

G. B. MILLER.
ICE SCRAPER.
APPLICATION FILED MAY 16, 1910.

977,211.

Patented Nov. 29, 1910.

Fig. 1.

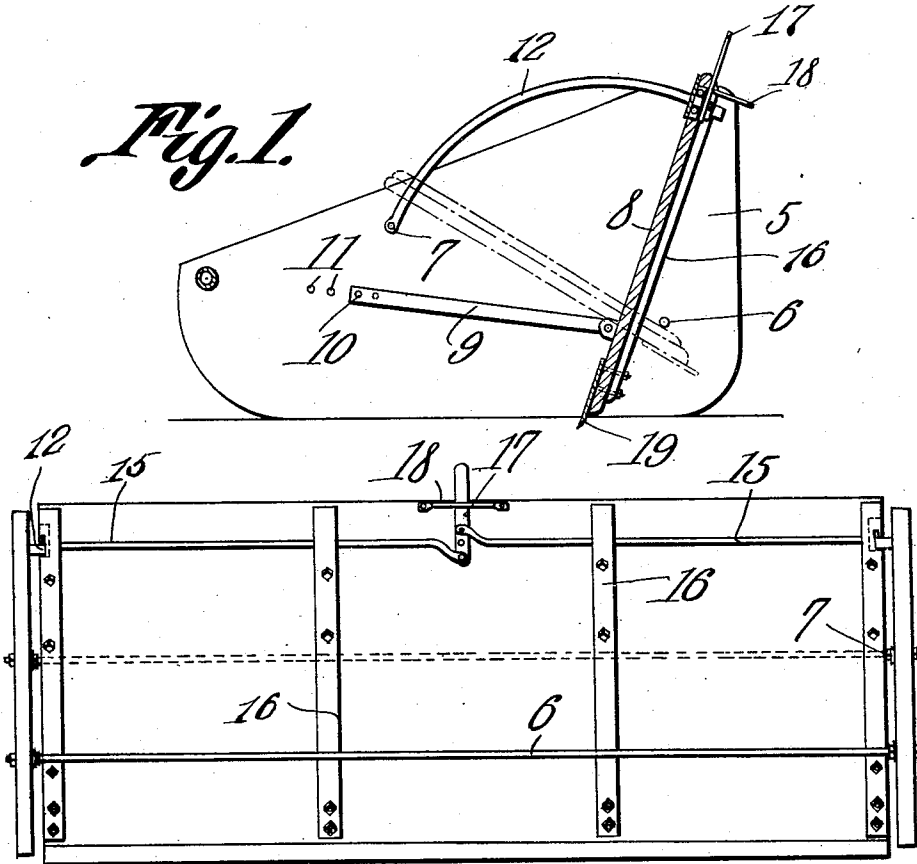


Fig. 2.

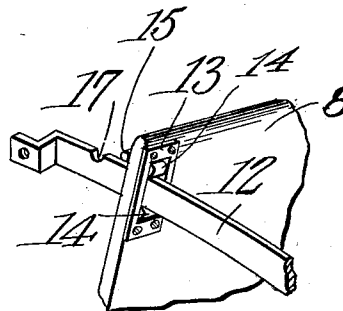


Fig. 3.

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Witnesses

E. J. Stewart
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UNITED STATES PATENT OFFICE.

GEORGE B. MILLER, OF EAU CLAIRE, WISCONSIN, ASSIGNOR OF ONE-HALF TO GEORGE LAUT, OF EAU CLAIRE, WISCONSIN.

ICE-SCRAPER.

977,211.

Specification of Letters Patent.

Patented Nov. 29, 1910.

Application filed May 16, 1910. Serial No. 561,624.

To all whom it may concern:

Be it known that I, GEORGE B. MILLER, a citizen of the United States, residing at Eau Claire, in the county of Eau Claire and State of Wisconsin, have invented a new and useful Ice-Scraper, of which the following is a specification.

It is the object of the present invention to provide an improved construction of machine for removing snow from the surface of ice prior to cutting the same.

The invention aims primarily to provide a machine of this class which will be self-dumping and may have its scraping blade adjusted to lie at any desired angle depending upon the condition of the ice.

In the accompanying drawings,—Figure 1 is a vertical sectional view taken from front to rear through the scraper embodying the present invention. Fig. 2 is a rear elevation of the scraper, and Fig. 3 is a perspective view of one of the upper corners of the blade board of the scraper.

In the drawings, the scraper is illustrated as embodying sides 5, the lower edges of which serve as runners and the sides support between them the scraper blade carrying-board in a manner which will presently be described. In order to brace the sides 5, there is provided a rod, which is indicated by the numeral 6 and is secured at its ends to the said sides 5, and a rod 7 is also secured at its ends to the sides and serves as an additional brace.

The scraper blade carrying-board of the machine is indicated by the numeral 8 and is pivoted at their rear ends to the front of the said board near the lower edge thereof are bars 9, one located directly inwardly of each side 5 and through the forward end of each of these bars 9 is engaged a bolt 10, the said bolt engaging also through openings 11, interchangeably, formed in the said sides 5 near the front thereof. An arcuate bar 12 is secured at its ends to each side member 5 of the frame with its convex edge presented upwardly. In each upper corner of the board 8 there is fitted a small frame 13 in which are journaled rollers 14, one located above the other, and the arcuate bars 12 project through the frames with their convex and concave edges riding against the said rollers 14, it being understood that the board 8 is supported by these arcuate bars

12 and that it may have rocking movement upon the pivots connecting it and the bars 9, as will be evident from an inspection of the full and dotted line positions of the board in Fig. 1 of the drawings. Rods 15 are mounted to slide through bracing cleats 16 secured upon the rear face of the scraper blade supporting board and at their outer ends are designed to project beyond the lateral edges of the board and engage in notches 17 formed in the convex edges of the bars 12 at the rear ends of the said bars, this engagement of the rods 15 in the said notches serving to hold the device in the full line position shown in Fig. 1 of the drawings. A rock lever 17' is mounted to rock upon the rear side of the board 8 at the upper end thereof and to this lever above and below the pivot are connected the inner ends of the rods 15. The upper end of this lever projects above the upper edge of the board 8 and through a handle 18 secured upon the said rear side of the board at the upper edge thereof, which handle may be of any desired form and is to be grasped when the board is to be tilted about its axis. It will be readily understood that whereas the scraper blade supporting board 8 is normally held in the full line position illustrated in Fig. 1 of the drawings, by reason of the engagement of the ends of the rods 15 in the notches 17, the board may be readily released and may be swung or allowed to swing forwardly when the lever 17' is rocked to the left in Fig. 2 of the drawings, and this is done when a quantity of snow or ice has been scraped and has collected in advance of the said board 8, it being understood that by so swinging the lever 17' and then advancing the machine, the resistance offered by the snow against the lower portion of the board 8 will serve to automatically swing the board to substantially dotted line position illustrated in Fig. 1 of the drawings, and the machine will then ride over the accumulated snow and ice when it has cleared the same, the board 8 may be restored to normal position by pulling rearwardly on the handle 18. At its lower end, the board 8 has secured upon its forward face a scraper blade 19 and it will be readily understood that by varying the location of the bolts 10, the inclination of this blade and its supporting board 8 may be varied to the desired degree

and that the board will be free to swing from full to dotted line positions and vice versa regardless of the location of the said bolts.

What is claimed is:

- 5 1. In a machine of the class described, sides, bars pivoted at their forward ends to the sides, a blade carrying board to which the rear ends of the bars are pivoted, arcuate bars carried by the said sides and formed
10 each with a notch, and means carried by the blade board and engaging the said notches for holding the board in upright position.
- 15 2. In a machine of the class described, sides, bars pivoted at their forward ends to the sides, the points of pivotal connection of the bars with the sides at their said ends

being variable, a blade carrying board to which the rear ends of the bars are pivoted, arcuate bars carried by the said sides and formed each with a notch, rollers carried by 20 the boards at the upper corners thereof and receiving between them the said arcuate bars, and means carried by the blade board and engaging the said notches for holding the board in upright position. 25

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GEORGE B. MILLER.

Witnesses:

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J. E. BARRON.