

# CPC COOPERATIVE PATENT CLASSIFICATION

## F MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING (NOTE omitted)

### LIGHTING; HEATING

## F25 REFRIGERATION OR COOLING; COMBINED HEATING AND REFRIGERATION SYSTEMS; HEAT PUMP SYSTEMS; MANUFACTURE OR STORAGE OF ICE; LIQUEFACTION SOLIDIFICATION OF GASES

## F25C PRODUCING, WORKING OR HANDLING ICE

### NOTE

In this subclass, the following term is used with the meaning indicated:

- "ice" means any frozen liquid and also covers frozen semiliquids or pasty substances.

<b>1/00</b>	<b>Producing ice</b> ( <a href="#">F25C 3/00</a> takes precedence)	5/08	. . . by heating bodies in contact with the ice
1/02	. Producing natural ice, i.e. without refrigeration	5/10	. . . . using hot refrigerant; using fluid heated by refrigerant
1/04	. by using stationary moulds	5/12	. . . Ice-shaving machines
1/045	. . with the open end pointing downwards	5/14	. Apparatus for shaping or finishing ice pieces, e.g. ice presses
1/06	. . open or openable at both ends	5/142	. . {extrusion of ice crystals}
1/08	. by immersing freezing chambers {, cylindrical bodies} or plates into water	5/18	. Storing ice
1/10	. by using rotating or otherwise moving moulds ( <a href="#">F25C 1/08</a> takes precedence)	5/182	. . Ice bins therefor
1/12	. by freezing water on cooled surfaces, e.g. to form slabs	5/185	. . . with freezing trays
1/125	. . {on flexible surfaces}	5/187	. . . with ice level sensing means
1/14	. . to form thin sheets which are removed by scraping or wedging, e.g. in the form of flakes	5/20	. Distributing ice
1/142	. . . from the outer walls of cooled bodies	5/22	. . {particularly adapted for household refrigerators}
1/145	. . . from the inner walls of cooled bodies	5/24	. . {for storing bins (ice bins <a href="#">F25C 5/182</a> )}
1/147	. . . . by using augers	<b>2300/00</b>	<b>Special arrangements or features for producing, working or handling ice</b>
1/16	. by partially evaporating water in a vacuum	<b>2301/00</b>	<b>Special arrangements or features for producing ice</b>
1/18	. of a particular transparency or translucency, e.g. by injecting air	2301/002	. Producing ice slurries
1/20	. . by agitation	<b>2303/00</b>	<b>Special arrangements or features for producing ice or snow for winter sports or similar recreational purposes, e.g. for sporting installations; Special arrangements or features for producing artificial snow</b>
1/22	. Construction of moulds; Filling devices for moulds	2303/042	. Snow making by using solid ice, e.g. ice crushing
1/24	. . for refrigerators, e.g. freezing trays	2303/044	. Snow making using additional features, e.g. additives, liquid gas
1/243	. . . Moulds made of plastics e.g. silicone	2303/046	. Snow making by using low pressure air ventilators, e.g. fan type snow canons
1/246	. . . Moulds with separate grid structure	2303/048	. Snow making by using means for spraying water
1/25	. . Filling devices for moulds	2303/0481	. . with the use of compressed air
<b>3/00</b>	<b>Processes or apparatus specially adapted for producing ice or snow for winter sports or similar recreational purposes, e.g. for sporting installations; Producing artificial snow</b>	<b>2305/00</b>	<b>Special arrangements or features for working or handling ice</b>
3/02	. for ice rinks	2305/022	. Harvesting ice including rotating or tilting or pivoting of a mould or tray
3/04	. for sledging or ski trails; Producing artificial snow	2305/0221	. . rotating ice mould
<b>5/00</b>	<b>Working or handling ice</b> ( <a href="#">F25C 3/00</a> takes precedence)	2305/024	. Rotating rake
5/02	. Apparatus for disintegrating, removing or harvesting ice	<b>2400/00</b>	<b>Auxiliary features or devices for producing, working or handling ice</b>
5/04	. . without the use of saws	2400/02	. Freezing surface state
5/043	. . . {Tools, e.g. ice picks, ice crushers, ice shavers}		
5/046	. . . {Ice-crusher machines}		
5/06	. . . by deforming bodies with which the ice is in contact, e.g. using inflatable members		

## F25C

- 2400/04 . Ice guide, e.g. for guiding ice blocks to storage tank
- 2400/06 . Multiple ice moulds or trays therefor
- 2400/08 . for different type of ice
- 2400/10 . Refrigerator units
- 2400/12 . Means for sanitation
- 2400/14 . Water supply

### **2500/00 Problems to be solved**

- 2500/02 . Geometry problems
- 2500/04 . Calculation of parameters
- 2500/06 . Spillage or flooding of water
- 2500/08 . Sticking or clogging of ice

### **2600/00 Control issues**

- 2600/02 . Timing
- 2600/04 . Control means

### **2700/00 Sensing or detecting of parameters; Sensors therefor**

- 2700/02 . Level of ice
- 2700/04 . Level of water
- 2700/06 . Rotation angle of the ejector ejecting ice from a stationary mould
- 2700/08 . Power to drive the auger motor of an auger type ice making machine
- 2700/10 . Rotating speed of the auger motor of an auger type ice making machine
- 2700/12 . Temperature of ice trays
- 2700/14 . Temperature of water