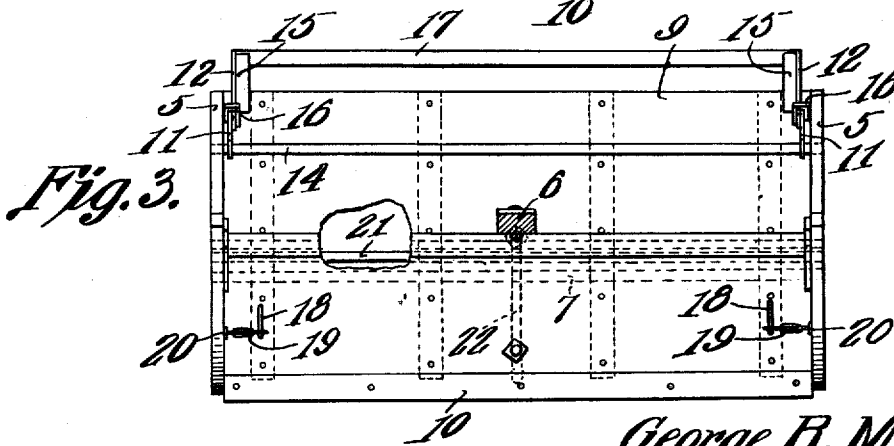
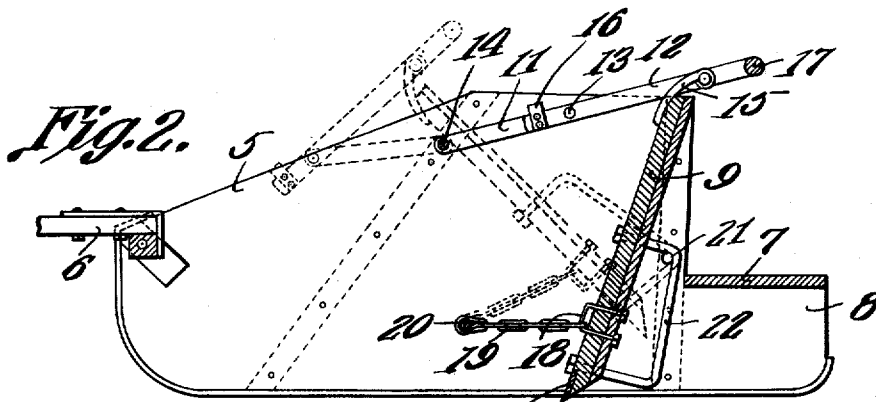
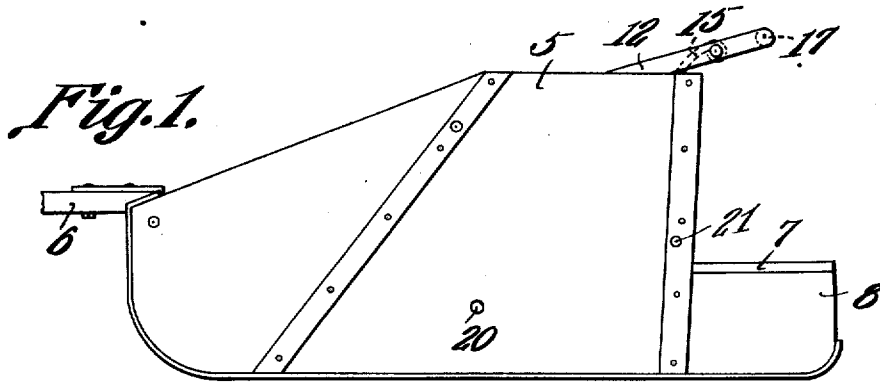


G. B. MILLER.
ICE SCRAPER.
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1,037,956.

Patented Sept. 10, 1912.



Witnesses

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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.

1,037,956.

Specification of Letters Patent.

Patented Sept. 10, 1912.

Application filed October 7, 1911. Serial No. 653,346.

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 of the latter.

One aim of the present invention is to provide a machine of this class in which the scraper blade will be allowed to rest by gravity upon the surface of the ice to be scraped; will at the same time be firmly braced in scraping position, and, may be readily released for automatic dumping.

In the accompanying drawings,—Figure 1 is a side elevation of the scraper embodying the present invention. Fig. 2 is a vertical longitudinal sectional view therethrough, the scraper blade board being shown in full lines in position to remove the snow from the surface of ice over which the scraper is drawn, and in dotted lines in dumped position. Fig. 3 is a front elevation of the scraper.

In the drawings, the scraper is illustrated as including spaced side boards 5, the lower edges of which serve as runners whereby the scraper may be readily drawn over the surface of the ice to be scraped. Any suitable draft device 6 is arranged at the forward end of the side boards 5 and serves also as a means for connecting the said side boards at their said ends. At their rear ends, the side boards are connected by a foot board 7 upon which the driver of the scraper may stand, this foot board being supported upon the upper edges of rearward extensions 8 of said side boards. It will be readily understood that the side boards may be further braced and connected in any suitable manner.

The blade-carrying board of the scraper is indicated by the numeral 9, and at its lower end supports the usual scraper blade 10. It is intended that the blade board shall be normally supported in substantially the position shown in full lines in Fig. 2 of the drawings, and in order to brace it, at its upper end, in this position, there are provided jointed arms each of which comprises a section 11 and a section 12, the two sec-

tions being pivoted together as at 13. At its forward end, the section 11 is pivoted as at 14 to the respective side board 5 at a point in advance of the blade-carrying board 9. Brackets 15 upstand from the blade-carrying board 9 and are pivoted to the sections 12 of the jointed arms. The section 12 of each arm extends forwardly beyond the pivot 13 and is provided with a stud 16 which engages with the section 11 when the arms are substantially in alinement, whereby to limit the movement of the arms upon their pivot 13. It will be understood, however, that these studs 16 do not prevent folding of the sections of each arm to about the dotted line position shown in Fig. 2 of the drawing, and that whereas, when the sections of the arms are in alinement, they brace the upper portion of the blade-carrying board of the scraper, when the sections are folded to about the dotted line position shown, the said board has its upper end swung forwardly until it assumes substantially the position shown also in dotted lines. The sections 12 of the arms are connected, at their rear ends, by a handle bar 17 which may be grasped for the purpose of throwing the sections out of alinement and thereby allowing them to fold.

A staple 18 having a relatively long connecting portion is secured through the blade board 9 at each side thereof and connected slidably with each staple is the rear end of a chain 19. At its forward end, this chain is connected as at 20 to the respective side board 5. A rod 21 is mounted at its ends in the side boards of the device directly in advance of the platform 7 and a bail 22, of substantially U-form, is secured at the ends of its arms to the blade board 9, and projects rearwardly therefrom. The rod 21 extends through this bail and the rod and bail serve as a supporting means for the board when the same is in scraping or dumping position. The advantage of the bail 22 is apparent from Fig. 2 of the drawings in which, in dotted lines the bail is illustrated as supporting the blade board in position to permit of free passage of accumulated snow beneath the board.

In using the scraper embodying the present invention, the sections of the two arms are first brought into alinement whereupon the blade-carrying board will assume the

full line position shown in Fig. 2 of the drawings. The scraper is then drawn over the surface to be cleaned, and when a considerable quantity of snow has collected in advance of the blade board, downward pressure is exerted upon the handle bar 17 thereby throwing the sections of each arm out of alinement and allowing them to assume substantially the dotted line position shown in the said Fig. 2. The blade board will be swung forwardly to assume the dotted line position shown, due to the pressure of the snow against the lower portion thereof and as it moves from full to dotted line position, the rearmost link of each chain 19 will ride upwardly along the connecting portion of the respective staple 18 until it rests at the upper end of said portion, the resistance of the lower portion of the blade board to the accumulated snow being in this manner lessened.

What is claimed is:—

1. In a scraper, sides, a blade carrying board disposed between the sides, jointed arms connected to and bracing the upper end of the board, a rod extending transversely between the sides, a bail carried by the board and supported upon the rod, and flexible means connected to each side and to the board and holding the board for movement of the bail upon the rod.

2. In a scraper, sides, a blade-carrying board disposed between the sides, jointed arms connected to and bracing the upper ends of the board, a rod extending trans-

versely between the sides, a bail secured upon the board and hung upon the rod, a staple at each side of the board, and flexible means connected to said side and slidably with each staple and holding the board in position for movement of its bail upon the rod.

3. In a scraper, sides; a blade-carrying member pivotally held between the sides and vertically movable with respect to the sides; an arm comprising a primary section fulcrumed intermediate its ends upon the blade-carrying member and protruding to the rear of the blade-carrying member, and a secondary section pivoted at its rear end to the primary section, the forward end of the secondary section being pivotally connected to one side; and means for holding the sections in alinement, to brace the blade-carrying member; the protruding end of the primary section being manually depressible, to effect a folding of the sections, out of bracing relation with respect to the blade-carrying member, thereby permitting an elevation of the blade-carrying member and a forward tilting of the upper edge of the blade-carrying member, under the impulse of the accumulated material.

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:

A. J. BRANSTAD,

F. A. QUILLING.