

Title (en)  
Quiet ice making apparatus

Title (de)  
Geräuscharme Eiserzeugungsvorrichtung

Title (fr)  
Appareil de fabrication de glace silencieux

Publication  
**EP 1744113 A1 20070117 (EN)**

Application  
**EP 06019659 A 20010914**

Priority  
• EP 01973727 A 20010914  
• US 23339200 P 20000915

Abstract (en)  
An ice-making machine (20) comprises an evaporator (36), a compressor (54) and a condenser (74) connected in circuit with a supply line (184, 186, 188) and a return line (189). During a freeze cycle, refrigerant is supplied via the compressor (54) and the condenser (74) along the supply line to the evaporator (36) and returned via the return line to the compressor (54). A pressure regulator (157) is connected in circuit with the return line. The pressure regulator (157) is operable during a harvest cycle to limit flow of the refrigerant through the return line, whereby the pressure and temperature of the refrigerant in the evaporator (36) increases to thereby assist in defrosting the evaporator to harvest ice. A receiver (40) is connected in circuit with the compressor (54), the condenser (74) and the evaporator (36) and is operable during the freeze cycle to direct the refrigerant flow to the evaporator (36) via the supply line. The receiver (40) is either operable during the harvest cycle to direct the refrigerant to the evaporator (36) via a vapor line (191), or is inoperable during the harvest cycle such that the refrigerant bypasses the receiver and the condenser such that the refrigerant flows from the compressor (54) to the evaporator (36) during the harvest cycle.

IPC 8 full level  
**F25D 19/00** (2006.01); **F25B 1/00** (2006.01); **F25B 41/04** (2006.01); **F25B 47/02** (2006.01); **F25C 1/00** (2006.01); **F25C 1/04** (2006.01); **F25C 1/24** (2006.01); **F25C 5/10** (2006.01)

CPC (source: EP US)  
**F25B 41/22** (2021.01 - EP US); **F25B 47/022** (2013.01 - EP US); **F25C 1/00** (2013.01 - EP); **F25C 5/10** (2013.01 - EP); **F25B 2400/0403** (2013.01 - EP); **F25B 2400/05** (2013.01 - EP); **F25B 2400/051** (2013.01 - EP); **F25B 2400/16** (2013.01 - EP); **F25B 2400/21** (2013.01 - EP); **F25B 2500/12** (2013.01 - EP); **F25B 2500/32** (2013.01 - EP); **F25B 2600/17** (2013.01 - EP); **F25B 2700/1933** (2013.01 - EP)

Citation (search report)  
• [Y] EP 0992749 A2 20000412 - MANITOWOC FOODSERVICE GROUP IN [US]  
• [Y] US 5058395 A 19911022 - NI SHIMAO [US], et al  
• [Y] US 5363671 A 19941115 - FORSYTHE DAVID P [US], et al  
• [Y] US 4774815 A 19881004 - SCHLOSSER CHARLES E [US]  
• [A] US 3766744 A 19731023 - MORRIS W  
• [A] US 5842352 A 19981201 - GREGORY CHARLES [CA]

Cited by  
EP3660419A1; CN113056644A; WO2020109213A1

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 1744113 A1 20070117**

DOCDB simple family (application)  
**EP 06019659 A 20010914**