May 3, 1960 F. L. ERICKSON ET AL 2,934,916

ICE CUBE EJECTORS

Filed April 18, 1956 3 Sheets-Sheet 1

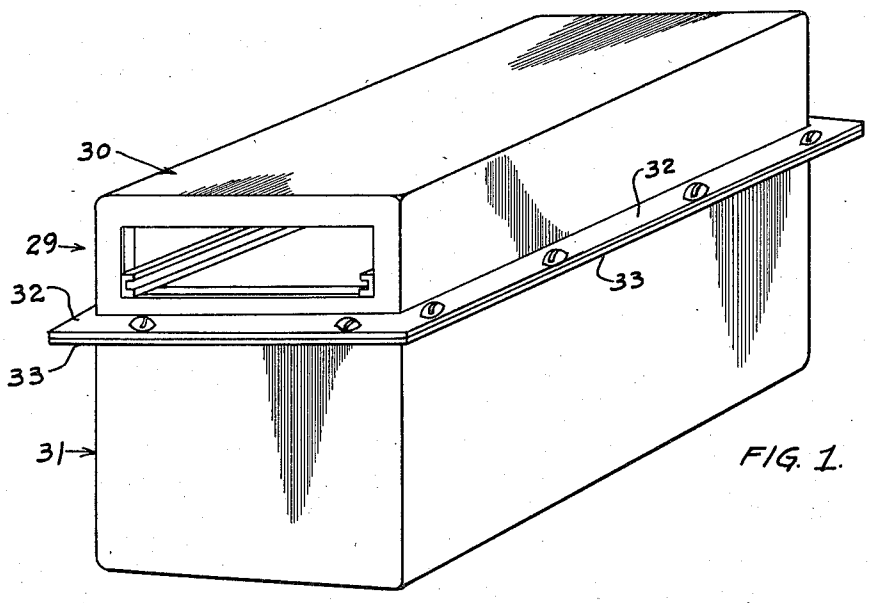


FIG. 1.

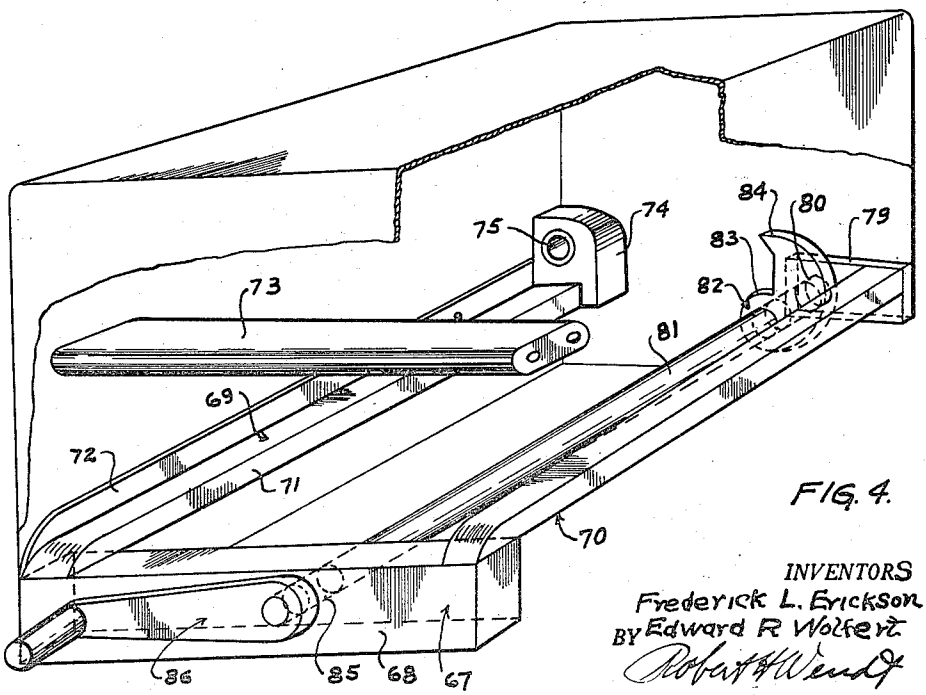


FIG. 4.

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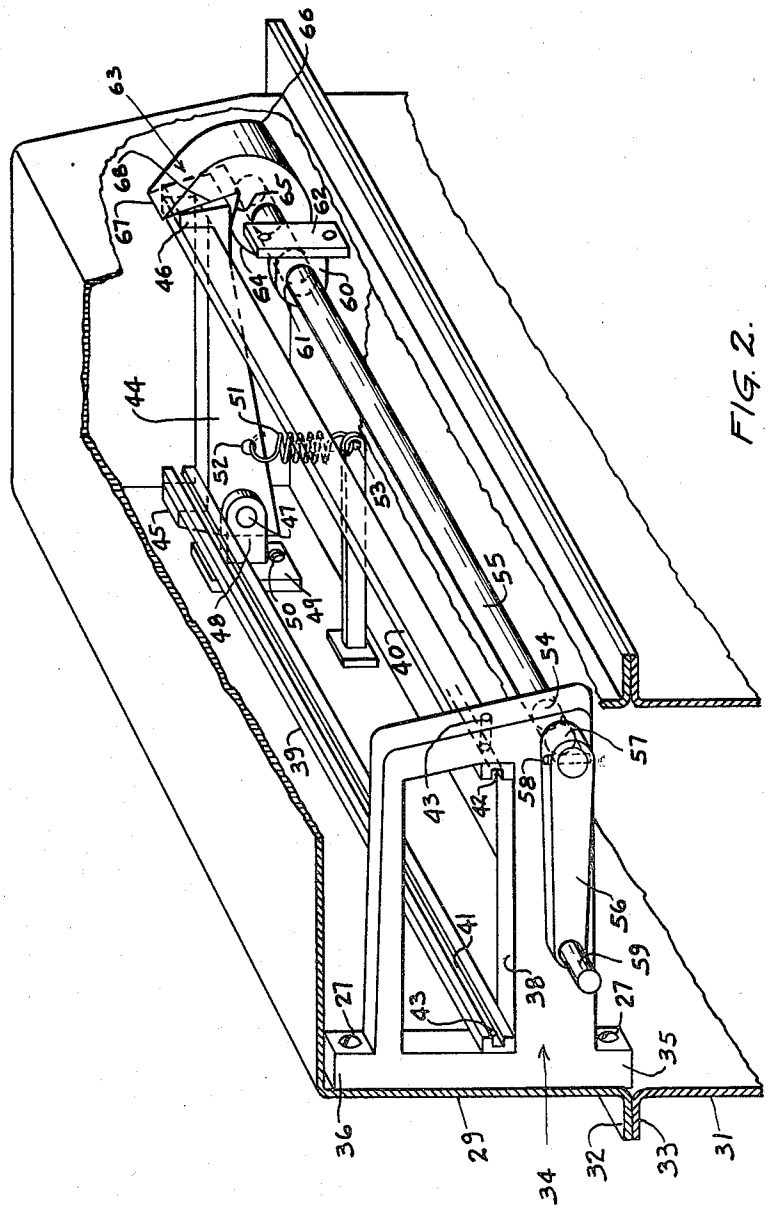


FIG. 2.

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Filed April 18, 1956 3 Sheets-Sheet 3

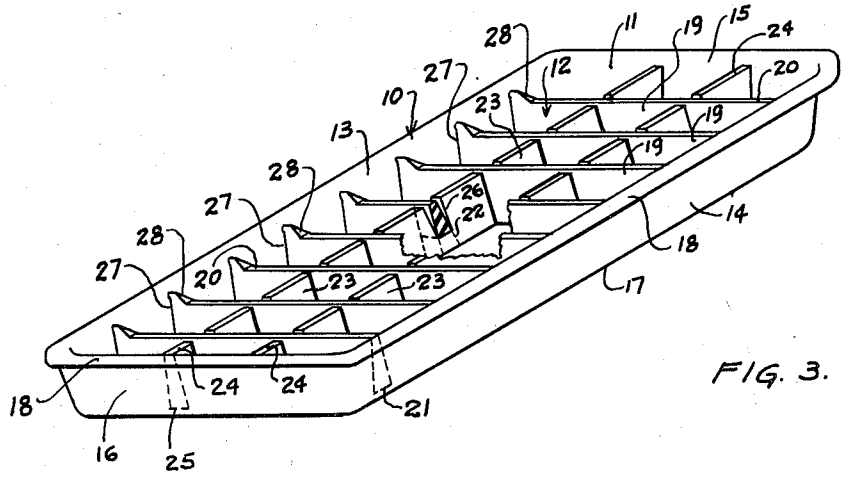


FIG. 3.

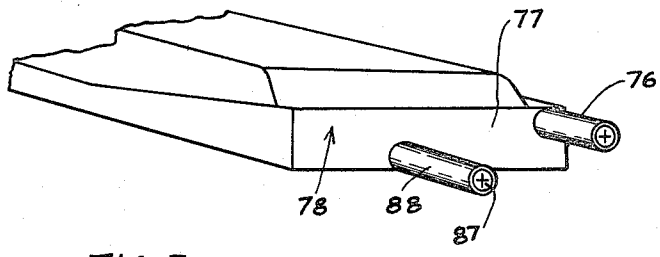


FIG. 5.

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2,934,916

ICE CUBE EJECTORS

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Application April 18, 1956, Serial No. 578,994

15 Claims. (Cl. 62—344)

The present invention relates to ice cube ejectors, and is particularly concerned with ice cube ejectors of the type adapted to loosen the ice cubes in a tray having a grid for shaping the cubes and also adapted to discharge the cubes into a storage container where they can be stored in a dry, cold condition without adhering to each other.

One of the objects of the invention is the provision of an improved ice cube ejector of the type adapted to be used with a flexible metal tray and a flexible non-metallic grid, all of the parts which taper toward their top edges, for twisting the tray and grid in the inverted position with the cubes in place, to break the bond between the cubes and the grid and the tray and to cause the cubes to drop into a storage container.

Another object of the invention is the provision of an improved ice cube ejector arrangement by means of which ice cubes may be removed without heating from the flexible tray having a flexible grid by inverting the tray and inserting it into a suitable support, and then cause the tray to be twisted by rotating a crank having a cam which acts on one corner of the tray to lift that corner of the tray while the rest of the tray is mounted at one end and secured against movement which necessitates the twisting by the action of the cam on the other end.

Another object of the invention is the provision of an improved ice cube ejector for ejecting cubes from an inverted flexible ice tray and grid which not only twists the tray between its ends to break the bond, but it also permits the tray to snap back to the plane position, the snap back causing the cubes to be forcibly ejected in case they are not already sufficiently loosened.

Another object of the invention is the provision of an improved ice cube ejector for flexible trays and flexible grids of the type having a laterally projecting flange at the upper edge of the tray, by providing a pair of parallel guides for receiving this flange and holding the tray substantially against movement at one end while the other end of one is acted on by a cam which lifts one corner of the tray and guide assembly warping or twisting the tray and breaking the bond between the cubes and all parts of the grid and tray, and thereafter permit the guide and tray to snap back to the parallel position, forcibly ejecting the cubes into a storage container.

Another object of the invention is the provision of an improved mechanism for ejecting ice cubes from flexible trays which includes a suitable housing, upper and lower guides for engaging the bottom of the tray and for holding one end in fixed position and a suitable pivot pin and bearing at one of the other corners of the tray, and a cam for acting on the opposite corner of the tray, whereby the tray is twisted upon its supporting rails, and the ice cubes are loosened and ejected.

Another object of the invention is the provision of a plurality of forms of ice cube ejectors which are simple in construction, which include a minimum number of parts, which may be manufactured economically, which operate

positively, and which not only loosen the ice cubes, but which eject them forcibly.

Other objects and advantages of the invention will be apparent from the following disclosure and description, in which similar characters of reference indicate similar parts throughout the several views.

Referring to the three sheets of drawings,

Fig. 1 is a view in perspective showing an ice ejector embodying the invention, mounted in a suitable housing having an ice cube storage container;

Fig. 2 is a fragmentary view in perspective of the actuating lever for an ice cube ejector of the type in Fig. 1;

Fig. 3 is a view in perspective and in partial section of a flexible ice tray and flexible grid of the type preferably employed with this ice cube ejector;

Fig. 4 is a view in perspective of another modified form of ice cube ejectors;

Fig. 5 is a fragmentary view in perspective of the rear end of the tray showing the changes in construction that are involved in using the ejector of Fig. 4. The present ice cube ejector will preferably be employed with an ice cube tray and tapered grid assembly of the type shown in Fig. 3.

The tray and grid assembly of Fig. 3 is indicated in its entirety by the number **10** and preferably includes the tray **11** and the grid **12**.

The tray is preferably a flexible metal tray which is only flexible because of the thinness of its walls and the material of which they are made, which is preferably aluminum. Thus, the tray has side walls **13**, **14** and end walls **15**, **16** all rectangularly joined to a bottom wall **17**.

The tray may take many different forms, but is preferably rectangular in form for the purpose of utilizing all the space in the box-like evaporators in which such trays are cooled.

The side walls **13—16** are preferably provided with an outwardly projecting, upper border flange **18** for the purpose of strengthening the tray and for cooperation with the ejecting mechanism. Border flange **18** may be curled downward, if desired, for ornament, strength and engagement with the fingers. All of the side walls **13—16** preferably slant outward, so that ice cube assembly will be larger at the top and smaller at the bottom of the tray, facilitating the withdrawal of the ice cubes.

The tray is preferably made of aluminum, but may also be made of flexible rubber or molded plastics. The rubber or plastic compositions may include powdered aluminum to increase their conductivity, which is one of the advantages of a metal or aluminum tray.

The grid **12** preferably includes a multiplicity of transversely extending webs **19** which are in the shape of upwardly tapering wedges, each web being narrow at the top edge **20** and wide at the bottom edge **21**.

The webs are also provided with slots **22** extending into their lower edges in position to receive the divider strip **23**. Since the divider strips are also wedge shaped, the slots **22** must be as wide as the widest part or bottom of each divider strip, and the slots **22** extend only part way into each web **19**.

The grid is preferably provided with one or more divider strips **23** also made of flexible material and tapered from bottom to top like the webs, so that the upper edge **24** of each divider strip is narrow and the bottom **25** of each divider strip is wide like a wedge.

The divider strips are provided with slots **26**, extending into their upper edges at regularly spaced points along the length for receiving the webs. The width of the slots **26** must be sufficient to receive the thickness of the web at the base of each slot **26**.

The webs and dividers are assembled together to form the grid **12** having a multiplicity of rectangular ice cube

pockets and the top edges 20 and 24 of the webs and dividers are preferably flush with each other, but the webs may be wider at their lateral edges 27 and tapered downwardly at 28 to a narrower central portion. This permits the water to run from one pocket to another at the top of the tray, above the grid, so that all pockets will be uniformly filled. Any excess of water above the grid does not prevent the breaking up of the ice into cubes because ice is scored deeply from bottom almost to the top by the grids.

The grid may comprise separate thin dividers and webs, loosely slotted and secured in the tray so that the grid is flexible because of the clearance between its parts, permitting relative movement and breaking the ice cubes loose from the grid.

The grid may be flexible or movable because it comprises separate, rigid members loosely connected by slots, or the grid may be molded out of one integral piece of flexible material, such as, rubber or flexible plastic and when so shaped, all of the cubes will taper toward the bottom on all sides.

Referring to Fig. 1, this is a view showing the housing 29 for the ejector which may consist of an upper tray container 30 and a lower ice cube storage container 31. Each of these containers may consist of a stamped, sheet metal housing of rectangular shape in plan and elevation, and the end walls may be separately formed and riveted to the side walls.

The end walls and side walls each have the laterally projecting border flanges 32, 33 for attachment together to complete the housing by means of screw bolts. The storage bin 31 may be made deeper to store a large number of cubes while the tray housing 30 need only be large enough to receive the tray and its ejector mechanism.

Referring to Fig. 2, the ejector mechanism preferably includes border frame 34 of metal having attaching flanges 35, 36 for receiving screw bolts 27 to secure the frame in the housing.

Frame 34 has a rectangular aperture 38 which is large enough to receive and pass an ice tray of the type described, in inverted position. The frame 34 preferably supports a pair of elongated tray guides 39, 40 comprising bars of resilient metal, each of which is provided with inwardly facing, rectangular slots 41, 42.

The slots 41, 42 are wide enough and deep enough to receive the border flange 18 of the tray and the guides are spaced sufficiently so that the tray with its border flange slides into the guides 41, 42 in inverted position.

At their front end, the guides 39, 40 may be welded or rigidly mounted on frame 34, or they may be provided with a pivot pin connecting them to the frame 34 as indicated at 43.

At their rear ends, the guides 39, 40 may be pivotally or rigidly secured to the cam follower lever 44, which has upwardly extending lugs 45, 46 to which the guides are secured in spaced relation to receive the tray between them.

The cam follower lever is pivotally mounted by means of a pin 47 on a pivot bracket 48 which has a supporting base 49, secured by rivets or bolts 50 to the inside of the housing. The guides 39, 40 are preferably as long, or longer than the tray.

The lever 44 is urged in a clock-wise direction by means of a coil spring 51, having one end hooked in an aperture 52, and having the other end hooked in an aperture 53, carried by the side wall of the housing 29.

The front frame 34 is preferably provided with a cylindrical bearing aperture 54 for receiving a cam shaft 55 which is provided on its front end with a crank 56. Crank 56 has an aperture 57 for the shaft to which it is pinned by pin 58. The crank may have a cylindrical handle 59. The crank preferably extends horizontally when the mechanism is at rest in the position of Fig. 2.

Cam shaft 55 extends to the rear end of the assembly

where it is pivotally mounted upon a bearing bracket 60, having a bearing aperture 61 and attached to the side wall of the housing by a flange 62 by bolts or rivets.

Bearing bracket 60 must be of sufficient length laterally to provide a clearance for the cam 63 which would otherwise engage the housing.

At its end, shaft 55 carries cam 63 which has a cylindrical portion 64 and a flat dwell 65 of minimum radius, against which the lever 44 rests in the position of Fig. 2. From the point 66, the cam gradually increases in radius until it has its maximum radius at the point 67 where there is an abrupt drop 68 on the cam. The operation of mechanism is as follows.

The tray of the type shown in Fig. 3 with the ice cubes frozen in it and bonded to the tray and the grid is inserted upside down with its border flanges in the slots 41, 42.

The tray having been fully inserted, the cam shaft 55 is rotated by the crank 56 and handle 59. This causes the cam 63 to rotate under the lever 44 until the rise 66 on the cam engages the lever and the right rear corner of the tray and guide 40 are lifted while the front ends of the tray and guides are held against twisting. During this motion, the lever 44 may pivot at 47, but the guides 39, 40 are sufficiently resilient to be twisted and bent, if necessary, within their elastic limit.

The twisting or warping of one corner of the ice tray upwardly causes all of the parts of the tray and guide to be warped and to slide relative to the ice surfaces of the cubes and the bond between the ice and rubber or metal is broken.

As the rotation of the cam 63 progresses the abrupt drop 68 on the cam comes into position below the end of lever 44. Lever 44 and the rear end of guide 40 snap down to the flat dwell 65 and to the parallel and coplanar position. The warping of the tray and guide has loosened the ice cubes and the snap back causes the tray and guide to eject the ice cubes into the ice cube storage bin 31.

Referring to Figs. 4 and 5, these views show a modification in which the ice tray rests upon a U-shaped frame 67, carried by the side walls of the housing previously described, and comprising a border flange member 68 and a pair of side frame members 69, 70.

The side frame members may each include a base rail 71 upon which the ice tray border flange rests in inverted position and an upwardly extending flange 72 for confining the tray against lateral movement. The housing also carries an upper transverse guide or frame member 73 which engages the bottom of the ice tray and prevents it from twisting at its forward end.

At its rear end the guide 69 carries an upwardly projecting lug 74 with a bearing aperture 75 for receiving a pivot pin 76 which projects longitudinally from the rear wall 77 of the ice tray 78.

The guide rail 70 preferably carries a bearing bracket 79 at its rear end with an aperture 80 serving as a bearing for the cam shaft 81. Cam shaft 81 carries a cam 82 with a dwell 83 of minimum radius and a rise to the point 84 of maximum radius. The cam shaft projects toward an aperture 85 in the front frame member 67 and is provided with the same crank 86.

In addition to the pivot pin 76 which is located toward the rear bottom corner of the tray, tray 78 also carries a rigid pin 87 upon which is rotatably mounted a sleeve 88, serving as a cam follower located to be engaged by the dwell 83 of the cam.

The operation in this case is substantially the same, except that the tray is held against twisting at its front end by the rails 69, 70 and the upper guide 73.

As the crank 86 is rotated, cam 82 brings its edge into engagement with the follower 88 on the tray and as the radius increases that corner of the tray is lifted while the corner carrying pin 76 is permitted to pivot but is not lifted. This causes the tray to be warped

which loosens all the ice cubes until the follower 88 drops off the rise 84 which permits the tray to snap back to a flat condition and ejects all of the ice cubes.

It will, thus, be observed that we have invented an improved ice cube ejector mechanism which requires only a minimum amount of labor on the part of the user. It is only necessary to take the tray with its ice cubes from the evaporator and invert it and place it in the ejector and then the crank is given one turn through 360°.

All of the ice cubes are immediately loosened and ejected into the ice cube bin without any heating or causing the cubes to become wet. In their dry, cold condition the cubes may be stored as long as necessary at a suitable temperature well below freezing so that they will not stick together.

While we have illustrated a preferred embodiment of our invention, many modifications may be made without departing from the spirit of the invention, and we do not wish to be limited to the precise details of construction set forth, but desire to avail ourselves of all changes within the scope of the appended claims.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent of the United States is:

1. An ice cube ejector assembly comprising a frame provided with a pair of rearwardly projecting rails spaced sufficiently to support the laterally projecting edges of an ice tray in inverted position without preventing the dropping of the ice cubes, an ice cube tray of flexible material provided with a multiplicity of partitions extending at right angles to each other and defining a multiplicity of ice cube pockets, said partitions all tapering toward the top, and the walls of the tray extending outward toward the top to cause all of the pockets to be downwardly tapered, a pivotal connection between one of the rear corners of the tray and said frame, a transverse frame member carried by said frame near its forward end and spaced from the rails sufficiently to permit insertion of the ice tray in inverted position and to prevent the turning of the front end of the ice tray, a front-to-rear shaft rotatably mounted on the other of said rails, and having an actuating crank on its front end for rotating the shaft, a cam carried by said shaft at its rear end and hving an anvil of reduced radius and a rise extending about the cam to an abrupt shoulder adjacent said anvil, and a follower carried by said tray and engaged by said cam, the rotation of the crank causing the cam to engage the follower and twist the tray by lifting the adjacent corner thereof to deform all of the pockets, tending to loosen the bond between the ice and tray, the follower dropping off the cam and striking the anvil at a predetermined point in the rotation of the shaft, so jarring the tray that the ice cubes are further loosened and ejected from the tray.

2. An ice cube ejector assembly comprising a flexible ice tray having a bottom and downwardly tapering sides, and a movable grid comprising transversely extending webs intersected by longitudinally extending dividers, said grid having all of its parts tapering from a narrow top to a wider bottom edge engaging the bottom of the tray so that all of the cubes taper from top downwardly toward the bottom of smaller size, means for supporting said tray above a container for ice cube storage, said supporting means including means for anchoring one end of the tray and a cam for lifting one of the other corners of the tray relative to said one end to twist the tray and grid intermediate its ends and to cause the bond between the cubes, grid and tray to be broken, the said cam having a dwell of minimum radius for supporting the tray in a plane condition and having a gradual rise and an abrupt drop for twisting the tray and permitting it to snap back to the plane condition.

3. An ejector mechanism for ice cubes in a flexible tray having a movable grid comprising a support provided with a cube storage container for receiving cubes dropping from an inverted ice tray, said support including a front frame member rigidly secured on said support and having a pair of rearwardly projecting guides comprising metal members having inwardly facing grooves for receiving the upper edge flange of an ice tray, the grooves being spaced from each other sufficiently so that the said flange may be seated therein to control the twisting movement of a tray, a lever pivoted on said support near the rear end of said guides and having said guides secured to said lever, a cam rotatably mounted on said support and having a dwell of minimum radius acting as an anvil engaging below said lever, said cam having gradual rise and abrupt drop, the rotation of said cam lifting said lever at its end and lifting one guide higher than the other, twisting the tray and its contents to loosen the ice cubes causing them to fall in said receptacle.

4. An ejector mechanism for ice cubes in a flexible tray having a movable grid comprising a support provided with a cube storage container for receiving cubes dropping from an inverted ice tray, said support including a front frame member rigidly secured on said support and having a pair of rearwardly projecting guides comprising metal members having inwardly facing grooves for receiving the upper edge flange of an ice tray, the grooves being spaced from each other sufficiently so that the said flange may be seated therein to control the twisting movement of a tray, a lever pivoted on said support near the rear end of said guides and having said guides secured to said lever, a cam rotatably mounted on said support and having a dwell of minimum radius acting as an anvil engaging below said lever, said cam having gradual rise and abrupt drop, the rotation of said cam lifting said lever at its end and lifting one guide higher than the other, twisting the tray and its contents to loosen the ice cubes causing them to fall in said receptacle, the said cam also rotating until it passes its point of maximum radius and the lever following the cam drops off the abrupt rise of the cam to snap against said anvil returning the tray to a plane condition and forcibly ejecting the cubes from the tray.

5. An ejector mechanism for ice cubes in a flexible tray having a movable grid comprising a support provided with a cube storage container for receiving cubes dropping from an inverted ice tray, said support including a front frame member rigidly secured on said support and having a pair of rearwardly projecting guides comprising metal members having inwardly facing grooves for receiving the upper edge flange of an ice tray, the grooves being spaced from each other sufficiently so that the said flange may be seated therein to control the twisting movement of a tray, a lever pivoted on said support near the rear end of said guides and having said guides secured to said lever, a cam rotatably mounted on said support and having a dwell of minimum radius acting as an anvil engaging below said lever, said cam having gradual rise and abrupt drop, the rotation of said cam lifting said lever at its end and lifting one guide higher than the other, twisting the tray and its contents to loosen the ice cubes causing them to fall in said receptacle, the said cam also rotating until it passes its point of maximum radius and the lever following the cam drops off the abrupt rise of the cam to snap against said anvil returning the tray to a plane condition and forcibly ejecting the cubes from the tray, the said lever being urged toward the position in which the tray is plane against said anvil for augmenting the snapping action.

6. An ejector mechanism for ice cubes in a flexible tray having a movable grid comprising a support provided with a cube storage container for receiving cubes dropping from an inverted ice tray, said support including a front frame member rigidly secured on said support and having a pair of rearwardly projecting guides comprising metal members having inwardly facing grooves for receiving the upper edge flange of an ice tray, the grooves being spaced from each other sufficiently so that the said flange may be seated therein to control the twisting movement of a tray,

a lever pivoted on said support near the rear end of said guides and having said guides secured to said lever, a cam rotatably mounted on said support and having a dwell of minimum radius acting as an anvil engaging below said lever, said cam having gradual rise and abrupt drop, the rotation of said cam lifting said lever at its end and lifting one guide higher than the other, twisting the tray and its contents to loosen the ice cubes causing them to fall in said receptacle, said support being provided with an elongated shaft and bearings for said shaft, the shaft supporting said cam and having forward crank on said shaft for actuating said crank.

7. An ejector mechanism for ice cubes in a flexible tray having a movable grid comprising a support provided with a cube storage container for receiving cubes dropping from an inverted ice tray, said support including a front frame member rigidly secured on said support and having a pair of rearwardly projecting guides comprising metal members having inwardly facing grooves for receiving the upper edge flange of an ice tray, the grooves being spaced from each other sufficiently so that the said flange may be seated therein to control the twisting movement of a tray, a lever pivoted on said support near the rear end of said guides and having said guides secured to said lever, a cam rotatably mounted on said support and having a dwell of minimum radius acting as an anvil engaging below said lever, said cam having gradual rise and abrupt drop, the rotation of said cam lifting said lever at its end and lifting one guide higher than the other, twisting the tray and its contents to loosen the ice cubes causing them to fall in said receptacle, said support being provided with an elongated shaft and bearings for said shaft, the shaft supporting said cam and having forward crank on said shaft for actuating said crank, the said guides being pivotally mounted on said support and on said lever for permitting the twisting of the tray without the bending of the guides.

8. An ejector mechanism for ice cubes in a flexible tray having a movable grid comprising a support provided with a cube storage container for receiving cubes dropping from an inverted ice tray, said support including a front frame member rigidly secured on said support and having a pair of rearwardly projecting guides comprising metal members having inwardly facing grooves for receiving the upper edge flange of an ice tray, the grooves being spaced from each other sufficiently so that the said flange may be seated therein to control the twisting movement of a tray, a lever pivoted on said support near the rear end of said guides and having said guides secured to said lever, a cam rotatably mounted on said support and having a dwell of minimum radius acting as an anvil engaging below said lever, said cam having gradual rise and abrupt drop, the rotation of said cam lifting said lever at its end and lifting one guide higher than the other, twisting the tray and its contents to loosen the ice cubes causing them to fall in said receptacle, said support being provided with an elongated shaft and bearings for said shaft, the shaft supporting said cam and having forward crank on said shaft for actuating said crank, the said guides being pivotally mounted on said support and on said lever for permitting the twisting of the tray without the bending of the guides, the said guides being made of resilient metal permitting them to bend intermediate their length in the twisting of the tray.

9. An ejector mechanism for ice cubes in a flexible tray having a movable grid comprising a support provided with a cube storage container for receiving cubes dropping from an inverted ice tray, said support including a front frame member rigidly secured on said support and having a pair of rearwardly projecting guides comprising metal members having inwardly facing grooves for receiving the upper edge flange of an ice tray, the grooves being spaced from each other sufficiently so that the said flange may be seated therein to control the twisting movement of a tray, a lever pivoted on said support near the rear end of said guides and having said guides secured to said lever, a cam rotatably mounted on said support and having a dwell of minimum radius acting as an anvil engaging below said lever, said cam having gradual rise and abrupt drop, the rotation of said cam lifting said lever at its end and lifting one guide higher than the other, twisting the tray and its contents to loosen the ice cubes causing them to fall in said receptacle, said support being provided with an elongated shaft and bearings for said shaft, the shaft supporting said cam and having forward crank on said shaft for actuating said crank, the said guides being pivotally mounted on said support and on said lever for permitting the twisting of the tray without the bending of the guides, the said guides being made of resilient metal permitting them to bend intermediate their length in the twisting of the tray, the said support including a forwardly open frame for receiving the tray in inverted condition and having an opening in which the guides are secured at the lower side of the opening, the opening locating the point of insertion of the inverted tray.

10. An ice cube ejector comprising a support including a container for receiving and storing ice cubes, a frame member mounted on said support at one end of said container and having a pair of backwardly extending rails with guide members for preventing lateral movement of an inverted ice tray, said rails being spaced sufficiently to engage the top edges of the side walls of an inverted ice tray, a guide member for engaging the bottom of the ice tray as it is inverted on said rails, said guide being located to engage the forward end of the bottom of the tray to prevent its twisting at that end, a cam carried by said support and located at the rear end of one of said rails for lifting that corner of the ice tray to twist the ice tray intermediate its ends and break the bond between the cubes and the tray, said support having a bearing at the end of the other rail and the tray having a pin for pivotally supporting the tray at said bearing, and the tray having a rearwardly extending cam follower for engagement with said cam.

11. An ice cube ejector comprising a support including a container for receiving and storing ice cubes, a frame member mounted on said support at one end of said container and having a pair of backwardly extending rails with guide members for preventing lateral movement of an inverted ice tray, said rails being spaced sufficiently to engage the top edges of the side walls of an inverted ice tray, a guide member for engaging the bottom of the ice tray as it is inverted on said rails, said guide being located to engage the forward end of the bottom of the tray to prevent its twisting at that end, a cam carried by said support and located at the rear end of one of said rails for lifting that corner of the ice tray to twist the ice tray intermediate its ends and break the bond between the cubes and the tray, said support having a bearing at the end of the other rail and the tray having a pin for pivotally supporting the tray at said bearing, and the tray having a rearwardly extending cam follower for engagement with said cam, the said cam having a dwell of minimum radius serving as an anvil for supporting the tray in a plane condition and the cam having gradually increasing radius leading to an abrupt drop, permitting the tray to snap back against said anvil for forcibly ejecting the ice cubes.

12. An ice body ejector assembly, comprising: a distortable resilient ice tray having a distortable grid dividing the tray into pockets from which ice bodies formed in said pockets fall when loosened and the tray inverted; a housing into which the inverted tray containing ice bodies in said pockets is insertable without substantial twisting of the tray; means in the housing for anchoring one end of the tray and one side of the opposite end; and means operable from said one end of the tray for moving another side of said other end to twist the tray and loosen ice bodies therein.

13. An ice body ejector assembly, comprising: a dis-

tortable resilient ice tray having a distortable grid dividing the tray into pockets from which ice bodies formed in said pockets fall when loosened and the tray inverted; a housing into which the inverted tray containing ice bodies in said pockets is insertable without substantial twisting of the tray; means in the housing for anchoring one end of the tray and one side of the opposite end; and means operable from said one end of the tray for moving another side of said other end to twist the tray and loosen ice bodies therein, the twisting means including a cam at said opposite end movable about an axis and engaging means associated with the inserted tray for imparting the twist.

14. The assembly of claim 13 wherein said cam includes a riser portion of increasing radius for imparting said twist and a dwell portion of lesser radius adjacent the riser portion, the engaging means moving with a snap from said riser portion to the dwell portion by reason of the resiliency of said tray on continued movement of said cam to jar ice bodies from the tray.

15. An ice body ejector assembly, comprising: a distortable resilient ice tray having a distortable grid dividing the tray into pockets from which ice bodies formed in said pockets fall when loosened and the tray inverted; a housing into which the inverted tray containing ice bodies in said pockets is insertable without substantial twisting of the tray; means in the housing for anchoring one end of the tray and one side of the opposite end;

crank means having a manipulatory portion operable from said one end of the tray and a shaft portion extending rearwardly toward said opposite end of the tray; a cam on said shaft at said opposite end engaging means associated with a second side of the tray opposite said anchored side to move said second side to twist the tray and loosen ice bodies therein upon movement of the crank means, the cam including a riser portion of increasing radius for imparting said twist and a dwell portion of lesser radius adjacent the riser portion, the engaging means moving with a snap from said riser portion to the dwell portion by reason of the resiliency of said tray on continued movement of said cam to jar ice bodies from the tray; and a receptacle associated with said housing into which said loosened ice bodies fall.

References Cited in the file of this patent

UNITED STATES PATENTS

2,261,952	Blomqvist	Nov. 11, 1941
2,429,882	Jennings	Oct. 28, 1947
2,558,015	Storer	June 26, 1951
2,587,852	Jahn	Mar. 4, 1952
2,752,762	Gaugler	July 3, 1956
2,757,519	Sampson	Aug. 7, 1956
2,772,542	Gaugler	Dec. 4, 1956
2,785,538	Schweller	Mar. 19, 1957
2,785,539	Simmons	Mar. 19, 1957
2,846,854	Galin	Aug. 12, 1958