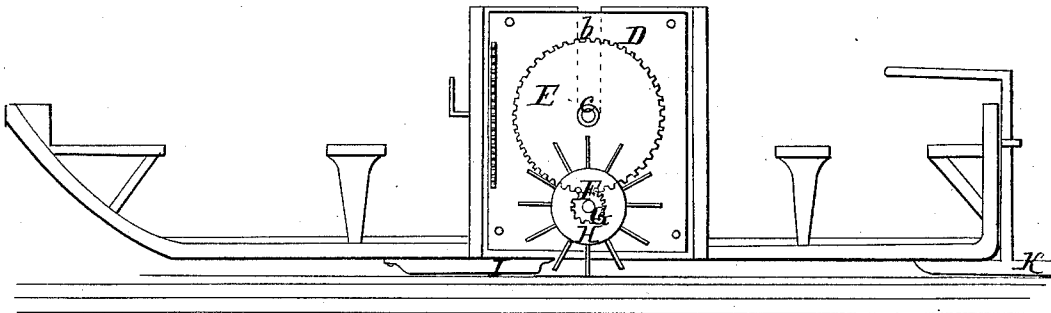
Nº 81,909.

Patented Sep. 8, 1868.

Fig. 1.



Sectional view



Witnesses
P. J. Harvey
L. W. Lane

Inventor:
Thos. B. Kelley
by J. B. Lurking
Attorney

United States Patent Office.

THOMAS B. KELLEY, OF DUNDEE, ILLINOIS.

Letters Patent No. 81,909, dated September 8, 1868.

IMPROVEMENT IN ICE-BOATS.

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, THOMAS B. KELLEY, of Dundee, in the county of Kane, and State of Illinois, have invented a new and useful "Pleasure Ice-Boat;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan of the boat and machinery,

Figure 2 is the section taken along the line *z z*, showing the side elevation of adjoining parts, and

Figure 3 the view of the iron case D.

Similar letters of reference denote similar parts of the machine.

The object of my invention is to provide a pleasure ice-boat for running on ice or snow in winter-time, and its nature consists in supplying a small ordinary boat with a proper gear to work a spur-wheel, used as propeller, said gear so arranged as to give ready means to raise or lower said spur-wheel according to the depth of snow, when said boat is used on the ordinary road. It consists also in a rudder, attached to the boat, and serving as a runner at the same time, to direct the boat. Also in replacing the spur-wheel or wheels with one or two small paddle-wheels for the purpose of using the said boat in summer-time on water.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is an ordinary small boat. B is a wooden case, with two vertical slots, *b b*, for the driving-shaft C, worked by the crank-handles M M. D is an iron case, fitted inside of and sliding in the wooden case B, with which the gear to propel the boat is connected; said gear consisting of the main shaft C, with two cog-wheels E E, gearing into pinions F F, set on shaft G, on which one or two spur-wheels, H, each consisting of a drum and a series of spurs, are set and secured.

Both shafts C and G are journaled to the iron case D, for the purpose of taking, if necessary, the whole machinery out of the wooden case B, as also for the purpose of raising or lowering the said case D, by means of a rack and ratchet-wheel, or a lever and a notched bar, or any other device answering the purpose, and thus raising or lowering the spur-wheel H, and regulating or adjusting its position to the depth of snow on and the condition of the road.

Two or more runners, I I, are secured to the bottom of the boat, and the rudder K, attached to the boat at the stern, is so arranged as to form a rudder and a runner at the same time, and may be made adjustable or not.

In summer-time, spur-wheel or wheels H may be taken off, and one or two small paddle-wheels substituted instead, for the purpose of running the boat on water. As a matter of course, the runners have to be taken off also, and the rudder-runner substituted by an ordinary rudder, and some other fixtures, necessary to fit the boat for water, added or attached.

The boat is supposed to be worked by hand, or by light and convenient propelling power, if such can be found.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A boat, provided with the water-tight compartment or case B, open at top and bottom, with the propelling-wheel mounted in a sliding adjustable frame D, fitted within said case B, for the purpose of adapting the boat for use either on the ice or water, substantially as set forth.

THOS. B. KELLEY.

Witnesses:

J. H. YOUNG,
JAMES YOUNG.