This invention relates to container enclosed ice chopper with spring retracted head, and more particularly to a chopper having a manually reciprocable head for cracking small quantities of ice enclosed in a container for home use.

One object of this invention is to provide a device of the above nature which will reduce a piece of ice quickly to small particles with a minimum effort of motion on the part of the operator.

Another object is to provide a device of the above nature having a chopper head adapted to be raised by springs, and wherein said head will also be resiliently held against rotation by said springs.

Another object is to provide a device of the above nature in which the springs are adapted to permit an initially high downward velocity of the head.

A further object is to provide a device of the above nature which will be simple in construction, inexpensive to manufacture, easy to install and manipulate, compact, ornamental in appearance, and very efficient and durable in use.

With these and other objects in view, there has been illustrated in the accompanying drawing one form in which the invention may conveniently be embodied in practice.

In the drawings,

Fig. 1 is a longitudinal sectional view, on a vertical plane through the center of the ice chopper.

Fig. 2 is a cross-sectional view taken on the line 2—2 of Fig. 1, looking upwardly.

Referring now to the drawings in which like reference numerals denote corresponding parts throughout the several views, the numeral 10 indicates a horizontal surface such as a table, upon which a flat-bottom dish 11 may be placed, said dish including an outwardly flared rim 12 embracing the lower open end of an inverted tapered cup 13, provided with a flat closed upper end wall 14.

Mounted in a central hole 15 in the end wall 14 is a vertical guide bushing 16 coaxial with the cup 13 and having a threaded portion 17 and an intermediate peripheral flange 18. The bushing 16 surrounds a slidable vertical rod 19 rigidly connected to a chopper head 20 disposed in the cup 13 and provided upon its lower surface with a plurality of rows of pyramid-shaped teeth 21.

The chopper head 20 is initially resiliently retained in the raised position shown in Fig. 1 by a plurality of coiled springs 22 having their ends secured in apertures 23 and 24 formed in the flange 18 and the disk 20, respectively. The flange 18 and the disk 20 are each recessed upon their adjacent faces, thereby forming a small depending circumferential rim 25 upon the edge of the flange 18, and a large upstanding circumferential rim 26 upon the edge of the disk 20.

In order that the chopper may be manually-operated, a handle 27 is provided having a central tapped bore 27a in which the upper end of the rod 19 is fixed. The ice to be chopped is represented by the numeral 28, as shown in Fig. 1.

Operation

In operation, the ice 28 such as a cube will be placed in the dish 11 and covered with the cup 13, to confine the ice within the rim of the dish 11. When the handle 27 is repeatedly struck by the operator's hand, the chopper head 20 will reciprocate and the pyramidal teeth 21 will be very effective in breaking up the ice.

It will here be noted that the coiled springs 22 are disposed at oblique angles when the chopper head is in its raised position. Consequently, the spring force will not have its full effect in this position, the result being that the chopper head may be easily started downwardly when the handle 27 receives an impact. However, in the lower positions of the head, the springs 22 become more nearly vertical, thereby exerting a greater force capable of quickly reversing the movement of the head 20, and raising it to its original position. This feature of the ice chopper has been found to enhance the efficiency thereof.

Another advantage of the improved device is that the head 20 tends to remain in the same angular relation throughout its operation, and even though said head may twist about its axis, the springs 22 will tend to return it always to its original position.

A further advantage is that the lower end of the guide bushing 16 serves to limit or restricting the upward movement of the head 20.

While there has been disclosed in this specification one form in which the invention may be embodied, it is to be understood that this form is shown for the purpose of illustration only, and that the invention is not to be limited to the specific disclosure, but may be modified and embodied in various other forms without departing from its spirit. In short, the invention includes all the modifications and embodiments coming within the scope of the following claim.

Having thus fully described the invention, what is claimed as new, and for which it is desired to secure Letters Patent, is:

In an ice chopper, an inverted cup provided with
a centrally-apertured end wall, a vertical guide bushing secured within the aperture of said end wall, said bushing comprising a flange intermediate its length, said flange, abutting the inner surface of said end wall, a plunger comprising a rod slideable in said bushing and a crusher head located within the cup, said crusher head having an upstanding peripheral rim of a diameter larger than said bushing flange, and a plurality of inclined coiled springs connecting said flange and said rim to resiliently urge said head against said bushing and tending to hold the head against rotation.

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