W. R. DAUGHTRY.

ICE SHAVING DEVICE.

APPLICATION FILED SEPT. 2, 1915.

1,212,915.

Patented Jan. 16, 1917.

2 SHEETS—SHEET 1.

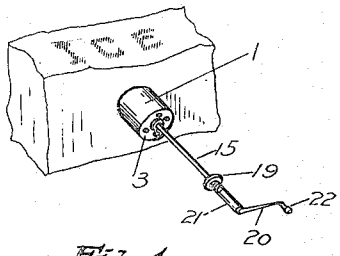


Fig. 1.

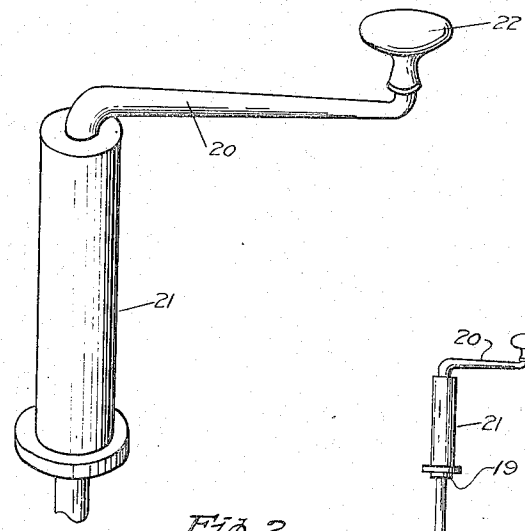


Fig. 2.

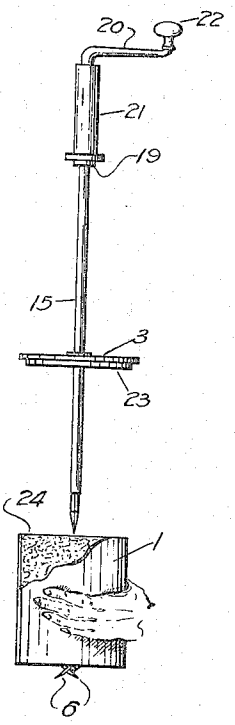


Fig. 3.

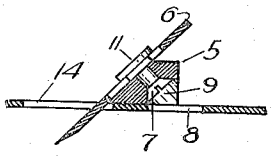
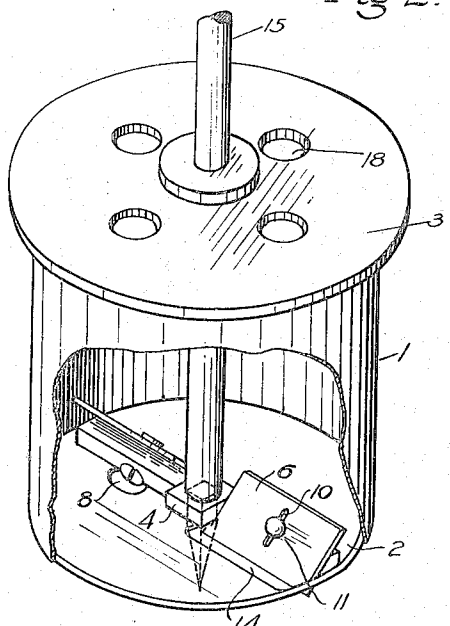


Fig. 4.



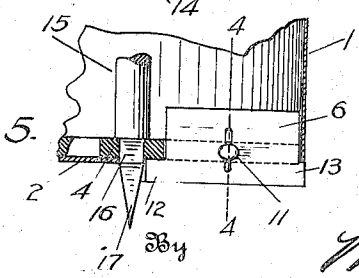


Fig. 5.

Witness

J. Gordon Barkis.

By

Inventor

W. R. DAUGHTRY

Attorney

W. R. DAUGHTRY.

ICE SHAVING DEVICE.

APPLICATION FILED SEPT. 2, 1915.

1,212,915.

Patented Jan. 16, 1917.

2 SHEETS—SHEET 2.

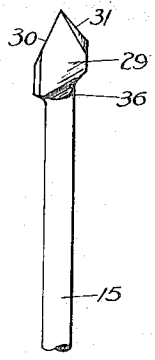


Fig-10

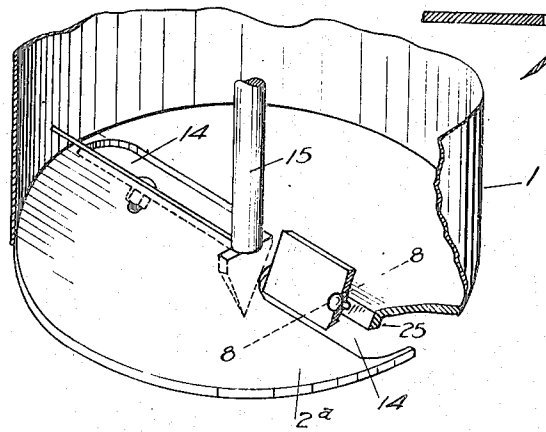


Fig-6

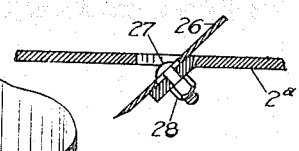


Fig-8

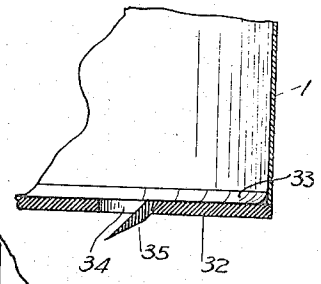


Fig-9

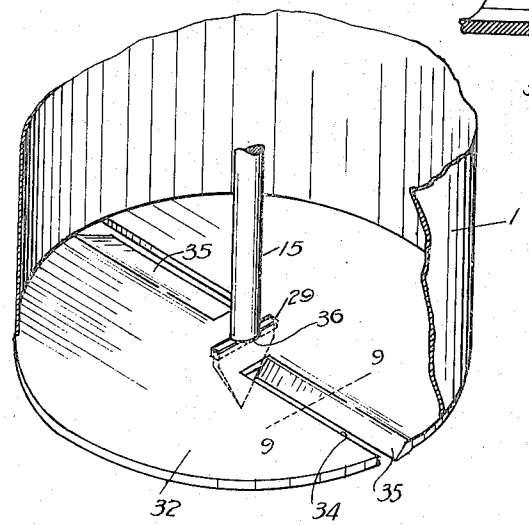


Fig-7.

Witness

J. Gordon Sparkes.

By

Inventor

W.R. DAUGHTRY.

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM R. DAUGHTRY, OF BIRMINGHAM, ALABAMA.

ICE-SHAVING DEVICE.

1,212,915. Specification of Letters Patent. Patented Jan. 16, 1917.

Application filed September 2, 1915. Serial No. 48,622.

To all whom it may concern:

Be it known that I, WILLIAM R. DAUGHTRY, a citizen of the United States of America, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Ice-Shaving Devices, of which the following is a specification.

My invention relates to a device for shaving ice which is especially, though not exclusively, adapted for domestic use.

Heretofore shaved ice has been obtained by a device operated on the principle of a plane and to make use of such a device it is necessary that the ice be so arranged in the ice box as to present a long unobstructed surface for the sweeping stroke of the plane. It is frequently impossible to use an ice crusher without breaking the ice with a pick into smaller sections or without the removal of bottles or other articles in the ice compartment.

One object of my invention is to adapt the shaver to work against any exposed face of the ice and without requiring any movement that could possibly upset or break bottles or other articles in the ice box. To this end I have provided a rotary shaver comprising a cylindrical container having at its inner or contact end, which is presented to the ice, cutting means for shaving ice into the container upon the rotation of the cutting means and I accomplish this rotation by means of an elongated crank shaft which turns the device and cutting means so as to bore into the ice until the container is filled with shaved ice. Preferably the crank shaft carries an outer end closure for the container and is readily removable from the container so that the latter can be detached to carry the shaved ice to the point of use. Preferably the container is of the capacity of an average glass or tumbler when the apparatus is designed for domestic use, and by lifting out the crank shaft and outer end closure the container filled with crushed ice can be inverted and its contents dumped into a glass for use.

A further object of my invention in making the crank shaft readily detachable from the container is that I purpose to utilize an elongated crank shaft so that the handle at the outer end can be operated from without any ordinary ice box while the shaver is engaging a lump of ice therein. By this arrangement the driving movement of the shaver is conducted from without the box and any disturbance of the contents of the box is safely avoided.

In the accompanying drawings I have illustrated several embodiments of my invention having in view the illustration of several forms which can be produced with varying expense but which all operate upon the same general principles. I do not however desire to be understood as limiting myself to the details of constructions shown as such may be widely varied without departure from the principles underlying my invention.

Referring to the drawings:—

Figure 1 shows the ice shaver as it would appear in actual service. Fig. 2 is an enlarged perspective view of one form of my apparatus showing the side wall of the container broken away to show the shaving means. Fig. 3 is a side elevation of the apparatus showing the container separated from the crank shaft and top cover. Fig. 4 is a detail sectional view of the shaving blade taken on the line 4—4 of Fig. 5. Fig. 5 is a partial vertical sectional view showing the shaving blade in front elevation. Fig. 6 illustrates a less expensive embodiment of my invention, the container being partly shown and broken away to make clearer the shaving mechanism. Fig. 7 is a similar view of a still less expensive embodiment of my invention in which the shaving blades are formed integral with the bottom. Figs. 8 and 9 are sectional views taken on the lines 8—8 and 9—9, respectively, of Figs. 6 and 7; and Fig. 10 is a detail view of the flattened end of a crank shaft shown in Figs. 6 and 7.

Similar reference numerals refer to similar parts throughout the drawings.

In the embodiment illustrated in Figs. 1 to 5, I show a container 1 which may be of thin galvanized iron, tin or similar thin sheet metal and is preferably cylindrical in shape having an inner or bottom end 2 which is made fast to the body of the container and having an upper or outer removable cover 3. On the inner face of the bottom 2 is mounted a transverse blade stock having a flat rectangular central portion 4 and reversely inclined arms 5 which extend diametrically across the bottom to the periphery of the container. Cutting blades 6

are reversely disposed and seated on the inclined faces of the stock arms 5, being connected thereto by screws 7 which are preferably passed upwardly through bottom openings 8 and counterbored holes 9 in the arms 5 and through slots 10 in the blades, and engage flat nuts 11 seated on the face of the blades. By this arrangement the screws can be conveniently manipulated through the bottom of the container to release blades 6 and permit of their adjustment as they wear or according to the character of the shaved ice desired. It will be noted in Fig. 5 that the blades 6 are provided at one end with an extension 12 which extends under the rectangular portion 4 of the stock to a point adjacent to a square central opening therein. The blade is also provided with a shoulder 13 at its outer end which extends out in line with the outer periphery of the container 1. The bottom 2 is provided with elongated slots 14 through which the upper or smaller ends of the blades can be passed and made fast by the screws 7 to the stock. I provide a crank shaft 15 which passes centrally through the cover 3 and bears against the blade stock 4, having a shank comprising an upper squared portion 16 and a lower pointed end 17. The square shank 16 fits into the squared opening of the central portion 4 of the stock and the pointed end 17 of the shaft extends centrally through the stock and container bottom and to a point below the cutting edges of the blades 6. Preferably the top closure or door 3 is made fast to the shaft 15 and is provided with any desirable number of openings 18 through which the quantity of shaved ice accumulated in the container may be observed. Near its upper or outer end I provide a fixed shoulder or bearing 19 on the shaft and between this and the crank end 20 on the shaft is loosely mounted a guide and thrust spool 21 which has a flange at its bottom end and is intended to be grasped in one hand of the operator while the other hand of the operator grasps the handle 22 on the crank and rotates the shaft 15 about its long axis, turning with it the container and its shaving blades. It will be noted that the top 3 is provided with a flange 23 which fits down into the container 1 and centers the shaft therein.

Having assembled the parts as shown in Fig. 2, the operator grasps the spool 21 and guides the device against the block of ice. The point 17 is thrust into the ice and by turning the crank 20 the point bores into the ice until the cutting blades engage the surface thereof and begin to shave ice through slots 4 into the container. After the container has been filled it is drawn outwardly and grasped in one hand while the shaft and cover are lifted off with the other hand, as seen in Fig. 3, when the container filled with shaved ice 24 can be carried to the point of use and the crank shaft 20 and top cover left at the refrigerator.

Where it is desired to construct the device more cheaply, this can be done as shown in Fig. 6 by providing the container 1 with a metallic bottom member 2^a which is of greater strength and thickness than would be required for the bottom 2 in Fig. 2, and in punching out the slots 14 in this bottom I leave a down-turned lip 25 along opposite edges of the two slots and incline the upper faces of these lips so as to afford the desired pitch to the shaving blades 26, Fig. 8, which in this case are fastened by bolts 27 which are passed from the inner end of the container through the alining holes in the blade and lips 25 and secured by nuts 28. The blades 26 in this case are not provided with the extensions 12 and 13 as in the case with the blade 6 and it is therefore necessary to make provision for the cutting away of a cylindrical body of ice which would be left between the adjacent inner ends of the cutting blades. To meet this condition I provide the crank shaft 15 with a wide flattened end 29 which is adapted to be passed through an oblong hole in the bottom 2^a and where it projects below the bottom it is tapered to a point and provided with reversely beveled cutting faces 30 and 31. It will be noted that the elongated slot for the portion 29 is disposed with its long axis at right angles to the blades 26, thus leaving a maximum amount of metal strength between the slots 14.

In Fig. 7 I show a still more inexpensive embodiment of my invention in which the container 1 is mounted upon a heavier cast metal or stamped metal base 32 which has the same diameter as the cylinder 1 and is made fast to the latter by solder 33 or equivalent means. This bottom is provided with two radial rectangular slots 34 extending from points near its center through its periphery and in forming these slots the displaced metal is down-turned to form reversely inclined lips 35 which have the desired inclination for shaving and which have their under faces beveled to form cutting edges. These blades 35 are reversely disposed and the bottom is provided with an oblong central opening to receive the squared oblong end 29 of the shaft 15, in which case the cutting point is adapted to cut out the cylindrical portion of the ice having a diameter equal to the space between the adjacent ends of the blades 35 or 26, as the case may be. In forming the portion 29, the lower end of the shaft 15 is provided with squared shoulders 36 which engage the bottom 2^a or 32 on either side of the oblong slot therein so as to transmit the requisite thrust to the device to hold it to its work.

It will be obvious that my invention is capable of being manufactured at a nominal cost and that it can be used in any position or under any circumstances in which a sufficient surface of the ice is accessible.

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

1. In a device of the character described, a cylindrical receptacle adapted to be placed upon the ice and rotated, the bottom of the receptacle having shaving means for cutting and directing the cut ice into the receptacle upon the rotation thereof, a detachable top and a crank device comprising a shaft made fast to the top and extending centrally through the receptacle and below the bottom thereof, a drill point on the lower end of said shaft, a positive driving and thrust connection between the shaft and the receptacle, a crank at the extreme end of said shaft, and a thrust spool mounted to turn on the shaft adjacent to its crank, said top being adapted to center the shaft in the receptacle.

2. In a device of the character described, a rotary cylindrical receptacle adapted to be placed upon the ice and rotated, and having its bottom provided with cutting devices adapted to shave the ice upon the rotation of the receptacle, there being openings in the bottom of the receptacle opposite the cutting devices to permit the shaved ice to enter the receptacle, a detachable cover which engages the top of the receptacle and has a centering flange which fits snugly in the upper end of the receptacle, and a crank means detachably connected to the receptacle for rotating the same, said means comprising an elongated shaft having a crank at its upper end, a thrust collar adjacent to the crank and having at its lower end a drill point, said shaft being adapted to project centrally through the receptacle with its drill point projecting below the bottom of the receptacle and its intermediate portion made fast to and centered by the receptacle top, and a driving and thrust connection between the shaft and the receptacle bottom, substantially as described.

In testimony whereof, I affix my signature.

WILLIAM R. DAUGHTRY.

Witness:
NOMIE WELSH.