

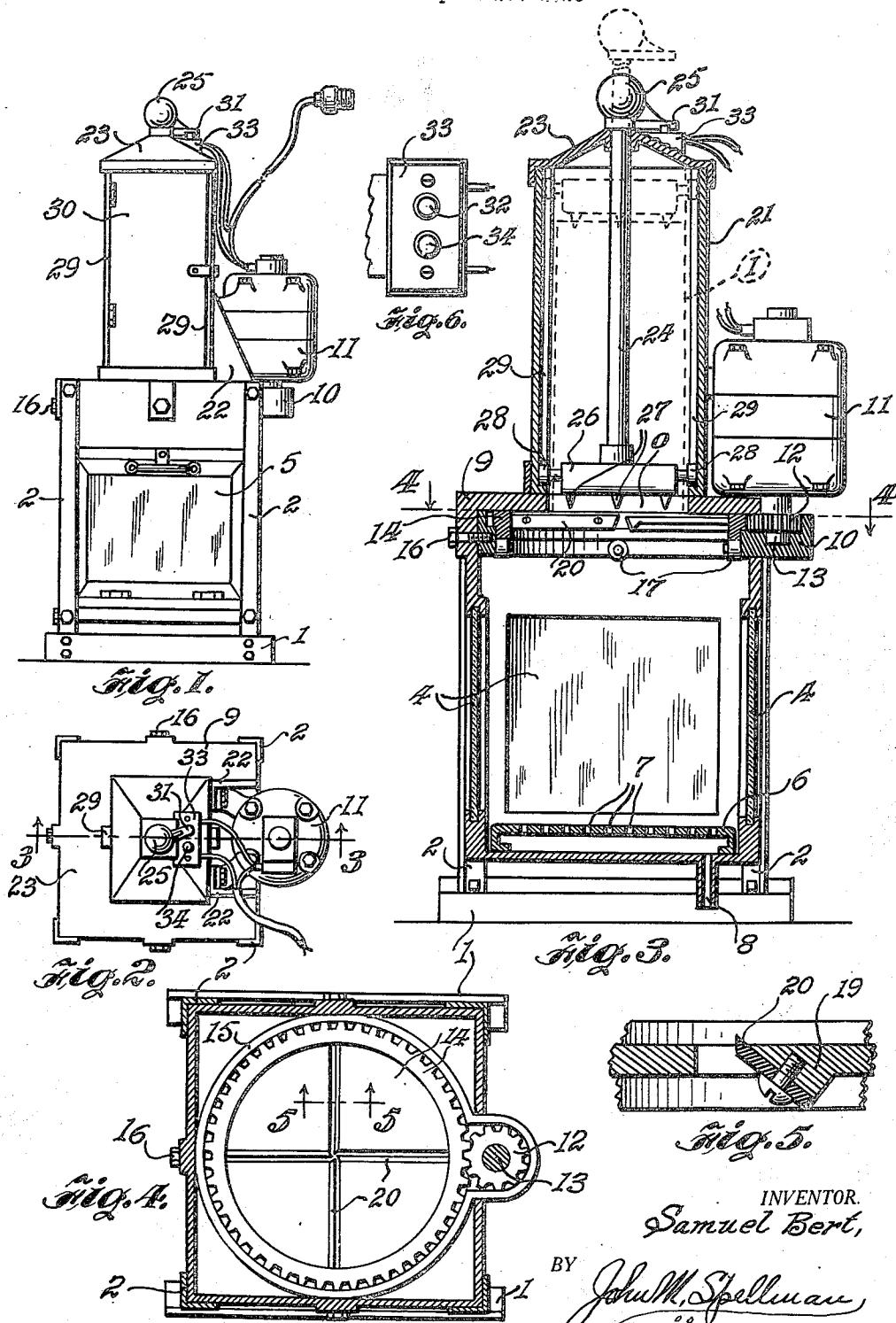
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ICE SHAVING AND CUTTING MACHINE

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UNITED STATES PATENT OFFICE.

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ICE SHAVING AND CUTTING MACHINE.

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This invention relates to improvements in ice-shaving and cutting machines, or that type of machine for shaving ice used in soft drinks and the like, and is more particularly 5 designed to be used in drug stores or other places where refreshments are served, and where it is desirable to cut or shave ice very quickly and practically.

One object of the invention is to provide a 10 neat, sanitary, and efficient machine for shaving ice wherein cutting or shaving knives are arranged in conjunction with a means for holding a block of ice firmly thereagainst until it is shaved or reduced to a fineness suitable for use in cold drinks.

A further object of the invention is to provide a machine that will stop automatically when the block of ice has been entirely shaved thereby making it unnecessary for the operator to give it further attention after it has once been set in motion.

With the foregoing and other objects in view, the invention resides in the novel subject matter hereinafter described and claimed, 25 the description being supplemented by the accompanying drawings, in which:

Figure 1 is a side elevational view of the machine,

Figure 2 is a top plan view thereof,

Figure 3 is a vertical sectional view of the machine taken along the line 3—3 of Figure 2,

Figure 4 is a cross-sectional view taken along the line 4—4 of Figure 3,

Figure 5 is a detailed sectional view taken along the line 5—5 of Figure 4, and

Figure 6 is a top plan view of the control switch.

Proceeding now in accordance with the 40 drawings wherein similar characters designate the various parts, 1 denotes the base of the machine, attached to which are the uprights or angle irons 2 which support the housing, including the glass panes 4. A door 45 is provided at 5 for removing the ice when shaved. On the interior of the housing is a platform 6 for the shaved ice, the platform having perforations 7 and a drain spout or outlet 8.

The housing includes a covering 9 adjacent to which is a support 10 for a motor 11, the motor being placed in a vertical position with respect to its shaft so that its drive gear wheel 12 on the shaft 13 may mesh properly 55 with an annular or ring gear 14. Both gears as clearly depicted in Figure 4 are enclosed in

a trackway 15, bolted to the housing at 16 and affixed to the trackway are a plurality of rollers 17 upon which the gear 14 rides. In addition to this the underside of the rim of the gear 14 is slightly projected so as to permit it to overhang and rest upon the trackway 15 clearly shown in Figure 3.

As shown in Figure 5 the gear wheel is provided with openings and along one side of each opening at 19 there is an enlargement with a properly slanted surface longitudinally of the slit or opening to permit the attachment thereto of the knives 20. These knives, four in number, are so arranged that their cutting edges project sufficiently above the body of the gear 14 to engage and cut and shave a block of ice I, which is disposed in a receptacle 21.

This receptacle is firmly seated to and attached to the top 9 or covering of the housing and so arranged thereon that its lower end, which is open, registers with an opening O in the covering 9. The receptacle 21 is also firmly braced to the base by members 22 and the motor 11 is thus partly supported by the receptacle wall.

A covering 23 has a central aperture through which a rod 24 with a knob 25 is adapted to be moved up and down in holding the ice firmly against the knives in the shaving operation of the ice. This rod includes a bottom member 26 with relatively sharp spikes 27 to engage the ice. The rod and its members 26 are fairly heavy so that sufficient pressure will be brought to bear upon the ice and maintain its firmly against the revolving knives. To stabilize the rod and its member in vertical movement in the receptacle there are provided rollers 28 which travel in channels 29 provided in the wall of the receptacle. The dotted lines in Figure 3 indicate the uppermost position of the member 26, resting upon the block of ice I. The receptacle is also provided with a door 30 to prevent the block of ice from being forced out while the shaving operation is being performed.

To the knob 25 and integral therewith is a finger 31. This finger is in vertical alignment with the button 32 of the switch 33 that is attached to the cover 23 of the receptacle 21. When the block of ice is in position with the member 26 resting on top, as shown by dotted lines in Figure 3, the finger 31 is raised to its extreme highest position. The operator starts the machine by pushing the

button 34 closing the circuit to the motor. When the ice is completely shaved and the member 26 has reached its lowest position the finger 31 makes contact with button 32 5 breaking the circuit and stopping the motor and thereby the machine. It is obvious, from the above, that the machine requires no further attention, from the operator, after it has once been filled with ice and started, and 10 that it will shave the ice and stop automatically when this has been accomplished.

It should be understood that those skilled in the art may vary the details of construction and arrangement of parts without departing from the spirit of the invention, and 15 therefore I do not wish to be limited to such features except as may be required by the claims.

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

1. The combination in an ice-shaving machine of a housing including transparent panels and a platform in which the shaved ice is deposited, an ice receptacle seated upon and attached to the housing, said ice receptacle including a rod reciprocable in said receptacle and a spiked member on the lower end of the rod, said rod and member adapted to bear upon the ice in the receptacle to hold the ice against the revolving knives; 20 25 30

and means for stabilizing the rod in its vertical movement in said receptacle, and a finger carried at the upper extremity of said rod adapted to throw a switch on its downward movement and stop the machine when the ice has been fully shaved, substantially as described. 35

2. An ice shaving machine comprising the combination of a housing including transparent side walls and a door, and a covering, an opening in the covering and an ice receptacle seated over the opening and having a lower open end communicating with said opening in the housing; a gear wheel carrying a plurality of cutting knives seated in the upper part of the housing adjacent the opening; a motor vertically disposed on the top of the housing and including a drive shaft and drive gear, the drive gear in mesh with said gear wheel to revolve said knives; a trackway and rollers for the gear wheel; and weighted rod in the receptacle including ice engaging parts to cause the ice to be held against said knives during the shaving of the ice; and a finger carried by said rod to throw a switch and stop the motor when the shaving of the ice has been completed, substantially as described. 40 45 50 55

In testimony whereof I affix my signature.

SAMUEL BERT.