

F25C

PRODUCING, WORKING OR HANDLING ICE

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Frozen sweets, including ice-cream, their production	A23G 9/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Concentrating solutions by removing frozen solvents	B01D 9/04
Purification of water by freezing	C02F 1/22
Refrigeration machines, plants, or systems	F25B
Refrigerators; cold rooms; ice-boxes; cooling or freezing apparatus	F25D
Solidification of gases or gaseous mixtures	F25J
Freeze-drying	F26B

Special rules of classification

Control means for production, working, storing or distribution of ice are classified in [F25C 2600/00](#).

Sensors for production, working, storing or distribution of ice are classified in [F25C 2700/00](#).

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Ice	Any frozen liquid and also covers frozen semi-liquids or pasty substances
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F25C 1/00

Producing ice ([F25C 3/00](#) takes precedence)

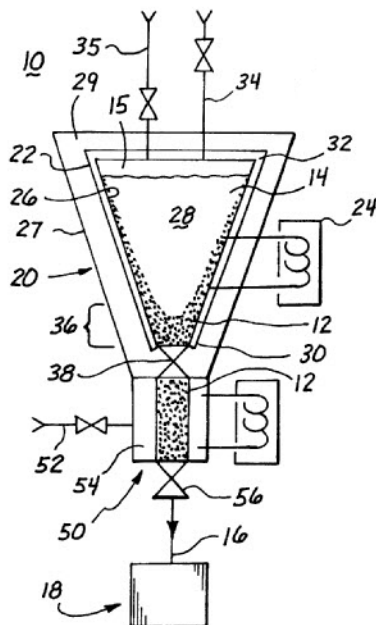
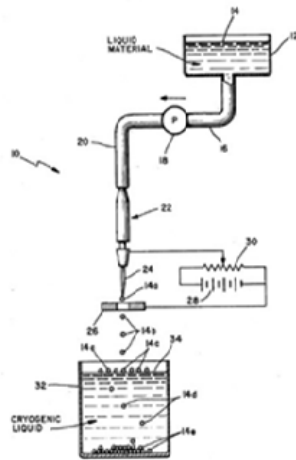
Definition statement

This place covers:

Freezers for pelletizing/granulating liquids.

Production of ice slurries.

Illustrative example of subject matter classified in this group.



References

Limiting references

This place does not cover:

Methods or apparatus specially adapted for producing ice or snow for winter sports or similar recreational purposes, e.g. for sporting installations; Producing artificial snow	F25C 3/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Production of ice slurries	F25C 2301/002
Forced air circulation with compartments at different temperature	F25D 17/065
Forced air circulation through special compartments	F25D 2317/061

Forced air circulation with air guides	F25D 2317/063
Forced air circulation characterized by the air return	F25D 2317/065
Forced air circulation characterized by the air supply	F25D 2317/066
Forced air circulation characterized by air ducts	F25D 2317/067
Forced air circulation characterized by the fans	F25D 2317/068

Special rules of classification

Multiple classification in [F25D 17/06](#) for the air flow to cool the ice mould.

Multiple classification in [F25B 21/02](#) for cooling the ice mould with a Peltier element.

Multiple classification in [F25B 39/02](#) for cooling the ice mould with an evaporator.

F25C 1/04

by using stationary moulds

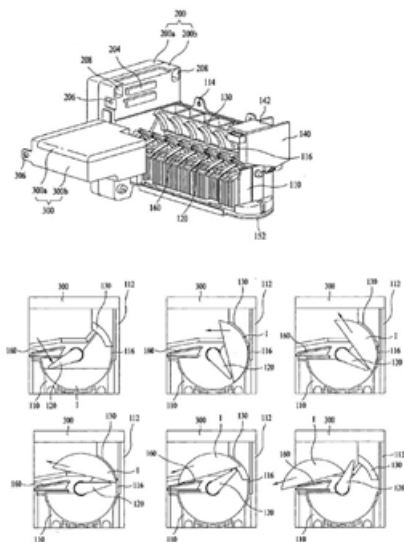
Definition statement

This place covers:

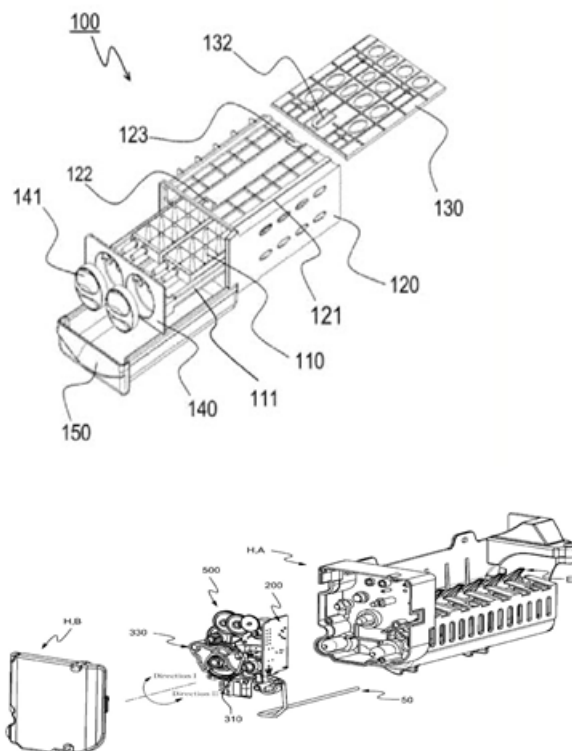
Automatic ice producing units using moulds which are not rotated or moved during freezing of the water.

Drive units to harvest ice of automatic ice makers with stationary mould during freezing.

Illustrative example of subject matter classified in this group.



Definition statement



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

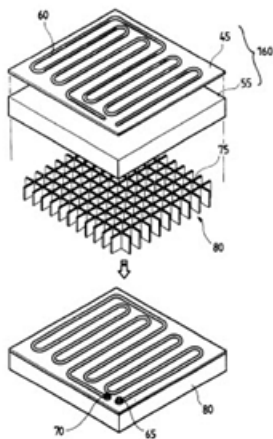
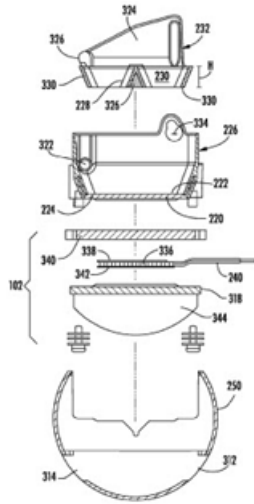
Producing ice by using rotating or otherwise moving moulds	F25C 1/10
Ice trays positioned manually inside a freezer after being filled manually with water	F25C 1/24
Harvesting ice including rotating or tilting or pivoting of a mould or tray	F25C 2305/022
Refrigerator units	F25C 2400/10
Using Peltier effects	F25B 2321/02
Fan speed control of evaporator fans	F25B 2600/112
Forced air circulation	F25D 17/065
Through special compartments	F25D 2317/061
Along the inside of doors	F25D 2317/062
With air guides	F25D 2317/063
characterized by the air return	F25D 2317/065
characterized by the air supply	F25D 2317/066
characterized by the air ducts	F25D 2317/067
characterized by the fans	F25D 2317/068

Special rules of classification

Multiple classification in [F25C 1/22](#) are necessary when constructional details of the mould itself are claimed.

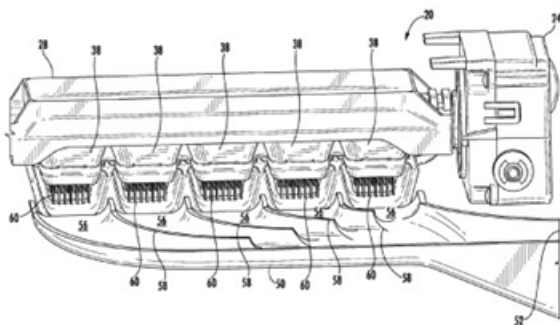
Multiple classification in [F25C 1/04](#) and [F25B](#) when the mould is cooled by:

- a Peltier element ([F25B 21/02](#)) or
- an evaporator ([F25B 39/02](#)).



Multiple classification in [F25C 1/04](#) and [F25D](#) when the mould is cooled by

- forced air circulation ([F25D 17/065](#)).



Multiple classification in [F25C 2400/10](#) when the automatic ice producing unit is placed inside a household refrigerator.

F25C 1/045

with the open end pointing downwards

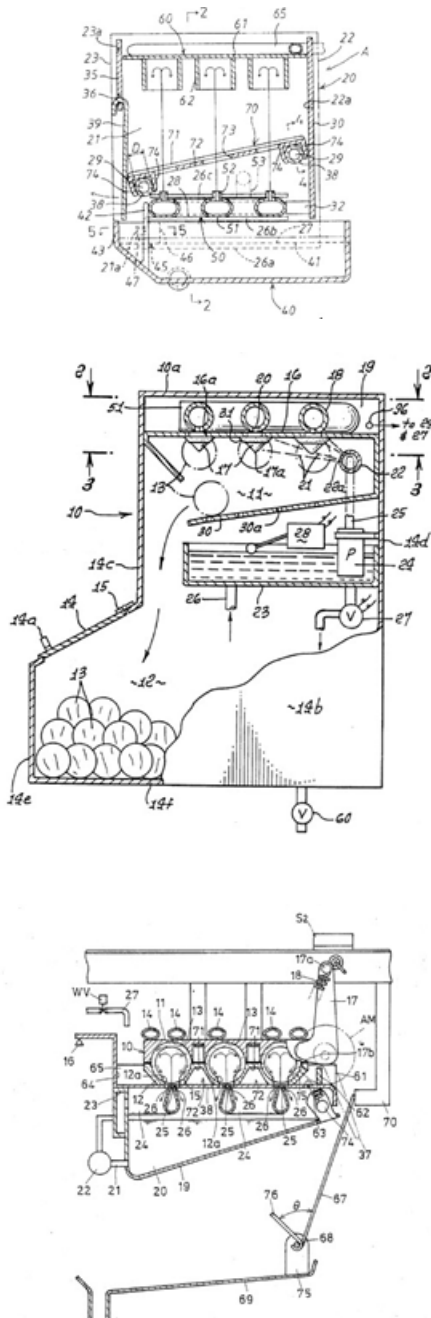
Definition statement

This place covers:

Automatic ice producing units using moulds which are not rotated or moved during freezing of the water, the mould has an open end pointing downwards.

Drive units to harvest ice for automatic ice makers with stationary mould during freezing, the mould with the open end pointing downwards.

Illustrative example of subject matter classified in this group.



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Harvesting ice including rotating or tilting or pivoting of a mould or tray	F25C 2305/022
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Special rules of classification

Multiple classification in [F25C 1/22](#) when constructional details of the mould itself are claimed.

F25C 1/06

open or openable at both ends

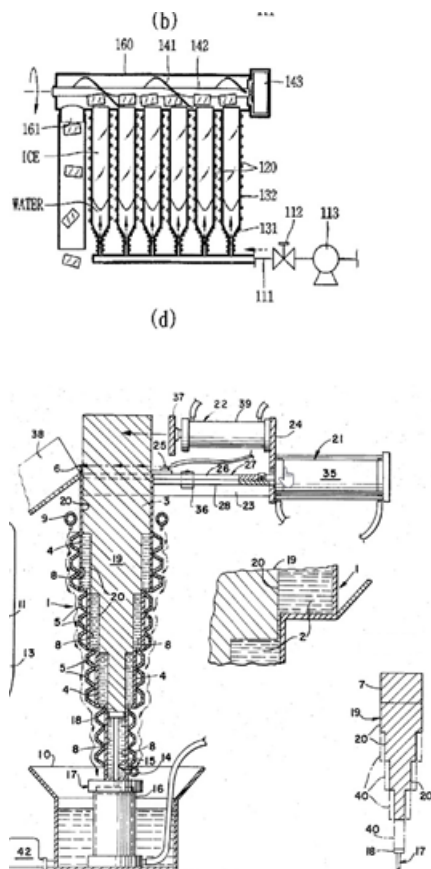
Definition statement

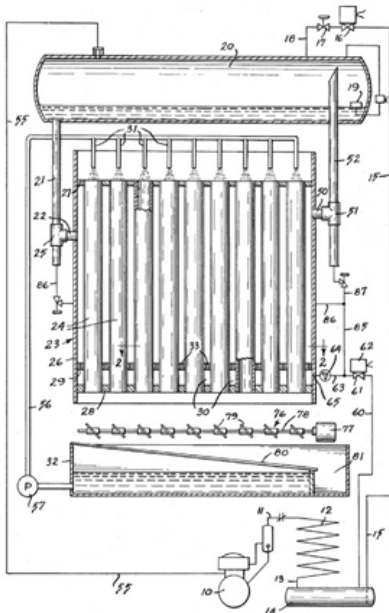
This place covers:

Automatic ice producing units using moulds which are not rotated or moved during freezing of the water, the mould is open or openable at both ends.

Production of bar-ice.

Illustrative example of subject matter classified in this group.





F25C 1/08

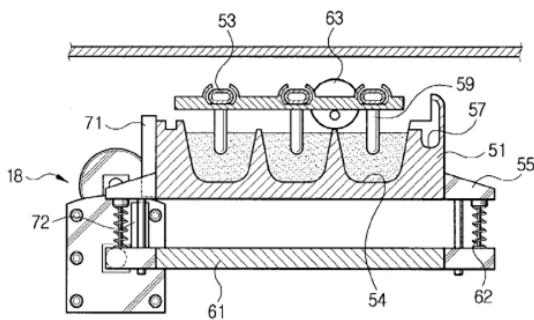
by immersing freezing chambers {, cylindrical bodies} or plates into water

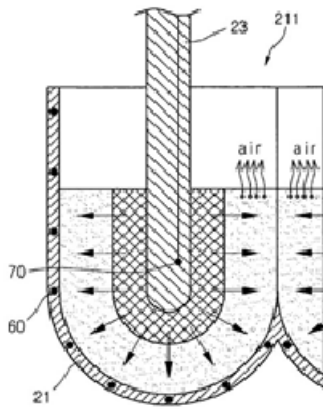
Definition statement

This place covers:

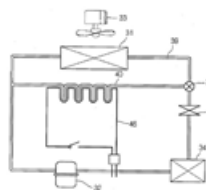
Producing ice by immersing cooling fingers, rods, conduits, pipes, chambers or plates into water.

Illustrative example of subject matter classified in this group.

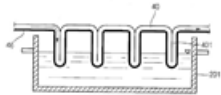




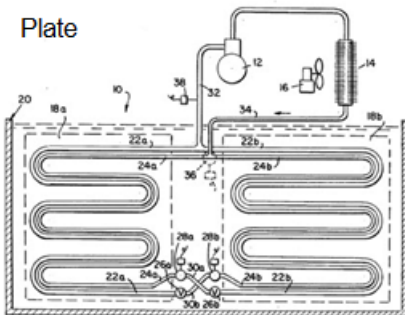
ROD



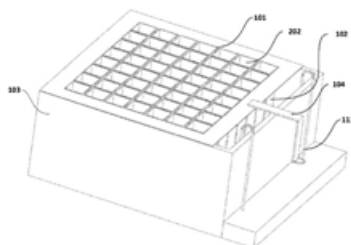
Evaporator



Plate



Chamber



Relationships with other classification places

In this subgroup multiple classification in [F25B 21/02](#) for cooling the cold finger with a Peltier device is used.

Relationships with other classification places

In this subgroup multiple classification in [F25B 39/02](#) for cooling the cold finger with refrigerant evaporating in an evaporator.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Producing ice by freezing water on cooled surfaces, e.g. to form slabs	F25C 1/12
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F25C 1/10

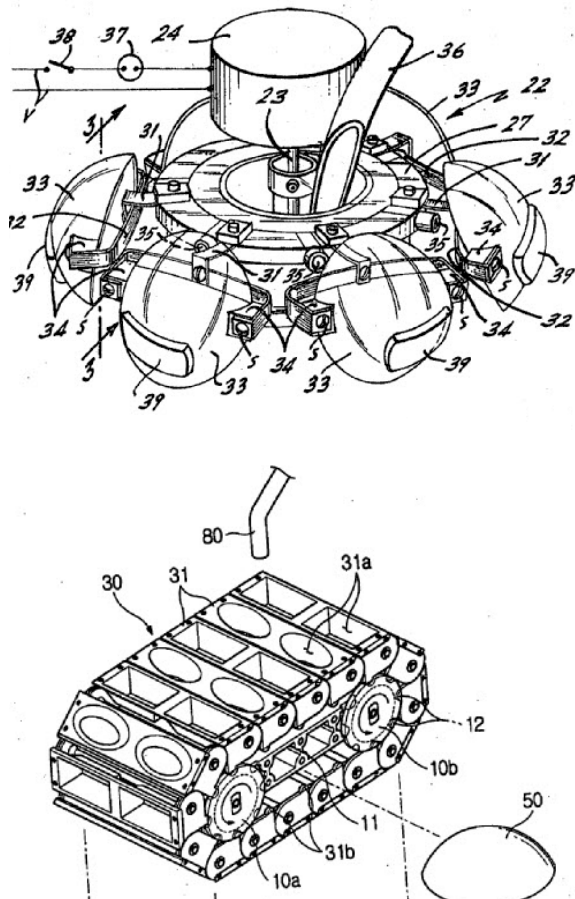
by using rotating or otherwise moving moulds ([F25C 1/08](#) takes precedence)

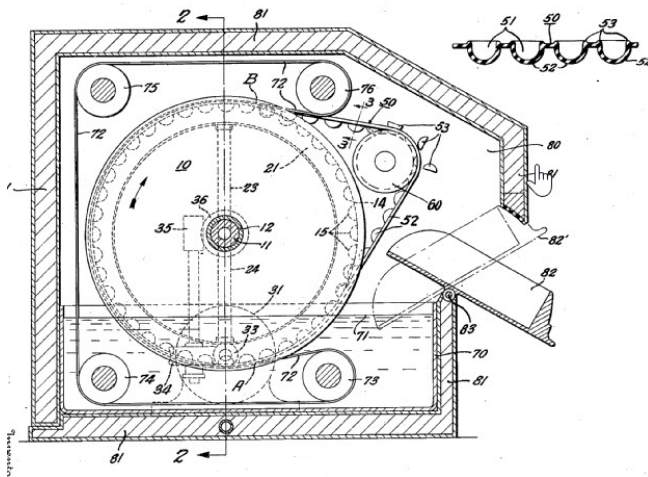
Definition statement

This place covers:

Producing ice by using rotating or otherwise moving moulds during freezing of water.

Illustrative example of subject matter classified in this group.





References

Limiting references

This place does not cover:

Producing ice by immersing freezing chambers or plates into water	F25C 1/08
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Informative references

Attention is drawn to the following places, which may be of interest for search:

By using stationary moulds	F25C 1/04
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Special rules of classification

Rotation of moulds during harvesting of ice is classified in [F25C 5/02](#) or lower and [F25C 2305/022](#).

F25C 1/12

by freezing water on cooled surfaces, e.g. to form slabs

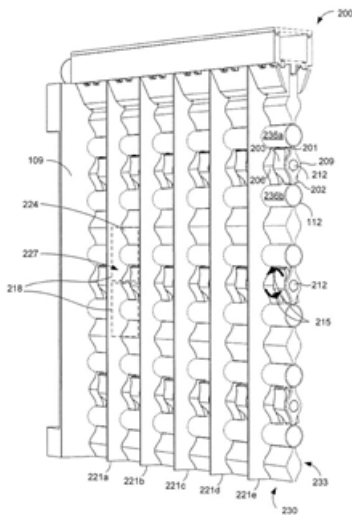
Definition statement

This place covers:

Producing ice by freezing water on cooled surfaces.

Ice slabs.

Illustrative example of subject matter classified in this group.



F25C 1/125

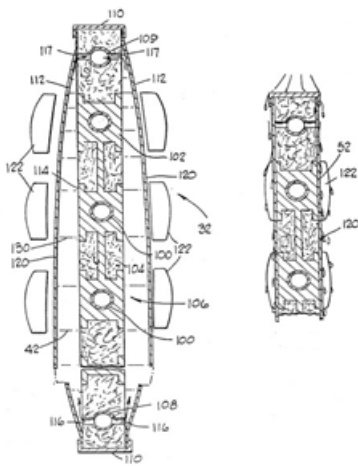
{on flexible surfaces}

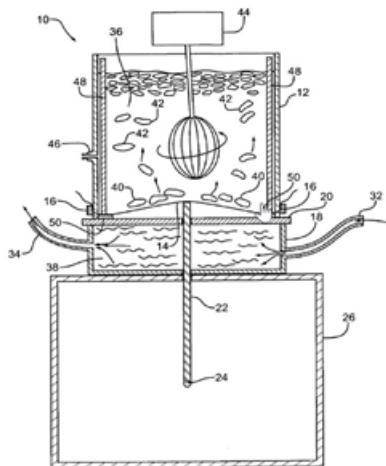
Definition statement

This place covers:

Producing ice by freezing water on flexible surfaces.

Illustrative example of subject matter classified in this group.





F25C 1/14

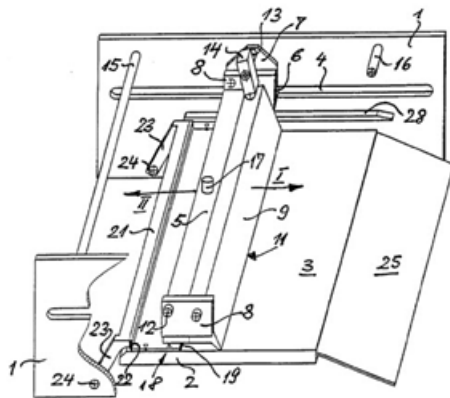
to form thin sheets which are removed by scraping or wedging, e.g. in the form of flakes

Definition statement

This place covers:

Producing ice by freezing water on cooled flat surfaces to form thin sheets which are removed by scraping or wedging, e.g. in the form of flakes.

Illustrative example of subject matter classified in this group.



F25C 1/142

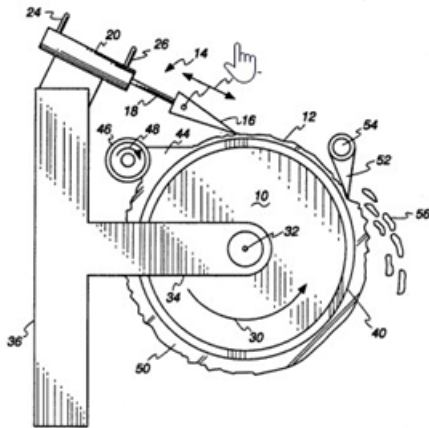
from the outer walls of cooled bodies

Definition statement

This place covers:

Producing ice by freezing water on cooled surfaces to form thin sheets which are removed by scraping or wedging from the outer walls of cooled bodies.

Illustrative example of subject matter classified in this group.



F25C 1/145

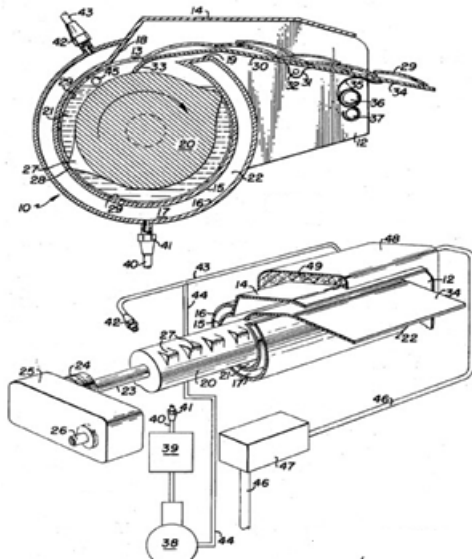
from the inner walls of cooled bodies

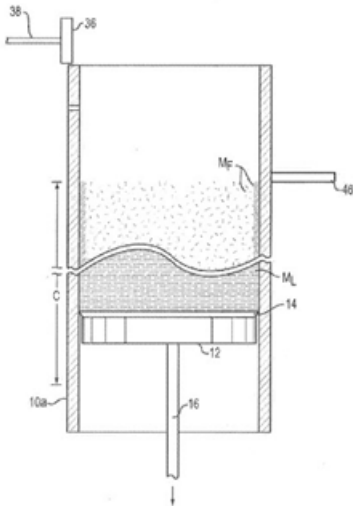
Definition statement

This place covers:

Producing ice by freezing water on cooled surfaces to form thin sheets which are removed by scraping or wedging from the inner walls of cooled bodies.

Illustrative example of subject matter classified in this group.





F25C 1/147

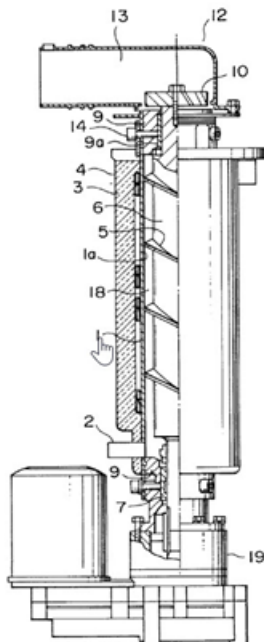
by using augers

Definition statement

This place covers:

Producing ice by freezing water to form thin sheets which are removed from the inner walls of cooled bodies by using augers.

Illustrative example of subject matter classified in this group.



F25C 1/22

Construction of moulds; Filling devices for moulds

Definition statement

This place covers:

Moulds for non-automatic ice production.

Constructional details of moulds of automatic ice production.

References

Informative references

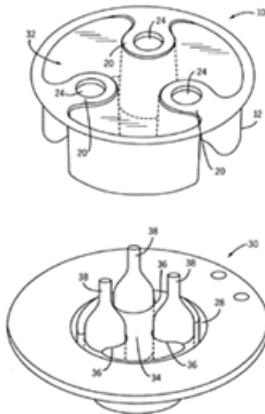
Attention is drawn to the following places, which may be of interest for search:

Metering by volume in general	G01F
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Special rules of classification

Multiple classification in [F25C 1/04](#) when an automatic ice producing unit with stationary mould is claimed.

Multiple classification in [F25D 3/08](#) when ice produced in mould is used to cool glasses, bottles, etc.



Multiple classification in [F25C 3/00](#) when mould is used to create a snow sculpture.



F25C 1/24

for refrigerators, e.g. freezing trays

Definition statement

This place covers:

Construction of moulds to be filled by tap water manually and placed inside refrigerators manually.

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Ice bins combined with freezing trays	F25C 5/185
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Producing ice by using stationary moulds	F25C 1/04
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F25C 1/243

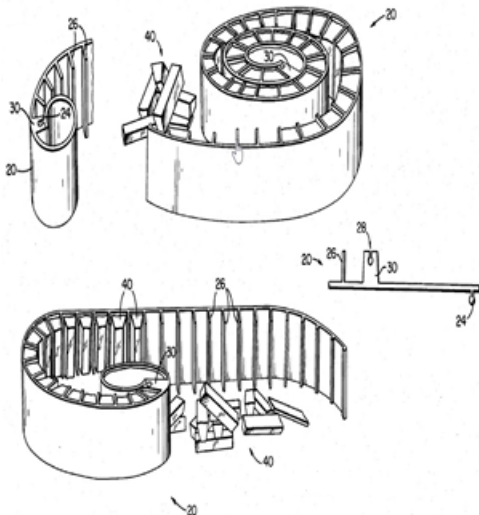
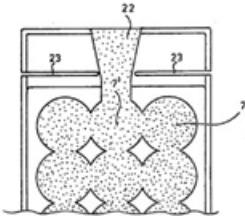
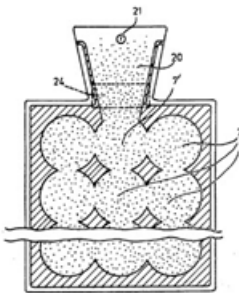
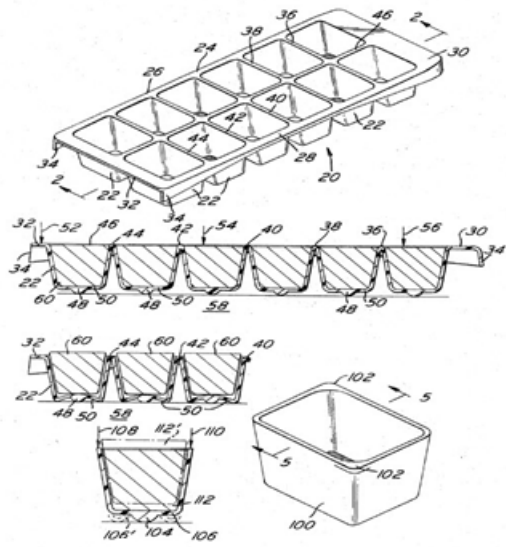
Moulds made of plastics e.g. silicone

Definition statement

This place covers:

Construction of moulds to be filled by water manually and placed inside refrigerators manually, the moulds made of plastics, e.g. silicone.

Illustrative example of subject matter classified in this group.



F25C 1/246

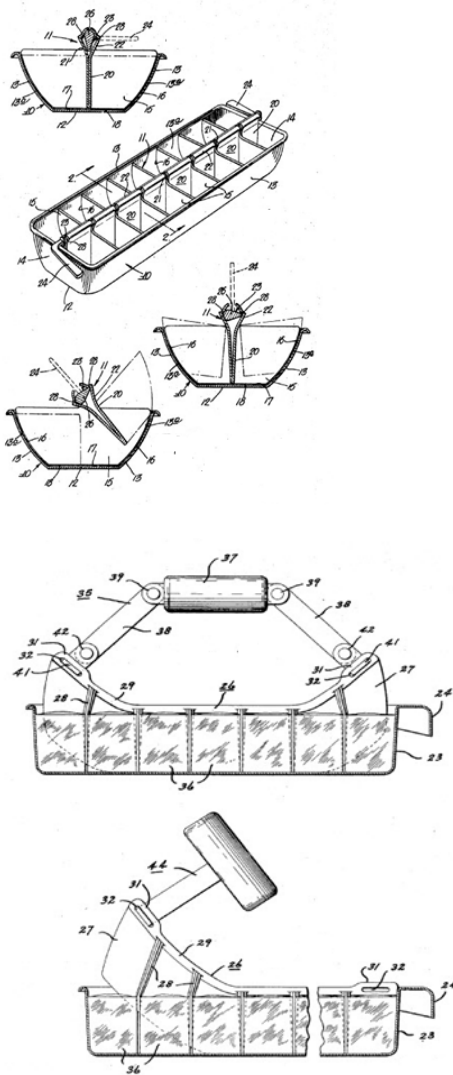
Moulds with separate grid structure

Definition statement

This place covers:

Construction of moulds to be filled manually with water and placed manually inside a refrigerator, the mould has a separate grid structure.

Illustrative example of subject matter classified in this group.



F25C 3/00

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

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Spraying apparatus for discharge of liquids or other fluent materials from two or more sources	B05B 7/00
Simulating ice or snow	C09K 3/24
Foundations or pavings for artificial surfaces for outdoor or indoor practice of snow or ice sports	E01C 13/10
Working on surfaces of snow or ice in order to make them suitable for traffic or sporting purposes	E01H 4/00

F25C 3/02

for ice rinks

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Shape of rinks	A63C 19/10
Construction of rinks	E01C

F25C 3/04

for sledging or ski trails; Producing artificial snow

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Special arrangements or features of snow making	F25C 2303/00
Shape of rinks	A63C 19/10
Spraying apparatus for discharge of liquids or other fluent materials from two or more sources	B05B 7/00
Simulating ice or snow	C09K 3/24
Construction of rinks	E01C 13/10

Special rules of classification

Different methods/devices for snow making are classified in [F25C 2303/00](#) and lower.

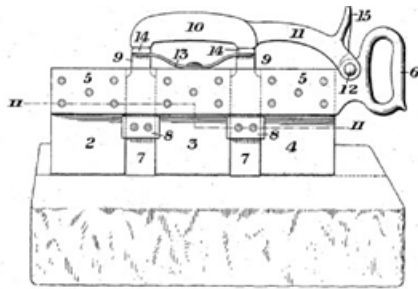
F25C 5/00**Working or handling ice ([F25C 3/00](#) takes precedence)****References****Limiting references***This place does not cover:*

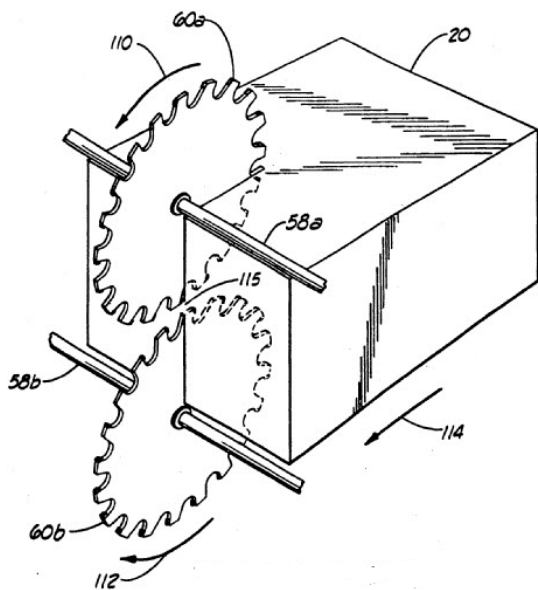
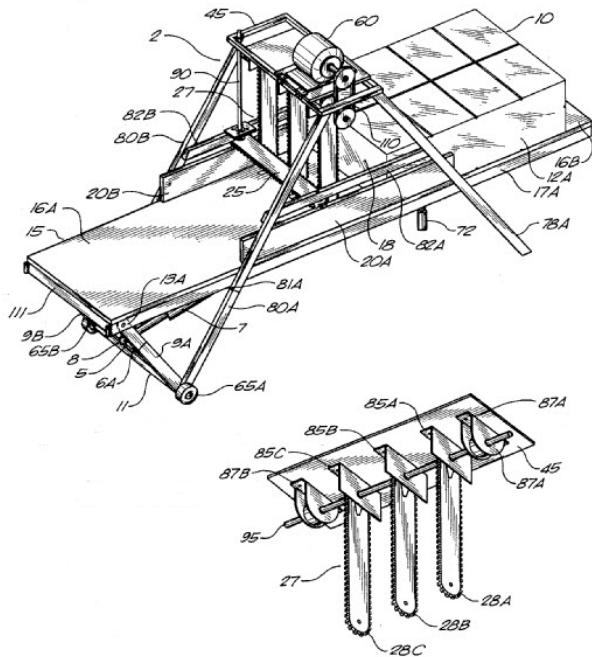
Methods or apparatus specially adapted for the production of ice or snow for winter sports or similar recreational purposes, e.g. for sporting installations; Production of artificial snow	F25C 3/00
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F25C 5/02**Apparatus for disintegrating, removing or harvesting ice****Definition statement***This place covers:*

Apparatus for disintegrating, removing or harvesting ice by using saws.

Illustrative example of subject matter classified in this group.





References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Producing ice by freezing water on cooled surfaces to form thin sheets which are removed by scraping or wedging	F25C 1/14
Scoring of ice by saws	F25C 5/14
Air guides	F25D

Special rules of classification

Combinations of ice-crusher and ice-shaving machine in one embodiment are classified in [F25C 5/02](#) and in [F25C 5/046](#) and [F25C 5/12](#).

F25C 5/04

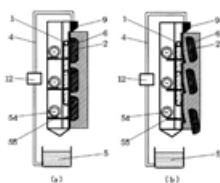
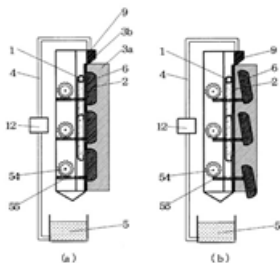
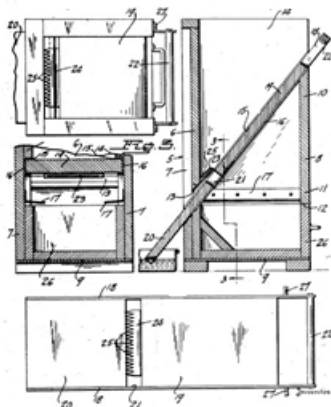
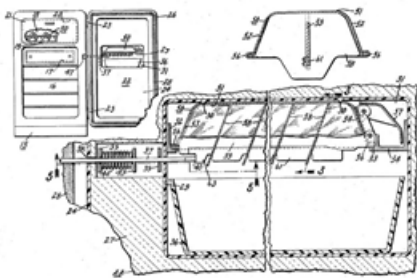
without the use of saws

Definition statement

This place covers:

Harvesting of ice by ejectors or pushing members without heating of the mould. Ice cutters.

Illustrative example of subject matter classified in this group.



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Producing ice by using stationary moulds	F25C 1/04
Producing ice by heating bodies in contact with the ice	F25C 5/08
Rotating rakes	F25C 2305/024
Ice augers for drilling holes for ice-fishing	A01K 97/01
Drilling ice or a formation covered by ice	E21B 7/008

F25C 5/043

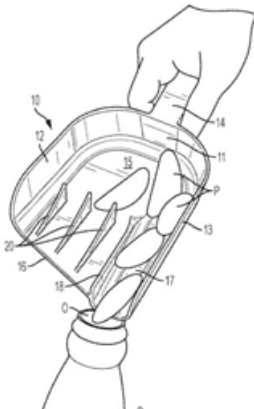
{Tools, e.g. ice picks, ice crushers, ice shavers}

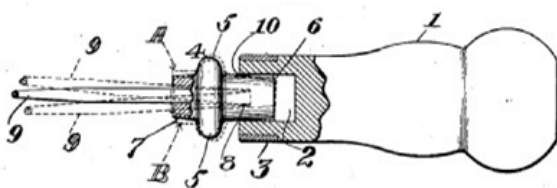
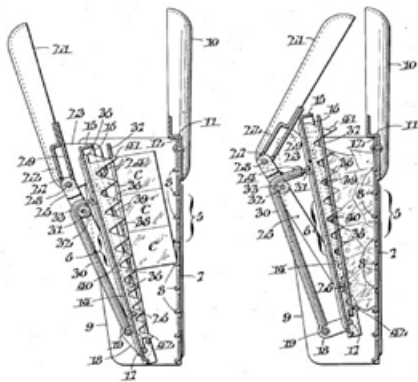
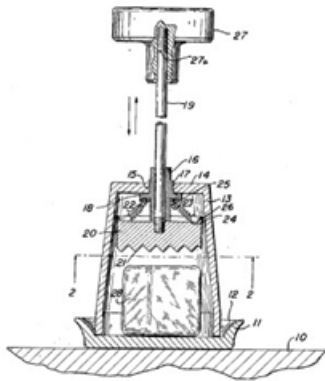
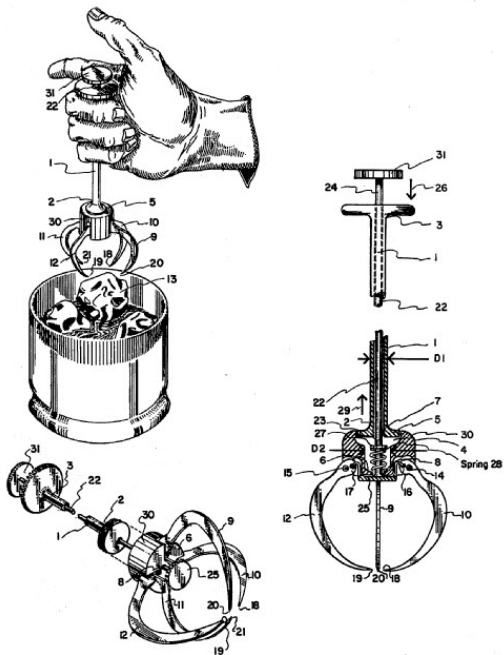
Definition statement

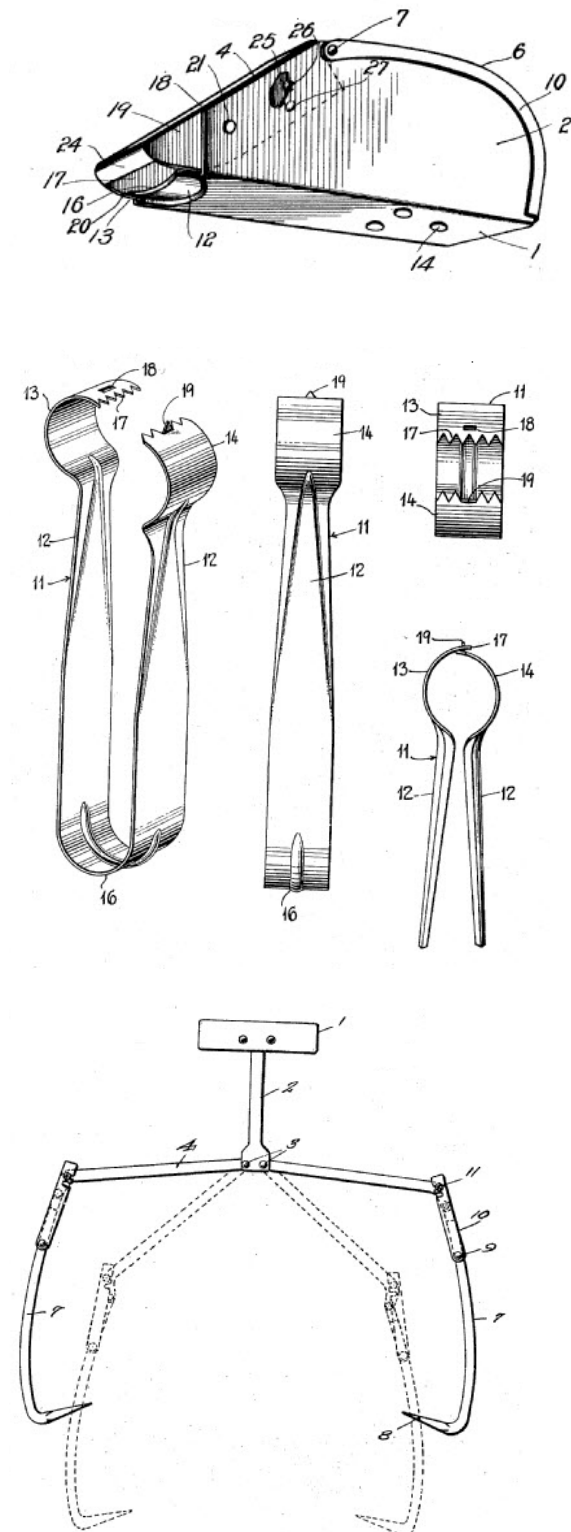
This place covers:

Hand tools for disintegrating, removing or harvesting ice cubes and blocks without the use of saws, by using other hand tools, e.g. ice picks, ice crushers, ice shavers.

Illustrative example of subject matter classified in this group.







References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Ice-crusher machines	F25C 5/046
Ice-shaving machines	F25C 5/12

Accessories for ice-fishing (ice drilling)	A01K 97/01
Brushes with a scraper	A46B 15/0081
Other food tongs	A47G 21/10
Guards or sheaths for hand cutting tools	B26B 29/00
Life-saving equipment adapted to use on ice	B63C 9/32
Working on surfaces of snow or ice in order to make them suitable for traffic or sporting purposes	E01H 4/00
Snow removing devices	E04D 13/106
Drilling ice or a formation covered by ice	E21B 7/008

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Tools	Hand tools
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F25C 5/046

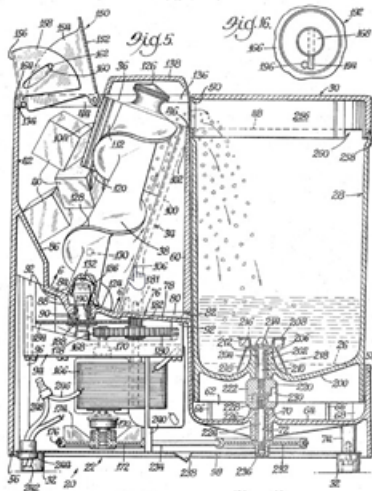
{Ice-crusher machines}

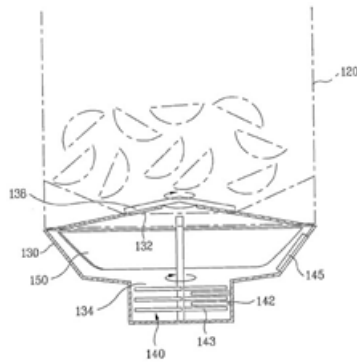
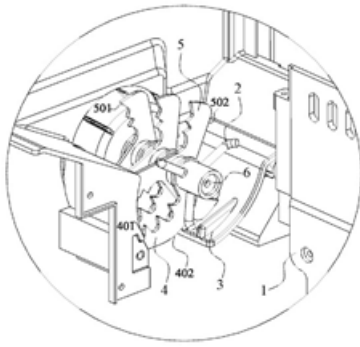
Definition statement

This place covers:

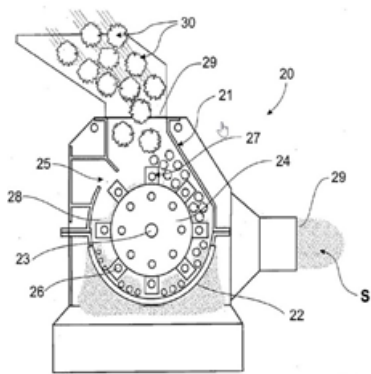
Automatic ice-crushers and grinders.

Illustrative example of subject matter classified in this group.





Grinder 145, crusher 140



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Ice crusher as hand tool for crushing ice cubes	F25C 5/043
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F25C 5/06

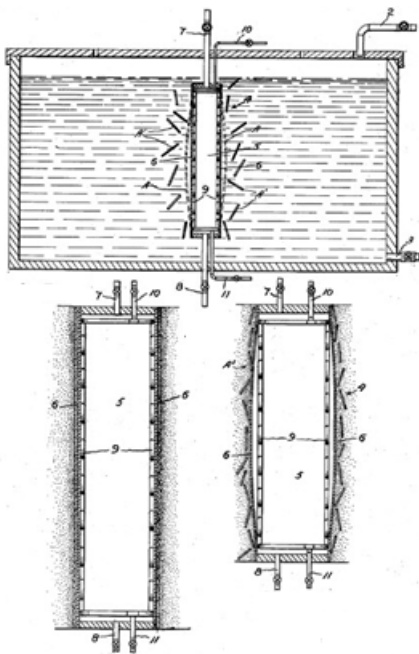
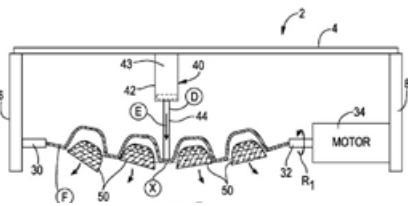
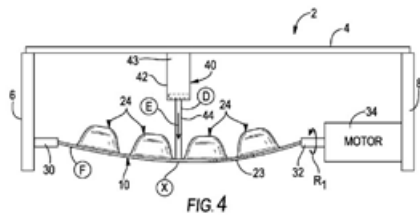
by deforming bodies with which the ice is in contact, e.g. using inflatable members

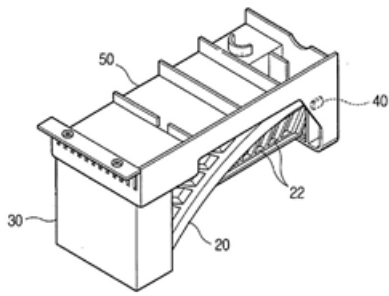
Definition statement

This place covers:

Apparatus for disintegrating, removing or harvesting ice by deforming bodies with which the ice is in contact, by deforming the mould, e.g. by twisting the mould or using inflatable members.

Illustrative example of subject matter classified in this group.





F25C 5/12

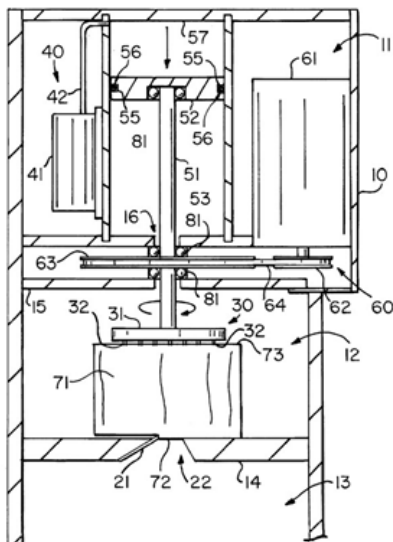
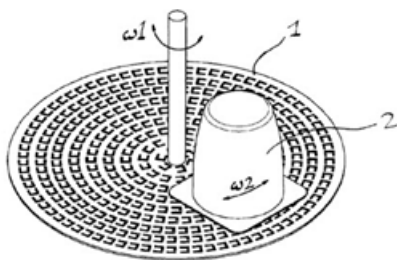
Ice-shaving machines

Definition statement

This place covers:

Automatic ice-shaving machines producing flake ice and chip ice.

Illustrative example of subject matter classified in this group.



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Production of ice by using augers	F25C 1/147
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Ice shaver as a hand tool to shave ice	F25C 5/043
Production of slush ice	A23G 9/045

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

- Flake ice
- Chip ice
- Rasp

F25C 5/14

Apparatus for shaping or finishing ice pieces, e.g. ice presses

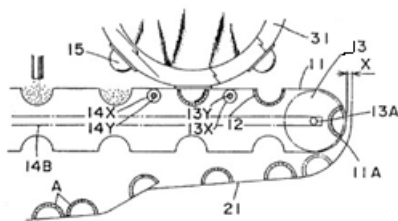
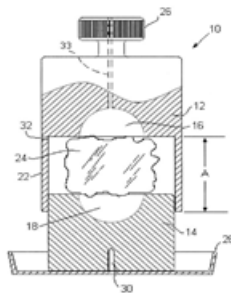
Definition statement

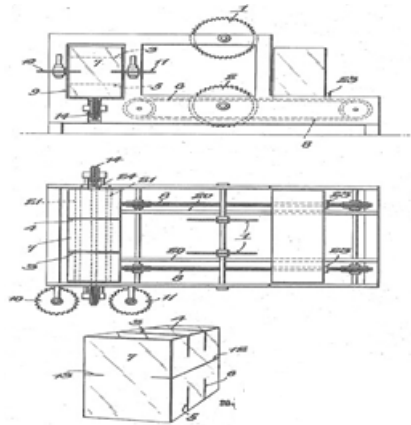
This place covers:

Moulding ice.

Scoring ice.

Illustrative example of subject matter classified in this group.





F25C 5/18

Storing ice

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cooling bags for medical or therapeutic treatment of the human body, e.g. ice-bags	A61F 7/10
Containers, packaging elements or packages specially adapted for ice-cream	B65D 85/78
Devices using ice, e.g. ice-boxes	F25D 3/02

F25C 5/185

with freezing trays

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Construction of moulds for refrigerators, e.g. freezing trays	F25C 1/24
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F25C 5/187

with ice level sensing means

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Indicating or measuring liquid level, or level of fluent solid material	G01F 23/00
Level control, e.g. controlling quantity of material stored in vessel	G05D 9/00

F25C 5/22

{particularly adapted for household refrigerators}

Special rules of classification

When emphasis is put on water dispenser classify in [F25D 23/126](#) and [F25C 2400/10](#).

F25C 5/24

{for storing bins (ice bins [F25C 5/182](#))}

References**Limiting references**

This place does not cover:

ice bins	F25C 5/182
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