Sept. 17, 1957 J. R. PICHLER 2,806,357

ICE MAKER

Filed July 20, 1955 3 Sheets-Sheet 1

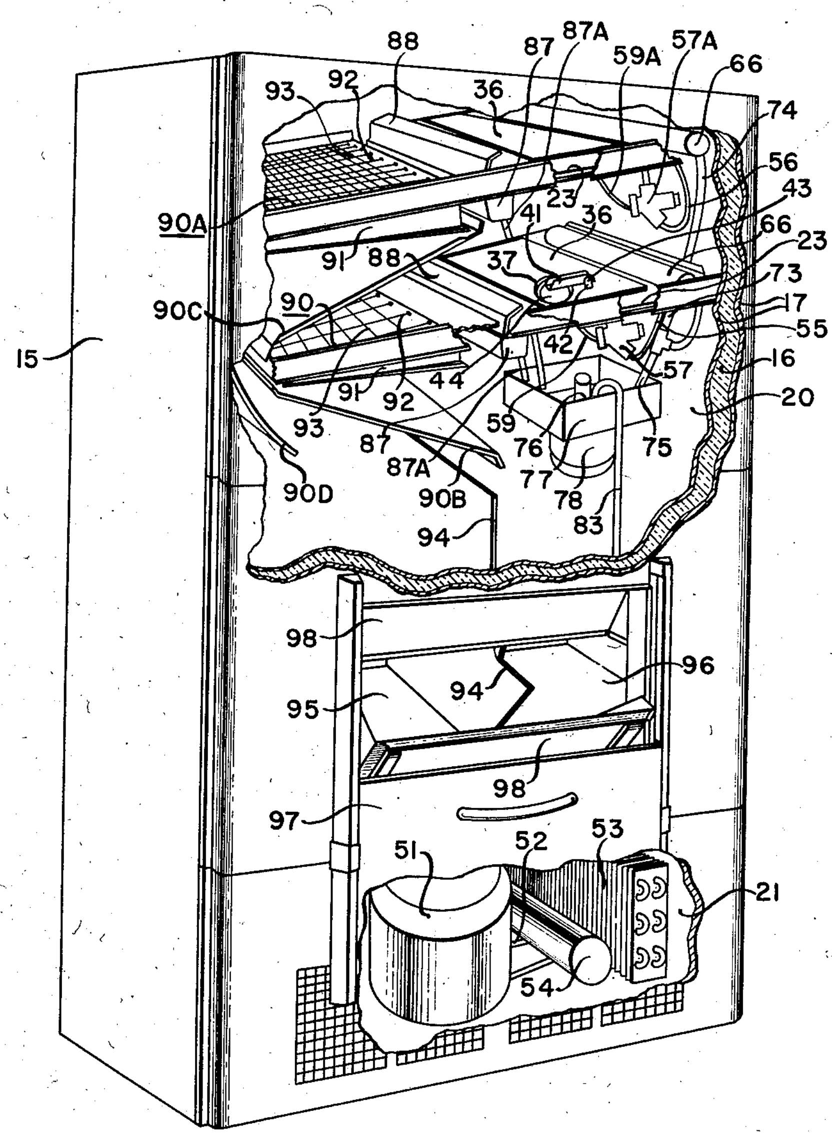

Fig. 1

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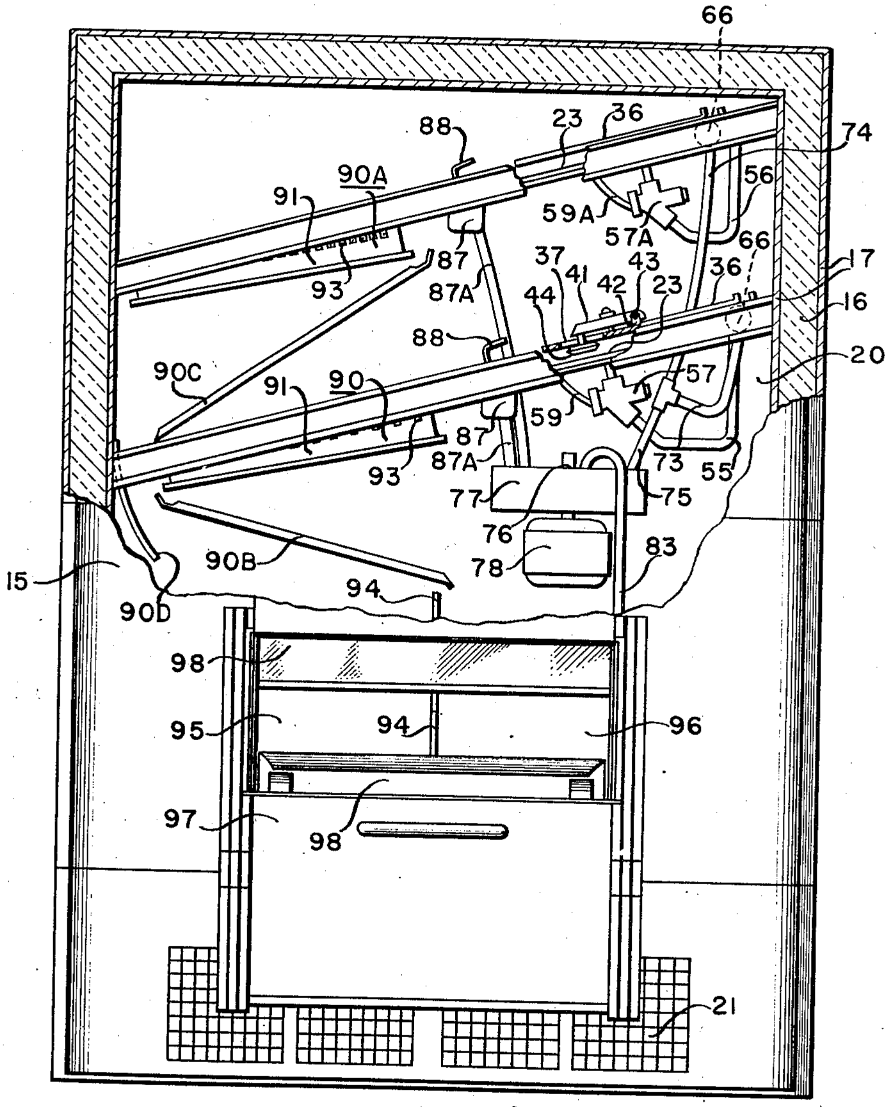

Fig. 2

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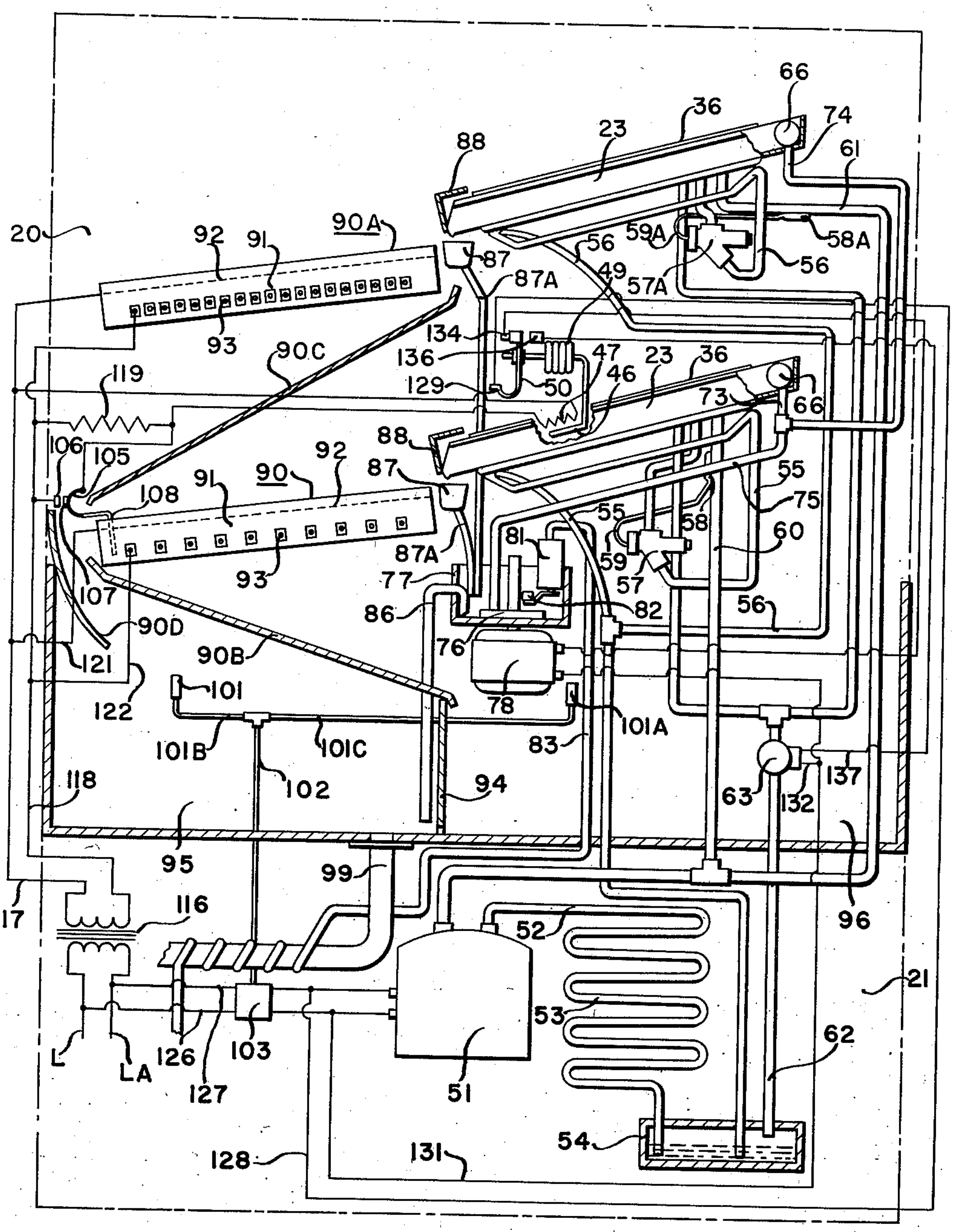

Fig. 3

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ICE MAKER

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Application July 20, 1955, Serial No. 523,236

2 Claims. (Cl. 62—7)

The present invention relates to refrigerating apparatus and more particularly to an ice block maker.

An object of my invention is to provide an improved, automatic, self-contained, ice block making and storage apparatus of large capacity for use in hospitals, restaurants, bars, hotels and other large volume ice users of the type which produces clear solid ice blocks of a size to be placed in glasses containing drinks to be chilled.

Another object of my invention is to provide an ice block making apparatus of the type wherein slabs of ice are formed on multiple freezing plates, by flowing water thereover, the slabs released from the plates and dissected into a plurality of ice blocks with means for directing the ice blocks into different sides or portions of an ice block storage means, cooled by the plates, for preventing the ice blocks from accumulating in a single pyramidal fashion in the storage means to thereby more evenly distribute ice blocks therein and increase the storage capacity thereof.

Another object of my invention is to provide in a chamber of a cabinet of an ice making apparatus inclined plates upon each of which a slab of ice is formed and released therefrom to separate dissectors associated with the plates which dissectors sever the slabs of ice into a plurality of ice blocks of different size with means for directing the larger ice blocks into one bin and for directing the smaller ice blocks into another bin to separate and store the different sized ice blocks in segregated fashion.

In carrying out the foregoing objects, it is a further object of my invention to arrange a plurality of inclined freezing plates and dissectors for each plate one above the other in a chamber of an ice maker cabinet so that these elements will be compact within the cabinet and the cabinet will occupy a minimum of floor space and wherein baffles are positioned below the dissectors in such a manner as to direct ice blocks severed thereby laterally thereof in opposite directions with respect to the dissectors into different sides of an ice block storage means or into separate bins.

Still further and more specific objects of my invention reside in details of construction of an ice block maker wherein such details present novel features to render the ice maker capable of producing large quantities of solid ice blocks, to facilitate harvesting of the ice blocks therefrom and to minimize waste.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawings, wherein a preferred form of the present invention is clearly shown.

In the drawings:

Figure 1 is a perspective view of an ice block maker cabinet having portions thereof broken away to show the location and arrangement of various elements within the cabinet;

Figure 2 is an enlarged front view of the ice maker cabinet shown in Figure 1 partly in section and partly in elevation; and

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Figure 3 is a diagrammatic view of various elements of the ice block maker and showing an electrical circuit therefore.

The present invention is an improvement over the ice block making apparatus illustrated and fully described in the patent to Marshall W. Baker, No. 2,784,563, dated March 12, 1957, entitled Ice Maker Apparatus and assigned to the assignee of the present application. Reference to this patent is made for a clear understanding of the ice block making apparatus herein more or less concisely shown and described. Certain features over those shown in the Baker patent are herein disclosed and exemplified in order to carry out the objects of the present invention.

Referring to the drawings I show, in Figure 1 thereof, an ice making apparatus of the type capable of producing small blocks of ice for table use including a cabinet **15** comprising a plurality of walls **17** having any suitable on conventional insulating material **16** therein forming an insulated chamber **20** within the cabinet. Chamber **20** is disposed over a non-insulated machine compartment **21** provided in the lower portion of cabinet **15**. A plurality of separate unitary freezing members **23** are stationarily mounted, preferably at an angle, in the upper portion of chamber **20**. In the copending application just referred to a single freezing plate is shown and the multiple plate apparatus herein disclosed creates problems which must be overcome to render the present ice block maker practical and efficient. The inclined freezing plate members **23** are disposed in spaced apart relationship one above the other and are refrigerant evaporators forming a part of a closed refrigerating system, to be hereinafter described, associated with cabinet **15**. Both members **23** have flat upper surfaces and each is formed by superimposing a flat metal plate upon an embossed metal plate and brazing the plates together in a manner now well known to those skilled in the sheet metal evaporator art. The embossations in the one plate of each member **23** form refrigerant evaporating or expansion passages (not shown) within the members as disclosed in the copending application referred to. A metal cover **36** is spaced from the flat upper surface of the lowermost member **23** and is provided with an opening **37** which receives a part of a thermostatic control means. This thermostatic control means comprises an adjustable arm **41** having its one end pivotally mounted to bracket **42**, welded upon cover **36**, by a pin **43**. The other end of arm **41** carries a feeler receptacle **44** (see Figure 2) containing a coiled tube **46** and a coiled electric heat element **47** disposed thereabove (see Figure 3). Heating element **47** is a one-half to five watt capacity electric heater. The feeler receptacle **44** is preferably made adjustable in any suitable manner relative to the flat upper surface of the lowermost freezing member **23** so as to vary the thickness of a slab of ice formed on the top surface of this member and, consequently, on the top surface of the other or uppermost of the members **23**. Tube **46** has its end at the coiled portion thereof sealed and has its other end connected to an expansible and contractable element **49** located in a suitable or conventional electric snap switch **50** (see Figure 3). The construction and arrangement of control or switch **50** with respect to the lower freezing member **23** is clearly shown and fully described in the patent hereinbefore referred to. A volatile fluid is sealed in tube **46** and element **49** so as to render switch **50** thermally responsive. The coiled heating element **47** has wire connections, to be hereinafter described, with a low voltage electric circuit. As before stated, the two vertically spaced apart freezing members or plates **23** form refrigerant evaporating portions of a closed refrigerating system and each has a plurality of conduit connections with a refrigerant translating device of the refrigerating system mounted in the machine compartment 21 and comprising a motor-compressor unit 51 (see Figure 3) connected, by a conduit 52, with a condenser 53 which may be cooled in any suitable or conventional manner. Condenser 53 is connected to a receiver 54 and conduits 55 and 56 connect this receiver in parallel circuit relation with the refrigerant evaporating passages within the two freezing plate member 23. Thermostatic expansion valves 57 and 57A are interposed in conduits 55 and 56 respectively and each has a thermal bulb 58 and 58A connected thereto by a tube 59 and 59A respectively for operating the valves 57 and 57A as is conventional in the art. Bulbs 58 and 58A are secured to the parallelly connected gaseous refrigerant return conduits 60 and 61, leading to unit 51, and are thermally responsive to the temperature of these conduits. The outlets of the separate plate evaportators 23 are connected by the conduits 60 and 61 and a main or common conduit to the intake side of the compressor of the motor-compressor unit 51. A conduit 62 extends from the top of receiver 54 and is connected to a solenoid operated valve 63 having branch pipes connecting the same directly to the refrigerant expansion passages in the two plate evaporator members 23. Valve 63 normally closes conduit 62 to prevent its communication with the refrigerant passage in members 23 during a refrigerating cycle of operation of the refrigerating system.

Means is provided for flowing a film of water over each of the spaced apart freezing plate evaporators 23 from a main or supply pipe containing water under pressure. This means comprises manifolds in the form of headers 66 one of which is located at the upper end of each inclined member 23 and provided with small holes or orifices for distributing water over the freezing plate members 23. Headers 66 have supply conduits 73 and 74 connected thereto and these conduits connect with a common pipe 75 which communicates with a centrifugal water pump 76 located in the bottom of a water sump or reservoir forming receptacle 77. A motor 78 located below receptacle 77 is employed to operate the water pump 76. A valve 81, actuated by a float 82, controls the flow of water through a water main or supply pipe 83, containing water under pressure, into the sump or reservoir 77. Receptacle or reservoir 77 is also provided with a siphon pipe 86 which periodically draws water out of the receptacle 77 to aid the apparatus in producing clear ice blocks. A trough 87 is located below the lower end of each of the members 23 and these troughs each have a pipe 87A connected thereto and extending into the receptacle 77. The troughs 87 receive excess water directed over the plate members 23 and convey this water into the sump or reservoir receptacle. A baffle 88 is located at the lower end of each member 23 to direct water flowing therefrom into the trough 87 and for preventing excessive water splash. These baffles 88 are each hingedly mounted so as to be swingably moved out of the path of slabs of ice released and sliding from the members 23.

In the upper left hand portion of chamber 20 there is mounted two inclined ice cutters, grids or dissectors 90 and 90A. The dissectors 90 and 90A are disposed in spaced apart relationship one above the other at the lower side of the freezing plate members 23 and each is adapted to receive a slab of ice from the plate freezer member with which it is associated. Each dissector ice cutting grid 90 and 90A comprises a frame 91 having sets of spaced apart wires 92 and 93 extending thereacross in opposite directions to one another. The lower portion of insulated chamber 20 forms storage means for ice blocks and this storage means has a partition 94 therein dividing same into separate side by side ice block storage compartments or bins 95 and 96. The ice block storage means, bins or compartments are normally closed by an insulated vertically slidable door structure 97 and inner tiltable guards or retainers 98 (see Figures 1 and 2) arranged as desired and which may be opened or tilted angularly automatically in response to sliding door 97 into open position to afford access to ice blocks in the storage means. The bins 95 and 96 are adapted to receive ice blocks severed by the diissectors 90 and 90A in a manner to be hereinafter described. A drain pipe 99 leads from the bottom of the ice block storage means to convey water, entering same from the siphon 86 associated with receptacle 77 and water resulting from melting ice in the storage means, out of the cabinet.

In order to accomplish objects of the present invention, the ice slab cutting or severing grid wires 92 and 93 of the uppermost 90A of the dissectors are spaced apart a shorter distance than these wires of the lowermost dissector 90. This closer spacing of the wires of the dissector 90A relative to the spacing of wires of the other dissector 90 causes dissector 90A to sever ice blocks from a slab of ice received thereon of a different or smaller size than ice blocks severed by dissector 90. It is desired to direct ice blocks severed by the two dissectors 90 and 90A into the storage means within chamber 20, cooled by the freezing plate 23, at two spaced apart points or at two sides thereof regardless of whether or not the ice blocks are of different size. Such will scatter or spread out the heap of ice blocks and increase the ice block storage capacity of the storage means. Obviously if the two dissectors 90 and 90A are to sever ice blocks of different size these different sized ice blocks should be kept separate from one another and stored in segregated fashion in the bins 95 and 96 for harvesting therefrom. I therefore stationarily mount a baffle 90B at an angle within chamber 20 beneath dissector 90 and this baffle 90B receives the larger ice blocks severed by dissector 90 and directs them laterally thereof, over the top of partition 94, and into the one side of the storage means or into bin 96. I also stationarily mount a second baffle 90C within chamber 20 intermediate the dissectors 90 and 90A and incline same in a direction opposite the angled mounting of baffle 90B. Baffle 90C receives the smaller ice blocks severed by dissector 90A and directs these smaller blocks laterally thereof over and to the opposite side of dissector 90 into the other side of the storage means or into bin 95. I further provide a deflector 90D at the one side of chamber 20 opposite and slightly below dissector 90 which directs the smaller ice blocks falling from baffle 90C to a central part of bin 95. In this manner either ice blocks of the same size produced by the apparatus may be distributed or discharged into two sides of the storage means or ice blocks of different size simultaneously produced by the apparatus can be kept separated and discharged into the ice block storage bins 95 and 96. Also in the present disclosure I provide each bin 95 and 96 with a thermal bulb 101 and 101A respectively which are connected by tubes 101B and 101C to one end of a conduit 102. The other end of conduit 102 is connected or sealed to an expensible and contractable bellows mounted in a bin thermostatic electric switch 103 of any desired or conventional construction. The bulbs 101 and 101A, tubes 101B and 101C and the bellows in switch 103 are charged with a volatile fluid and then sealed to form a temperature responsive unit for actuating switch 103. The bulbs 101 and 101A may be placed at any desired height within chamber 20 to maintain a predetermined supply of ice blocks in the compartments or bins 95 and 96. When, however, ice blocks accumulate in either one of the storage bins up to or above the bulb therein to contact same the bulb responds to the temperature of the ice and will cause switch 103 to shut down or render the refrigerating system inoperative to produce ice on the freezing plate members 23. The apparatus further includes a switch 105 having contacts 106 and 107 one of which is mounted on a movable arm 108, associated with the lower side of ice cutter or dissector 90. Arm 108 is disposed in the path of and is adapted to be struck or engaged and moved by a cake or slab of ice released from the lowermost of the freezing plate members 23 and slidable therefrom onto cutter 90 for a purpose to be hereinafter described.

Electrical circuit

The one hundred and fifteen volt power mains indicated at L and LA (see Figure 3) lead to a low voltage, say, for example, an eleven volt, transformer 116. A wire 117 leads from transformer 116 to the heater 47 of thermostatic control switch 50. A wire 118 leads from transformer 116 to contact 106 of switch 105. When contacts 106 and 107 are closed wire 118 leads to the other side of heater 47 of switch 50. A resistance jumper wire 119 bypasses switch 105 in wire 118 and continuously energizes heater 47 with approximately one-half watt current. This is an auxiliary feature and provides the feeler receptacle 44, of the ice thickness thermostat, with a small amount of heat to at all times insure that the interior thereof will remain dry. A branch wire 121 leads from wire 117 to wires 92 of the lower ice cutter grid or dissector 90 and a branch wire 122 leads from wire 118 to wires 93 of this lower dissector, which are connected in series with wires 92, to continuously energize the dissector or ice severing grid 90. A branch wire 123 leads from wire 117 to wires 92 of the upper ice cutter grid or dissector 90A and a branch wire 124 leads from wire 118 to wires 93 of this upper dissector, which are also connected in series with wires 92 thereof, to continuously energize the dissector 90A. The wires and connections just described complete the low voltage circuit incorporated in the ice block maker. The one hundred and fifteen volt circuit includes a wire 126 branched from power main L and leading into the bin thermostat switch 103. Another wire 127 branches from power main LA and also leads into the bin switch 103. The wires 126 and 127 extend from switch 103 to the electric motor of the motor-compressor unit 51 to cause continuous operation of this unit which is interrupted only by actuation of switch 103 in response to a predetermined accummulation of ice blocks within the storage means or bins 95 and 96. A branch wire 128 leads from wire 127, between switch 103 and unit 51, and is connected to a movable arm 129 of the ice thickness thermostat control switch 50. Another branch wire 131 leads from wire 126, between switch 103 and unit 51, and is connected to a wire 132 which enters one side of a solenoid in valve 63. Wire 132 extends to the water pump motor 78. A wire 133 extends from pump motor 78 and is connected to a contact 134 of the thermostatic switch 50. The other contact 136 of switch 50 is connected, by a wire 137, with the solenoid in valve 63. The contact on arm 129 of switch 50 is adapted to alternately engage or disengage the contacts 134 and 136 in response to temperature conditions in the feeler receptacle 44 associated with the lowermost freezing member 23.

Operation

Assume that the ice block maker is properly connected to a source of water supply, to a drain and its electric circuit is now energized by plugging an extension cord, leading from the cabinet, into an electric outlet. Electric current now flows from the mains L and LA through closed switch 103 to the motor-compressor unit 51 to cause operation thereof. Simultaneously therewith electric current flows from transformer 116 through wires 117 and 118 and branch wires 121, 122, 123 and 124 to continuously energize both of the ice cutters or dissectors 90 and 90A by directing thirty to thirty-five watts of current into the resistance wires 92 and 93 of each to heat these wires. A small amount of current, one-half watt, flows, through by-pass restrictor 119, to the heating element 47 in the ice thickness feeler member or receptacle 44. At this time electric current also flows

through wire 128, arm 129, of the ice thickness thermostat switch 50, contact 134, then through wire 133 to water pump motor 78. The circuit is completed back to the power main L from motor 78 through wires 132, 131 and 126. Water fills receptacle 77 to a predetermined level under control of float valve 81. Solenoid valve 63 is closed while motor 78 operates. The pump 76 lifts water, from receptacle 77, by way of pipe 75 and conduits 73 and 74, to each of the headers 66 of the superimposed freezing plate members 23. Water is distributed in the form of a film simultaneously upon each freezing plate surface of members 23 by the outlet openings in the manifolds or headers 66. The compressor of unit 51 withdraws refrigerant vapor from the expansion passages in the plate portion of both members 23, to cause chilling of these plates, compresses the same and forwards the compressed refrigerant to condenser 53 wherein it is cooled and liquefied in any suitable manner such as by forced circulation of air over the condenser. Refrigerant liquefied in condenser 53 flows into receiver 54 where it is further cooled and collected. Liquid refrigerant enters the conduits 55 and 56 and flows to the expansion valves 57 and 57A. This liquid refrigerant is directed into the passages of both plate members 23, by the expansion valves, where it evaporates, in removing heat from the plates, and the evaporated or gaseous refrigerant is returned through conduits 60 and 61, to the compressor unit 51. The refrigerating effect produced by members 23 causes water from the film thereof flowing over the plates to freeze and accumulate thereon in the form of thin cakes or slabs of ice. When the thickness of the cake or slab of ice on at least the lowermost of the freezing plates 23 reaches the feeler receptacle 44 its temperature overcomes the small amount of heat imparted to heating element 47, by resistor 119, and cools the coiled portion of tube 46. The temperature of tube 46 is lowered to the desired point, in accordance with a predetermined thickness of accumulated ice on lower member 23, and element 49 of switch 50 will contract and cause movement of switch arm 129 away from contact 134 and into engagement with contact 136. When arm 129 disengages contact 134, of switch 50, the circuit to the water pump motor 78 is opened and when this arm engages contact 136 the circuit to the solenoid valve 63 is closed. Energization of the solenoid in valve 63 causes this valve to open and hot gaseous refrigerant is now circulated from the receiver 54 and condenser 53, through conduit 62, valve 63 and the branch conduits leading therefrom directly into the passages in both of the freezing plates 23 and thence back to the compressor of unit 51 which continues to operate at this time. The thermostatic control or switch 50, thus, serves as a means responsive to a predetermined thickness of ice on one of the members 23 to alternately refrigerate the freezing plates and to heat them. Switch 50 also serves as a means for simultaneously stopping the flow of water over both freezing plates 23, rendering the refrigerating means ineffective and for initiating heating of the plates by rendering the heating means, hot gas lines 62, effective. Heat of the gaseous refrigerant flowing through the passages in the plate members 23 thaws and substantially simultaneously breaks the bond between both plates and the slabs of ice previously formed thereon. The slabs of ice released from the lower and upper plates 23 are adapted to slide therefrom onto the inclined ice dissectors 90 and 90A respectively associated therewith. The sliding slabs of ice engage and move the baffles 88 about their pivotal mounting out of the path of movement of the ice. As the slabs of ice slide off the freezing plates 23 onto the dissectors 90 and 90A the one or lower slab strikes the movable arm 108 of switch 105 and causes the contact 107, carried on arm 108, to engage contact 106. Closing of contacts 106 and 107 causes the flow of about five watts of electric current, around resistor 119, through wires 117 and 118 to the heating element 47 of the ice thickness thermostat. Heat generated by the electrical heating element 47 rapidly warms the coiled portion of tube 46 to thereby cause expansion of element 49 of switch 50. This reduces to a minimum the interval of time between the removal of slabs of ice from both members 23 and a subsequent ice slab freezing cycle since arm 129 of switch 50 will be quickly moved to engage contact 134, after the slabs of ice leave the members 23. Movement of arm 129 away from contact 136 of switch 50 deenergizes the solenoid valve 63 to cause it to close and the engagement of arm 129 with switch contact 134 again energizes the water circulating pump motor 78. Heat of the sets of wires 92 and 93 in each dissector 90 and 90A cuts or severs the slabs of ice received therein into a plurality of ice blocks. Ice blocks severed by the lowermost dissector 90 fall upon baffle 90B and are directed laterally thereof, over partition 94, to the one side of the ice block storage means or into bin 96. Ice blocks severed by the uppermost dissector 90A fall upon baffle 90C, located between the dissectors, and are directed laterally across the top of dissector 90 into the other side of the ice block storage means or into compartment or bin 95. In the case of the dissectors 90 and 90A severing different size ice blocks these different blocks are prevented from becoming mixed together and are stored in segregated fashion in the separate bins 95 and 96. The freezing cycles and the ice releasing cycles continue uninterrupted alternately until such time as one of the ice block storage bins becomes substantially filled with ice blocks.

It should be apparent from the foregoing that I have provided an improved ice maker of large capacity which can be used to produce automatically a quantity of ice blocks of the same size or readily altered to simultaneously produce ice blocks of different sizes. This feature in the present invention is accomplished by merely changing one of the dissectors at the location of installation of the apparatus to meet the demand of a user or purchaser of the ice making apparatus. The arrangement of the multiple freezing plates in my ice maker cabinet one above the other permits the cabinet to be constructed rather shallow and narrow so that it will not occupy too much valuable floor space. The bottom of the storage means in the present cabinet is above floor level at substantially waist height to facilitate harvesting of ice blocks therefrom with a minimum of stooping. If, in the apparatus herein shown, a waiter or waiters continually harvest ice blocks from one and/or the same storage bin ice blocks may accumulate in the other bin up to the point that the control in this other storage bin will shut down or render the refrigerating system inoperative to produce ice blocks. Thus, if the supply of ice blocks in the one bin becomes depleted at a time the thermostat in the other storage bin shuts down the refrigerating system plenty of ice blocks still remain to be harvested from this other bin. As ice blocks are removed from the other bin to cause the supply therein to diminish to a point where they no longer contact the thermostat therein the refrigerating system is rendered effective automatically to supply more ice blocks to both storage bins. The dual bin thermal controls herein disclosed thereby supply a safety feature for the apparatus to prevent it from becoming totally exhausted of ice blocks should waiters harvest ice blocks from one storage bin only. While I have disclosed a single refrigerating system for cooling the plurality of freezing plates it is to be understood that two separate systems having common control means connected in parallel circuit relation could be employed if desired.

While the form of embodiment of the invention as herein disclosed constitutes a preferred form, it is to be understood that other forms might be adopted, as may come within the scope of the claims which follows.

What is claimed is as follows:

1. An ice making apparatus including a cabinet with a chamber therein and of the type capable of simultaneously producing a plurality of separate batches of ice blocks in spaced apart superimposed communicating zones in said chamber comprising, an inclined plate disposed in each of said zones in said chamber, means for flowing water across each of said plates, means for refrigerating said plates to freeze water flowing thereacross into a slab of ice on each plate and for thereafter heating said plates, means associated with one of said plates for limiting the freezing of water on each spaced plate to a slab of ice thereon of substantially uniform thickness relative to one another, a dissector within said chamber at a side of the uppermost plate adapted to receive a slab of ice therefrom, another dissector separate from and independent of the dissector associated with said uppermost plate spaced therebelow within said chamber at a side of the lowermost plate adapted to receive a slab of ice therefrom, the lower portion of said chamber providing ice block storage means in said cabinet, vertically disposed partitioning means dividing said storage means into side by side ice block receiving and storing bins, said ice thickness limiting means being in the form of a control for stopping the flow of water across said plates, rendering said means for refrigerating said plates ineffective and for initiating heating of the plates to substantially simultaneously break a bond between the slabs of ice and both plates whereby the slab of ice on said uppermost plate slides therefrom and is severed by the dissector associated therewith into a first batch of ice blocks of predetermined size and the slab of ice on said lowermost plate slides therefrom at substantially the same time with sliding of the slab of ice from said uppermost plate and is severed by said another dissector into a second batch of ice blocks of a size different from said ice blocks of said predetermined size, baffle means interposed between said dissectors for directing said first batch of ice blocks severed by said uppermost dissector in one direction laterally thereof, another baffle means beneath the lowermost dissector for segregating said second batch of ice blocks severed thereby from said first batch thereof and for directing said second batch of ice blocks laterally therefrom in a direction opposite said one direction, and said baffle means being fixed within said cabinet whereby to concurrently deliver said first batch of ice blocks of said predetermined size into one of said storage bins and said second segregated batch of ice blocks of said different size into the other of said side by side storage bins.

2. An ice making apparatus including a cabinet provided with a chamber having vertically spaced apart inclined plates disposed therein and an ice cutting grid adjacent each plate, means for flowing water across each of said plates, means for refrigerating said plates to freeze water flowing thereacross into a slab of ice on each plate and for thereafter substantially simultaneously releasing the slabs of ice therefrom, said grids having ice cutting wires arranged in differently spaced apart relationship with respect to one another, said grids each receiving a slab of ice released from said plates and severing one slab of ice into a first batch of ice blocks of a predetermined size and another slab of ice into a second batch of ice blocks of a size different from said first batch of ice blocks and substantially concurrently discharging both batches of ice blocks toward a storage means in the lower portion of said cabinet, said storage means being provided with a stationary vertically disposed partition dividing the same into ice block receiving and storing bins, first baffle means below one of said grids for directing said first batch of ice blocks in one direction therefrom, second baffle means below said first baffle means and the other of said grids for directing the concurrently discharged second batch of ice blocks therefrom in a direction opposite said one direction to segregate said batches of ice blocks from one another, and said baffle means being fixed in said cabinet whereby to deliver said first batch of ice blocks of said predetermined size into one of said

storage bins while at the same time delivering said concurrently discharged segregated second batch of ice blocks of said different size into the other of said storage bins.

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