



(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
02.01.1997 Bulletin 1997/01

(51) Int. Cl.⁶: F25C 1/08

(43) Date of publication A2:
09.10.1996 Bulletin 1996/41

(21) Application number: 96110325.6

(22) Date of filing: 29.03.1993

(84) Designated Contracting States:
DE ES FR GB IT

(30) Priority: 31.07.1992 JP 59652/92 U
22.08.1992 JP 64400/92 U

(62) Application number of the earlier application in
accordance with Art. 76 EPC: 93105187.4

(71) Applicant: HOSHIZAKI DENKI KABUSHIKI
KAISHA
Toyoake-shi, Aichi-ken (JP)

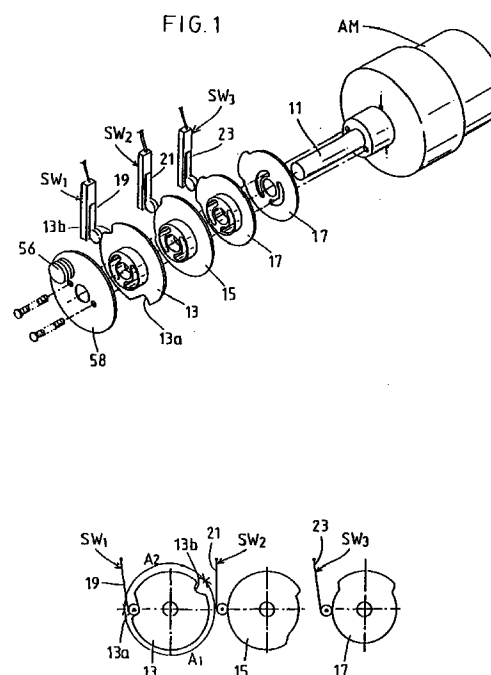
(72) Inventors:
• Sakai, Tadashi,
c/o Hoshizaki Denki K.K.
Sakae-machi, Toyoake, Aichi (JP)
• Sanuki, Masao,
c/o Hoshizaki Denki K.K.
Sakae-machi, Toyoake, Aichi (JP)

(74) Representative: Prüfer, Lutz H., Dipl.-Phys. et al
PRÜFER & PARTNER,
Patentanwälte,
Harthäuser Strasse 25d
81545 München (DE)

(54) Ice making machine

(57) Disclosed is a cam control mechanism in an ice making machine, in which a multiplicity of freezing fingers (36,117) formed on the lower surface of a freezing base plate (34,118) are dipped in the water supplied to a freezing chamber (32,129) defined in a water tray (24,116) to carry out a freezing operation and form inverted dome-shaped ice pieces (70,121) gradually around the freezing fingers (36,117); characterized in that said mechanism consists of a control cam (13,136) to be rotated by an actuator motor (AM) for tilting and resetting said water tray (24,116); and a control switch (SW₁,SW₇) disposed on the fixed side corresponding to the location of said control cam (13,136) for giving a cam action in accordance with a predetermined timing; wherein said control cam (13,136) and said control switch (SW₁,SW₇) are adapted to control at least tilting and resetting of said water tray (24,116), as well as, stopping thereof in such postures by the actuator motor (AM). The cam control mechanism of the invention can successfully attain a series of cam actions to be caused in accordance with the rotation of an actuator motor (AM) for driving the water tray (24,116): (1) tilting of the water tray (24,116) and resetting thereof to the horizontal posture; (2) supply of hot gas to an evaporator (22,131) for accelerating releasing of ice pieces in the ice releasing operation and stopping thereof; and (3) replenishment of water to be frozen after a cycle of freezing operation and stopping thereof, whereby to

realize simplification of the control system and reduction of production cost.





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 96 11 0325

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	GB-A-2 090 955 (CASTEL MAC SPA) * the whole document *	1	F25C1/08
D,A	AU-A-2 273 077 (BLAKELY) * the whole document *	1,2	
A	FR-A-2 038 067 (JULLIEN-PALETIER) * page 3, line 31 - line 40; figure 3 *	1	
A	US-A-2 718 125 (HORVAY) * the whole document *	1	
A	FR-A-2 522 123 (SIMKENS) * the whole document *	1	
P,A	US-A-5 187 948 (FROHBIETER) * the whole document *	1	
A	US-A-3 418 823 (SALIMBENI VIVA1)		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			F25C
Place of search		Date of completion of the search	Examiner
THE HAGUE		6 November 1996	Silvis, H
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.92 (P04C01)