J. A. WOOTON.

ICE DIVIDING MECHANISM.

APPLICATION FILED NOV. 29, 1913.

1,149,241. Patented Aug. 10, 1915.

Fig. 1.

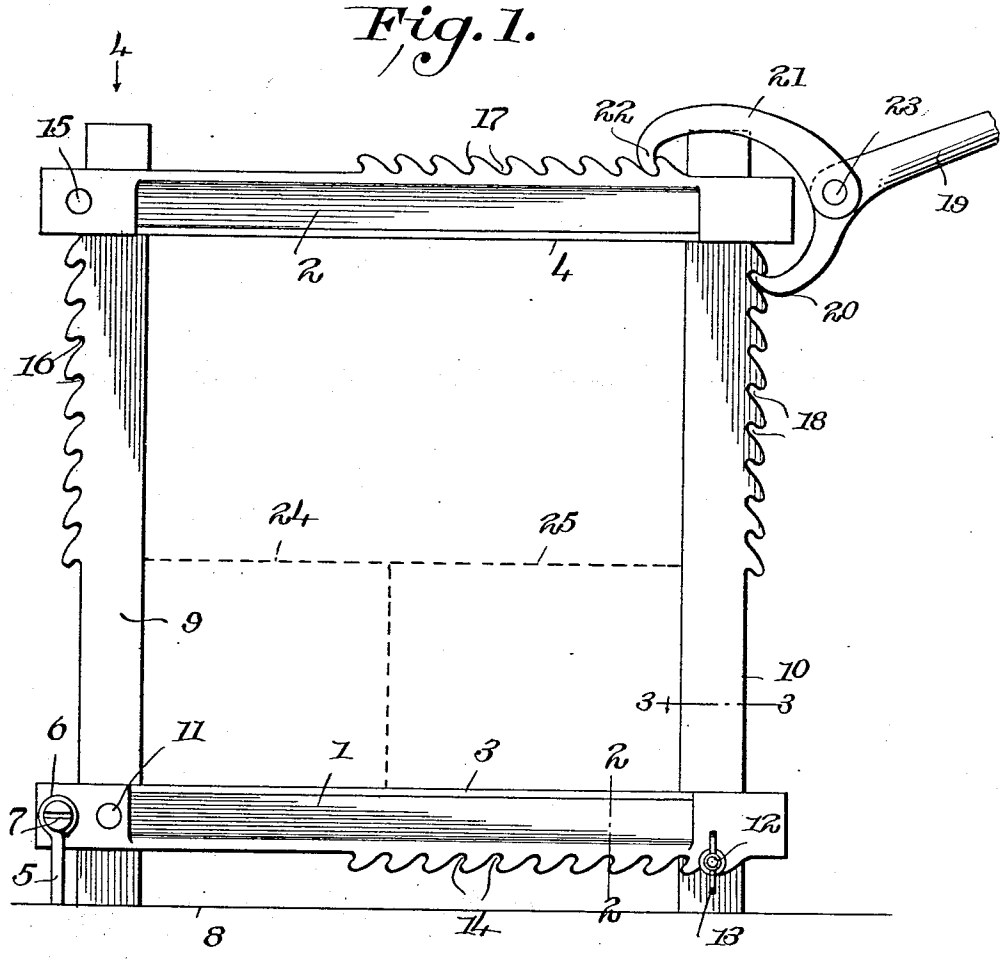


Fig. 4.



Fig. 2.

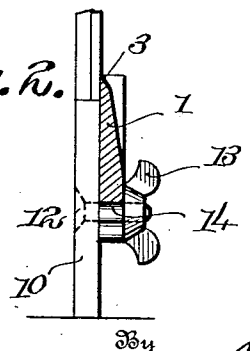
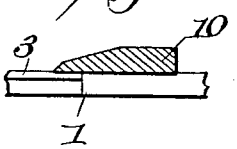


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN A. WOOTON, OF FORT MEADE, FLORIDA.

ICE-DIVIDING MECHANISM.

1,149,241. Specification of Letters Patent. Patented Aug. 10, 1915.

Application filed November 29, 1913. Serial No. 803,822.

To all whom it may concern:

Be it known that I, JOHN A. WOOTON, a citizen of the United States, residing at Fort Meade, in the county of Polk and State of Florida, have invented certain new and useful Improvements in Ice-Dividing Mechanism, of which the following is a specification.

The object of my invention is to provide a mechanism for dividing or cutting ice blocks into chunks of the desired sizes in a manner to eliminate such waste of ice as is unavoidable in the sawing and hacking methods now employed.

It is one of the objects of this invention to provide means for arresting movement of an ice block in one direction, and to apply stress to mechanism moving in the direction in which the ice block is arrested from movement, to sever the block into chunks by pressure on the ice.

In the most improved embodiment of my invention, I provide oppositely disposed cutting or knife edges, which are advanced upon the ice to sever the same into chunks by pressure, rather than by hacking and breaking the ice blocks into chunks.

The device of my invention is adjustable for subdividing ice cakes into blocks or pieces of any desired size, even into small chunks for pail or water coolers.

The device of my invention will be more fully described in connection with the accompanying drawing, and will be more particularly pointed out and ascertained in and by the appended claims.

In the drawing:—Figure 1 is a view in side elevation showing an ice cutting mechanism embodying one form of my invention. Fig. 2 is a sectional view on line 2—2 of Fig. 1. Fig. 3 is a sectional view on line 3—3 of Fig. 1. Fig. 4 is a view looking in the direction of the arrow 4 in Fig. 1.

Like characters of reference designate similar parts throughout the different figures of the drawing.

Broadly considered, my invention consists of means for supporting or arresting an ice cake from movement in one direction, which may be a bar 1, and a subdivider for movement against the opposite side of the cake, which may be in the form of a knife-edge cutter bar 2, to subdivide the cake into blocks or chunks of ice of the desired size. However, I preferably provide both bars 1 and 2 with knife edges, as indicated at 3 and 4, respectively.

In order to afford an assembled structure, I may pivotally connect the subdividing or supporting bar 1 with a floor space in an ice house or storage house, or if the device is used on an ice wagon, I may provide a pivotal connection with the floor of the wagon. As shown, 5 designates means for pivotally securing the subdividing bar 1 to a floor, and the part 5 may be in the form of a rod or bolt having an eye 6 connected with the bar 1 by a screw 7. The rigid connection of the bolt 5 with the floor structure 8, serves to hold the mechanism in an upright position.

I have shown the mechanism provided with knife-edged subdividing or cutting bars 9 and 10 which are vertically disposed and extend upright from the floor line 8. The lower bar 1 is pivoted to the supporting bar 9, as at 11, at one end of the bar 1, and the other end of the bar 1 is supported on the bar 10, preferably adjustably, by means of a bolt 12 and a winged nut 13. In order to complete the adjusting feature, I notch the bar 1, as at 14, so that the bolt 12 can be seated in any one of the notches and hold the supporting bar 10 at any desired distance from the bar 9. It will be seen that when the bar 1 is clamped in place on the bar 10, the flat abutting faces of the bars 1, 9 and 10 will hold the structure upright.

The upper bar 2 is provided with a pin 15 which may be seated in any one of the downwardly facing notches 16 with which the supporting bar 9 is provided. I preferably bend the end 2′, of the bar 2, so that it will engage both faces of bar 9, and provide a bearing for both ends of pin or rivet 15. The cutting or subdividing bar 2 is provided with laterally-facing actuating notches 17, for actuating purposes, and the supporting bar 10 is provided with downwardly facing pressure notches 18 for fulcruming purposes.

Means is provided for advancing the cutting bars 2, 9 and 10 onto a cake of ice interposed therebetween so as to subdivide the same.

As shown, I provide a lever 19 with a fulcruming end which may be in the form of a hook 20, adapted to be engaged with the pressure notches 18, and with an actuating member 21 having a terminal which may be

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in the form of a hook 22 for engagement with the actuating notches 17. The actuating member 21 is pivoted to the lever 19, as at 23.

Assuming that two cakes of ice were to be severed into blocks or chunks of the desired size, the cakes, as indicated at 24 and 25 would be disposed between the cutting bars 9 and 10 and upon the severing bar 1. The severing bar 2 would then be lowered with the pin 15 engaging one of the lower notches 16 so that the cutting bar 2 would lie upon the ice blocks 24 and 25. The lever 19 would then be engaged with the lowermost notch 18 and with one of the right-hand notches 17, so that upon downward movement of the lever, the cutter bars 1, 2, 9 and 10 would engage and sever the ice cakes into blocks by reason of the opposing pressure on opposite sides by the knife edges of all the bars. It will be seen that bar 1 will actively function on a cutting bar notwithstanding the fact that it may not be raised on pressure descent of bar 2. Thus it will be seen that instead of sawing or hacking the ice, the same may be accurately subdivided by pressure engagement of knife edges into blocks of the desired size.

It will be seen that bars 1, 2, 9 and 10 are pivotally connected so that movement of lever 19 will serve to approach all the bars onto the interposed cakes. Furthermore, all the cutting edges are in the same plane so that the severed block will not have ragged edges which would cause the ice to melt quickly.

While I have herein shown and described one specific form of my invention, I do not wish to be limited thereto except for such limitations as the claims may import.

I claim:—

1. In an ice cutting device, a pivoted cutting bar for engagement with one side of an ice block, means adjusting said bar in fixed position, a second pivoted cutting bar for engagement with an opposite side of said block, and means for imparting pressure to the second bar to subdivide the block by pressure exerted by said bars, substantially as described.

2. In an ice cutting device, a pivoted cutting bar for engagement with one side of an ice block, means adjusting said bar in fixed position, a second cutting bar pivoted at one end for engagement with an opposite side of said block, and means for applying pressure to the free end of said second bar to subdivide the ice, substantially as described.

3. In an ice cutting device, a lower pivoted cutting bar for supporting an ice block, an upper bar, means adjusting said bar in fixed position movable downwardly upon the ice, and means for applying pressure to said upper bar to subdivide the ice, substantially as described.

4. In an ice cutting device, a structure comprising frame portions for surrounding the ice to be subdivided, cutting edges on each portion and means operable on one corner of said structure for moving said frame portions against the ice to subdivide the same, substantially as described.

5. In an ice cutting device, a frame comprising upright cutting bars and upper and lower cutting bars, and means engaging one of the upright bars and one of the cutting bars to engage and cut the ice, substantially as described.

6. In an ice cutting device, a structure comprising adjustably connected cutting frame portions, means for adjusting said portions into embracing relation with the ice to be subdivided, cutting edges on each portion and means for imparting pressure to said portions for subdividing the ice, substantially as described.

7. In an ice cutting device, a structure comprising a substantially rectangular cutting frame portions adjustably connected with each other for contraction of said portions in embracing relation about a cake of ice to be severed, and means for applying pressure to said portions to subdivide the ice, substantially as described.

8. In an ice cutting device, a structure including adjustably connected substantially rectangularly disposed cutting frame portions, opposite portions having cutting edges, and means for engaging one of the portions having a cutting edge and another of said portions for applying pressure to sever the ice, substantially as described.

9. In an ice cutting device, a structure comprising adjustably connected rectangularly disposed frame portions, all of said portions having cutting edges, and means for engaging the corner of said structure at the extremities of a pair of adjacent cutting portions for applying pressure to such cutting portions to sever the ice, substantially as described.

10. In an ice cutting device, a rectangular frame composed of upper and lower cutting bars, an upright cutting bar pivotally connected with one of said cutting bars, means for anchoring the frame in an upright position to a floor space, a second cutting upright bar, means for adjustably connecting the second upright bar to one of said cutting bars, the remaining cutting bar being adjustably connected with the first-named upright bar, and means engaging one of the cutting bars and one of the upright bars to apply pressure to sever the ice, substantially as described.

11. In an ice cutting device, a frame structure including rectangularly assembled bars, opposite bars being pivoted, and one of said pivoted bars being adjustable into a fixed position, cutting edges formed on all of said

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bars, and lever means adapted to act upon a corner of said structure to force the remaining bars to sever the ice supported by said adjustably fixed bar, substantially as described.

12. In an ice cutting device, a frame structure including rectangularly assembled bars, cutting edges formed on each of said bars, notched edges formed on each bar for a portion of its length opposite the cutting edge thereof, the notches of a pair of adjacent bars being oppositely directed, and lever means engageable with the notched edges of last said bars to apply a severing pressure to said cutting edges against ice inclosed by said structure, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. WOOTON.

Witnesses:
J. J. DAMPIER,
E. D. PRINE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."