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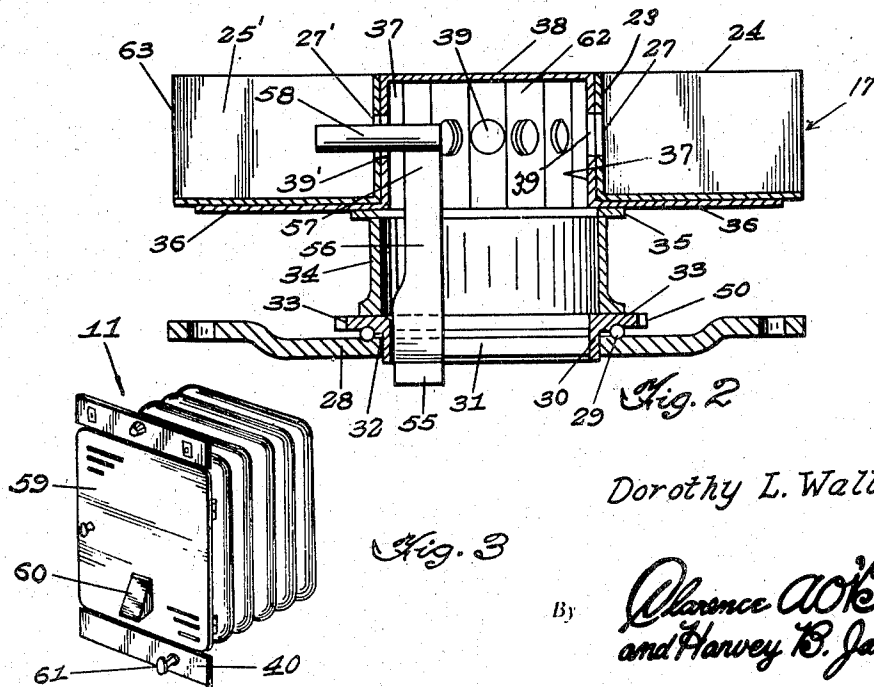
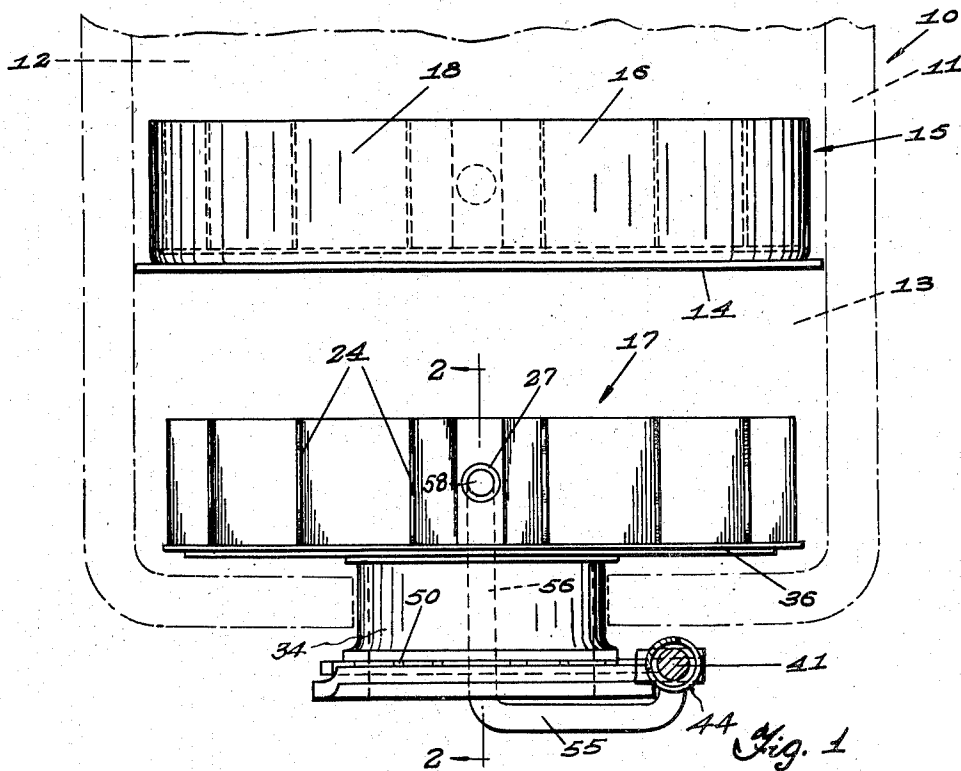
D. L. WALLACE

2,471,801

AUTOMATIC FROZEN CUBE DISPENSER FOR REFRIGERATORS

Filed Feb. 28, 1946

3 Sheets-Sheet 1



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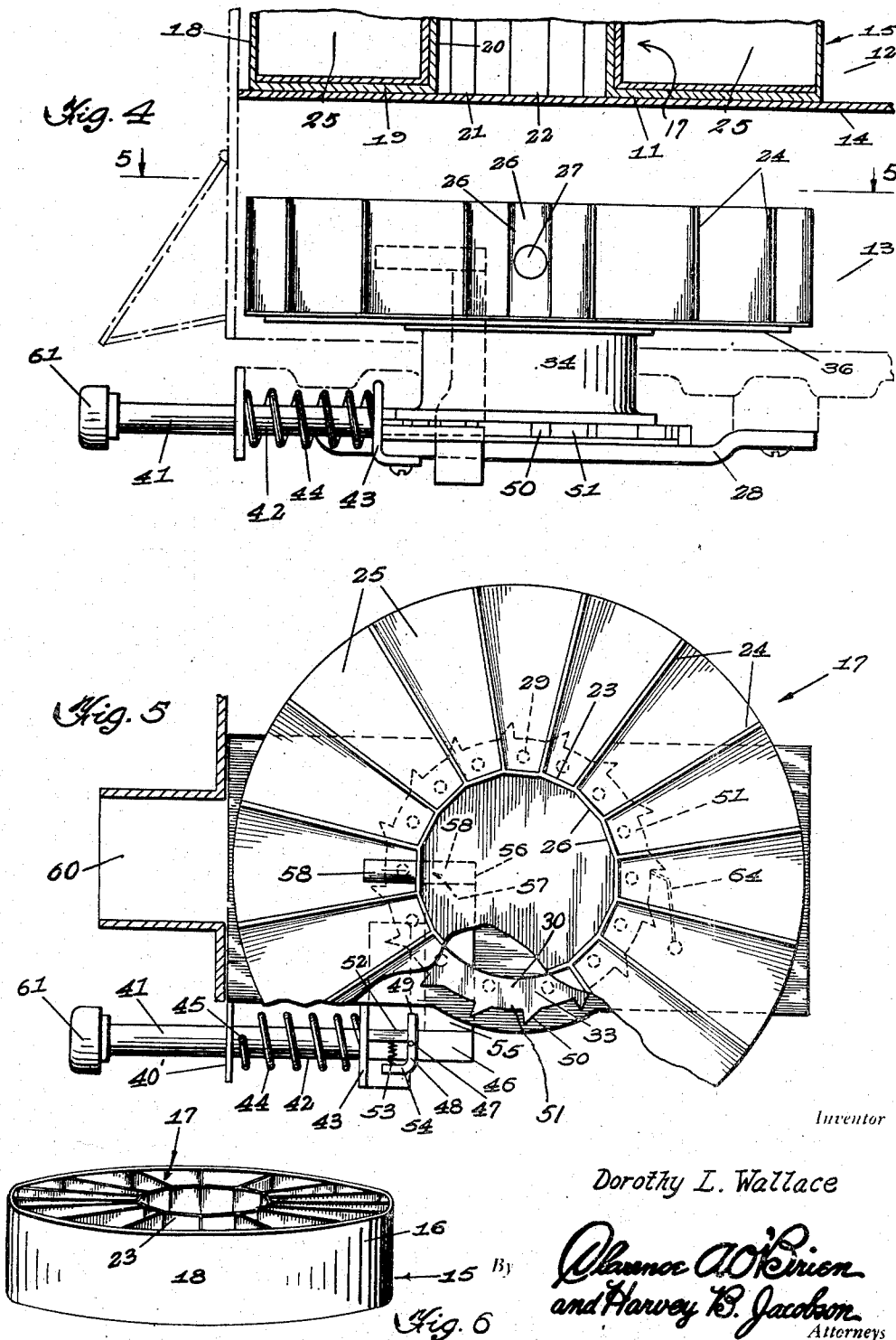
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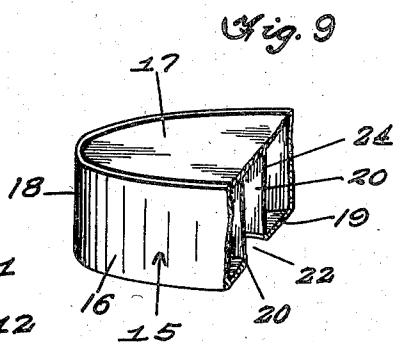
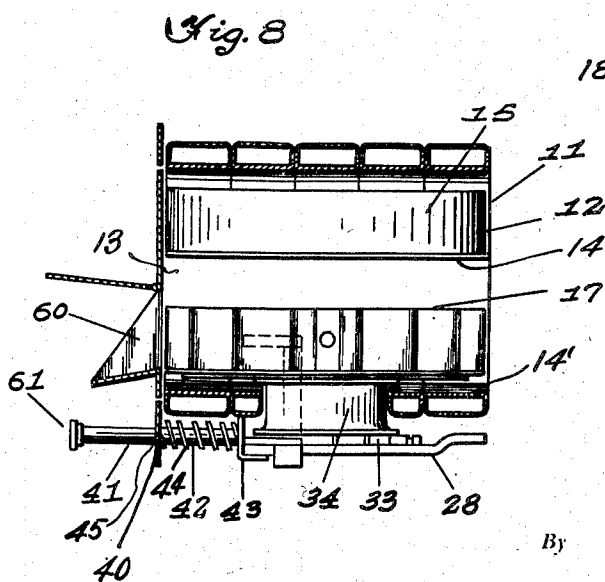
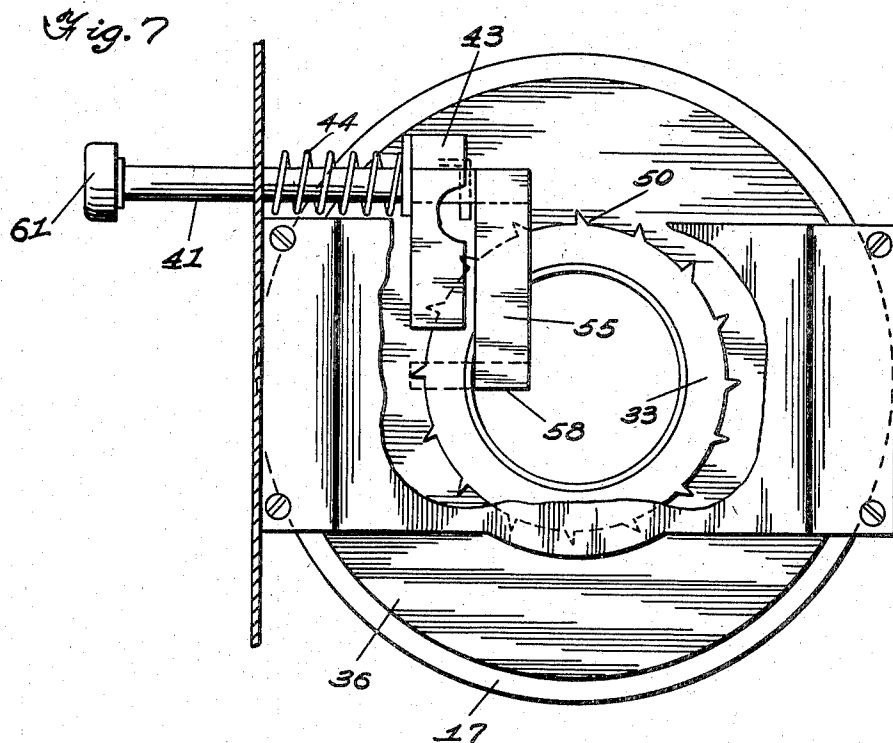
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UNITED STATES PATENT OFFICE

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AUTOMATIC FROZEN CUBE DISPENSER FOR REFRIGERATORS

Dorothy L. Wallace, Saginaw, Mich.

Application February 28, 1946, Serial No. 650,983

5 Claims. (Cl. 312-36)

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The invention which I disclose in the accompanying drawings and describe in the specification to follow is a device by means of which when a button is pushed a block (cube) of ice or the like is automatically discharged from a refrigerator.

The primary object of my invention is to provide means whereby frozen ice cubes may be dispensed from a freezer without having to remove the ice container from the freezing compartment.

One object of the invention is to provide a rotatable ice container together with means whereby the same may be rotated to bring an ice cell in alignment with a dispensing chute or opening to permit the discharge of the contents of the cell.

A further object of my invention is to provide a double container in which ice blocks may be frozen, the inner container being divided into cells with open ends through which the blocks may be discharged.

Other features and advantages will become more readily apparent from the following description and the accompanying illustrative drawings in which:

Figure 1 is an elevational view of a freezing compartment embracing my invention,

Figure 2 is a transverse sectional view of an ice container and dispensing apparatus taken on line 2-2 of Figure 1,

Figure 3 is a reduced perspective view of a freezer,

Figure 4 is an elevational view partly in section and partly broken away of the invention,

Figure 5 is a similar plan view,

Figure 6 is a detail perspective view of a freezing pan,

Figure 7 is a bottom plan view of Figure 1,

Figure 8 is an enlarged vertical sectional view of Figure 3, and

Figure 9 is a detail perspective sectional view of a freezing unit.

While one embodiment of my invention is illustrated in the above referred to drawings, it is to be understood that they are merely for the purpose of illustration and that various changes in construction may be resorted to in the course of manufacture in order that the invention may be utilized to the best advantage according to circumstances which may arise, without in any way departing from the spirit and intention of my device, which is to be limited only in accordance with the appended claims. And while I have stated the primary field of utility of my in-

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vention it remains obvious that it may be employed in any other capacity wherein it may be found applicable.

In the accompanying drawings, and in the following specification, the same reference characters are used to designate the same parts and elements throughout and in which 10 refers to my invention in its entirety and 11 indicates a freezer compartment of a refrigerator (not shown). The box 11 is divided into two or more compartments 12 and 13, by walls or flanges 14, the upper of which is adapted to receive the double freezing pan 15, which consists of a cylindrical outer pan 16 and an inner receptacle 17. The pan 16 is provided with an outer wall 18, a bottom wall 19, and an inner centrally disposed vertical wall 20, which is integral with the inner edge 21 of the bottom wall 19, leaving an opening 22 through the bottom wall.

The inner receptacle or ice magazine 17 conforms to the shape of the outer pan, but has no outer side wall. However, it is provided with a bottom wall, an inner polysided wall 23, and a series of radially disposed fins 24, integral with said inner and bottom walls and which provide a series of cells 25, within which ice is frozen when seated in the outer pan. Each of the inner wall segments 26, forming inner walls for the cells 25, are provided with apertures 27, the purpose of which will be explained later.

Mounted upon a horizontal plate 28, in compartment 13, by means of roller bearings 29, is a turntable 30, which is tubular and its collar 31 projects through an opening 32, provided in plate 28, and its flange 33 seats upon said balls 29. Seated upon the turntable 30 is a drum 34, upon the upper annular horizontal flange 35 of which seats a supporting plate 36. This latter plate is formed with an intermediate polysided drum 37, conforming in diameter to the drums 34, and aligning therewith. The drum 37 also conforms exactly with the contour of wall 23, and around which the latter wall is adapted to closely seat. The segments 38, of drum 37, are also provided with apertures 39, which are adapted to align with the like apertures 27, in wall 23.

Projecting through wall 40 of the freezer 11 is a plunger 41, the inner part 42 of which operates through an aperture in a fixed bracket 43, and coiled around said portion 42 of the plunger and seating between the bracket and wall 40, is an expansion spring 44, the outer end 45 of which is fixed to the plunger and adapted to hold the plunger normally out. Attached to the inner end 46 of the plunger by a pivot pin 47, is a dog

48, the upper end 49, of which is in the path of the teeth 50 of a ratchet 51, formed on the periphery of flange 33 of said turntable 30. The dog 42 is held against outer movement by a stop 52, on the plunger and is held normally in upright position against the latter stop by a spring 53, connecting its angular end 54 with said plunger.

Fixed to the end 46 of the plunger 41 is the horizontal arm 55 of a vertical arm 56, on one end 57, of which is a horizontal finger 58 aligning with the bores 39' and 27'.

Either fixed or hingedly connected to an opening through door 59 of the freezer 11 is a chute 60, through which ice cubes may be directed into a receptacle in a manner now to be explained.

The ice magazine may be placed down side up in pan 15 which is filled with water and placed in the compartment 12 of the freezer 11. After the water is frozen the magazine may be lifted from the pan and seated in upright position upon the drum 37, in compartment 13. (It may be stated at this point that the member 17, is formed of a plastic or other material to which ice will not readily adhere.) The plunger 41 will be first pushed in by its knob 61, whereby the finger will be drawn into the well 62, formed by the drums 34 and 37. Upon seating the member 17 over the drum 37, the bores 27' and 39' will align with one another and with the finger 58, which upon release of the said knob 61, will be drawn forward and through said bores to press against an ice block in the cell 25', pushing the ice therefrom through its open end 63, causing it to drop through chute 60, through the action of the spring 44. Upon again pushing in the plunger, the operation is repeated as the dog 47 turns the turntable on the next indexed position of an adjoining cell, a spring 64, bearing against the teeth 50, controlling the exact movement of the turntable.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Changes in shape, size and rearrangement of details and parts such as come within the purview of the invention claimed may be resorted to, in actual practice, if desired.

Having now described my invention that which I claim as new and desire to procure by Letters Patent is:

1. In refrigerating apparatus a freezing box, a rotatable ice magazine in the box and from which ice blocks are ejected, said magazine comprising a series of cells for individual blocks, each cell having an open end, said magazine being cylindrical, a turntable upon which the magazine seats, each of the cells having apertures through a wall thereof, an ejector finger adapted to operate through the apertures to dislodge the blocks, and spring controlled means for actuating the ejector and the turntable.

2. In refrigerating apparatus a freezing box, a rotatable ice magazine in the box and from which

ice blocks are ejected, said magazine comprising a series of cells for individual blocks, each cell having an open end, said magazine being cylindrical, a turntable upon which the magazine seats, each of the cells having apertures through a wall thereof, an ejector finger adapted to operate through the apertures to dislodge the blocks, and spring controlled means for actuating the ejector.

3. In refrigerating apparatus a freezing box, a rotatable ice magazine in the box and from which ice blocks are ejected, said magazine comprising a series of cells for individual blocks, each cell having an open end, said magazine being cylindrical, a turntable upon which the magazine seats, each of the cells having apertures through a wall thereof, and an ejector finger adapted to operate through the apertures to dislodge the block.

4. In refrigerating apparatus, a freezing box, a rotatable ice magazine in the box and from which the ice blocks are ejected, said magazine comprising a series of cells for individual blocks, each cell having an open end, said magazine being cylindrical, a turntable upon which the magazine seats, each of the cells having apertures through a wall thereof, an ejector finger adapted to operate through the apertures to dislodge the blocks, and spring-controlled means for actuating the ejector and the turntable, said cells being radially disposed and tapering to wider widths at the ends of the cells disposed at the periphery of the magazine, and said wall being substantially circular and disposed to close the inner narrower ends of the cells.

5. In refrigerating apparatus, a freezing box, a rotatable ice magazine in the box and from which the ice blocks are ejected, said magazine comprising a series of cells for individual blocks, each cell having an open end, said magazine being cylindrical, a turntable upon which the magazine seats, each of the cells having apertures through a wall thereof, an ejector finger adapted to operate through the apertures to dislodge the blocks, and spring-controlled means for actuating the ejector and the turntable, said cells being radially disposed and tapering to wider widths at the ends of the cells disposed at the periphery of the magazine, and said wall being substantially circular and disposed to close the inner narrower ends of the cells, said ejector finger having a manual actuating plunger extending exteriorly of the refrigerating apparatus, and a chute to guide an ice block to the exterior of the refrigerator after dislodgment from a cell by said finger.

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