

PATENT LICENSING PROPOSAL

ICE MACHINE AND ASSEMBLY THEREOF

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TECHNICAL FIELD OF INVENTION:

The present invention relates to an ice-machine rotatable assembly and housing, an ice-machine rotatable assembly, an ice-machine, and associated maintenance and construction methods.

PATENT APPLICATION STATUS:

Granted in India (Patent No 319693)

Patent Pending in US and China

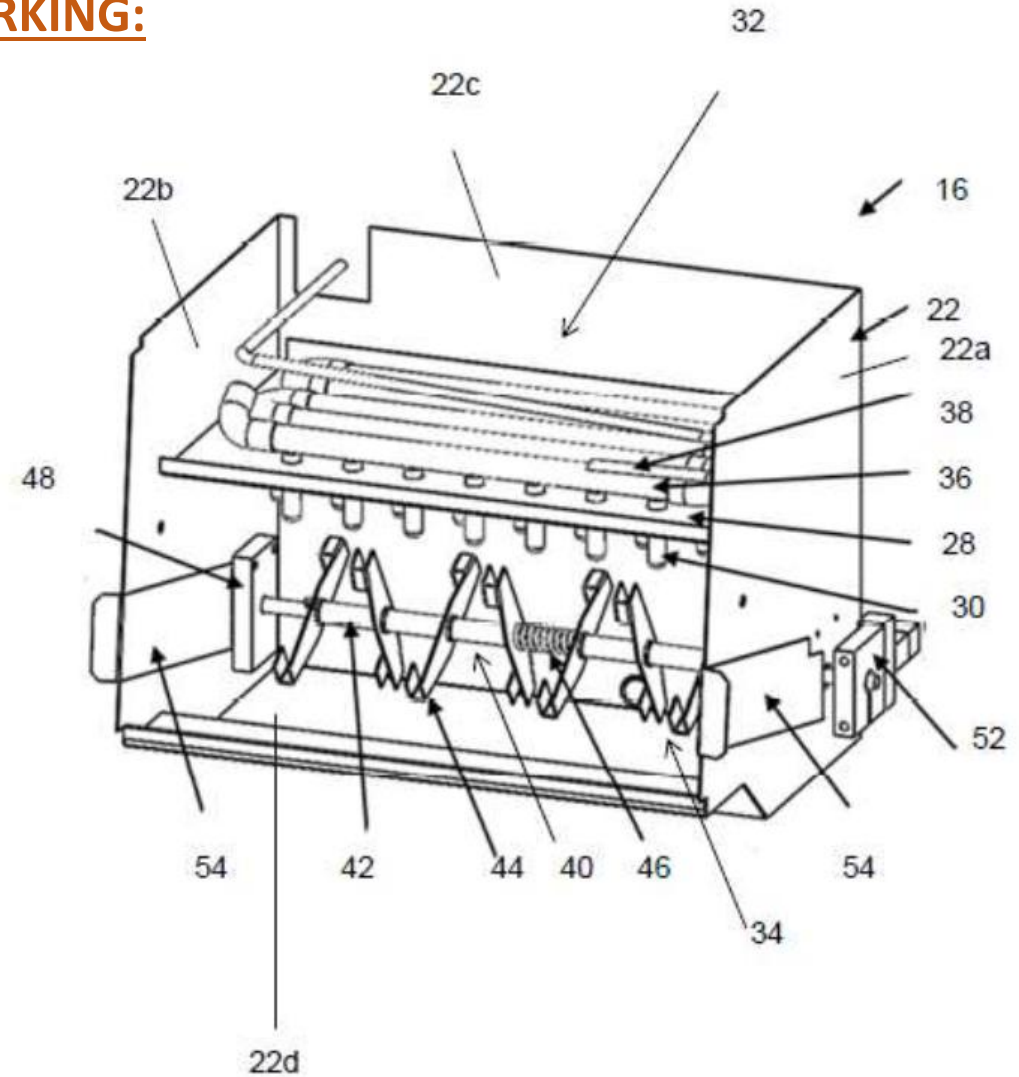
Application Number: (1) US - 14463035;

(2) CN - 201880003662.0

INTRODUCTION:

The present invention is an ice-machine rotatable assembly and housing which could be used to produce ice for various uses. One of the advantages of this invention is that the splasher assembly can be easily removed from splasher-type ice-machines

WORKING:

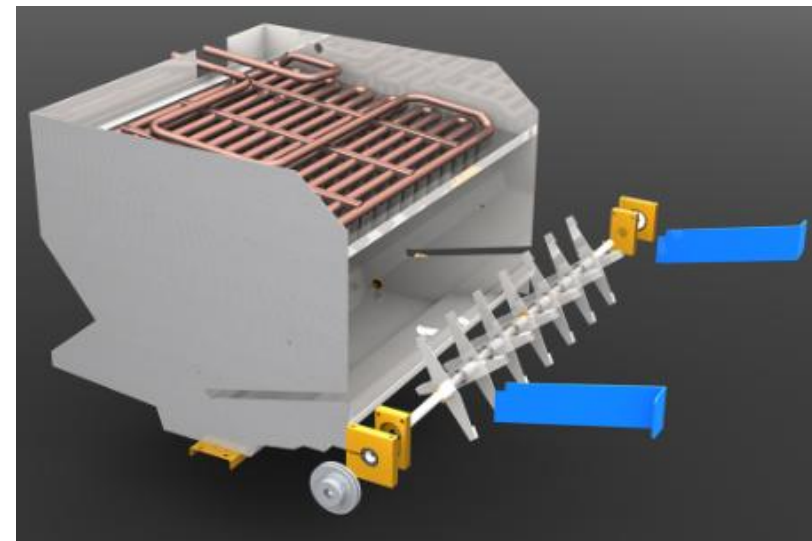


BACKGROUND OF THE INVENTION:

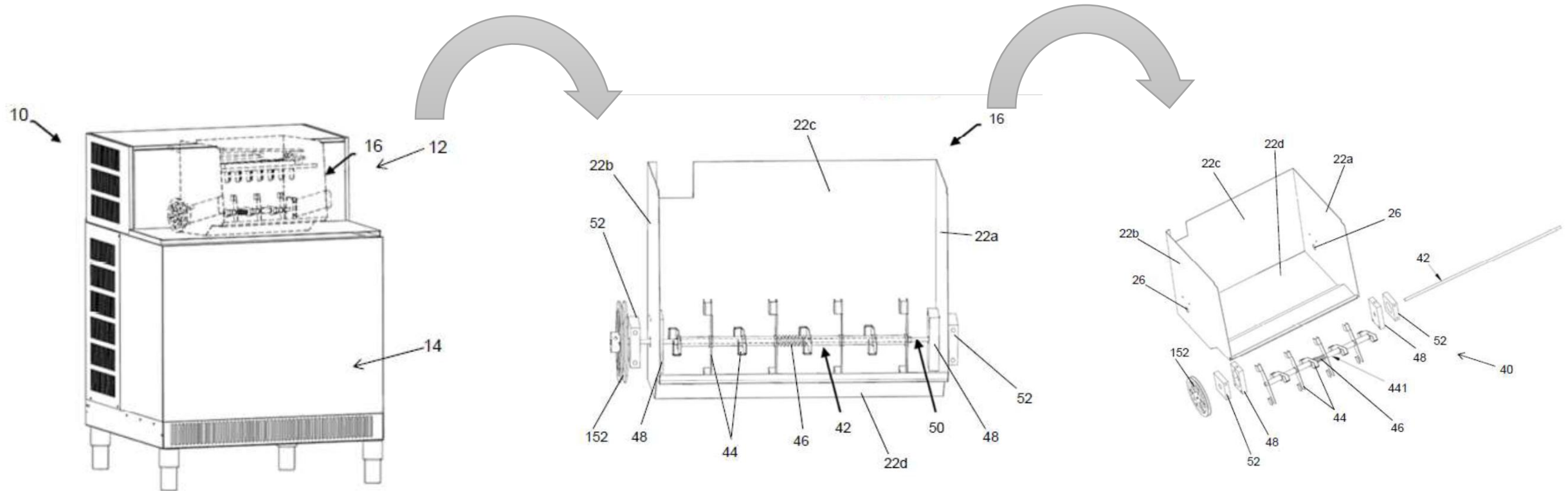
- A typical way commercial high output ice making machines (“ice machines”) work is by use of rotating arm(s) to move water on to a refrigerated surface to form ice.
- The arm or arms are configured to splash water against a cooled evaporator and ice former
- A disadvantage of such splasher-type ice-machines and some other machines with rotatable members is that it is often difficult to remove the rotatable member assembly for cleaning, repair and/or replacement.
- This invention essentially works by using the rotating arms to move a liquid toward an ice former, where the rotating arms can be easily removed

ABOUT THE INVENTION:

The rotating arms can be easily pulled out for easy removal of the complete Splasher Assembly for cleaning, maintenance or replacement.



EXEMPLARY ILLUSTRATION SHOWING FEATURE OF THE INVENTION



An isometric view of the front of an ice-machine

Front view of an evaporator assembly

An exploded isometric view of an evaporator assembly

APPLICATIONS

INDUSTRIAL AND COMMERCIAL

High output machines

- Hotels and Restaurants
- Convenience Stores and Supermarkets
- Food preservation
- For certain drugs and pharmaceuticals
- Laboratories and Research Institutions

PERSONAL AND HOME

Low output machines

- For Personal/ Mini Bars
- At Office
- At small parties/ gatherings
- Small Pantry/ Canteen
- Camping/ Holidays



ICE MAKING MACHINE MARKET

As per a report published at FCSI in July 2018*

- North America remains, and is expected to remain till 2021 the leading market for ice machines
- Ice cube market will grow even bigger as developing economies in the world, such as India, Brazil, and several other Latin American countries,
- Another market that is expected to grow shortly is the Asian Pacific area
- This expansion will be primarily driven by the growth of juice bars, hotels, restaurants, and other big corporate fast food chains.
- On the whole, financial analysts estimate that by 2023, the **market value will exceed 5 billion dollars.**
- Due to this rapid growth, experts predict that the industry will see something of a renaissance that will incentivize companies to innovate and come up with new, groundbreaking technologies

Laws and regulations for maintaining standards of quality and hygiene of ice is becoming stringent

Technology has to follow suit to meet those standards, and the current invention takes a step in that direction

* <https://www.fcsi.org/foodservice-consultant/worldwide/ice-maker-machines-industry-trends-forecasts/>

ICE MAKING MACHINES AND USEFULNESS OF PRESENT INVENTION

- An Ice Making Machine typically works on the same principle as a refrigerator (refrigeration cycle) and includes standardized components such as compressor, condenser, evaporator, throttle valves
 - Compressor compresses low-pressure refrigerant vapour to high-pressure vapour and fed to condenser. Condenser converts high-pressure vapour into high-pressure liquid which drains out through the throttle valve to become low-pressure liquid. At this point, the liquid is conducted to the evaporator, where heat exchanging occurs, and ice is created.
 - Evaporator is an important component, where the actual ice formation happens. Typically, water is drawn and continuously flown or poured over the Evaporator gradually freezing the water and building up ice cubes
 - The ice cube making machines rely on water becoming ice at freezing point of ice (0 degree Celsius or 32 degrees Fahrenheit)
- For this freezing action, it is therefore of utmost importance, that the water and the whole ice making system remains pure, free of impurities
- The present invention scores a major point over other ice making machines, by having an easy Slide Out Design allows for easy removal of the rotating arms of the Splasher Assembly for easy cleaning, maintenance and replacement

ADDITIONAL INFORMATION ABOUT THE PRODUCTS/ BUSINESS

- Full and proper financial disclosure about the firm and it's business would be provided to interested parties (upon signing of NDA/ MoU)
- ICE-BOY currently has around 23 product lines catering to various requirements (see <https://www.iceboyindia.com/products/>)
- All machines manufactured by the firm are CE certified
- Firm manufactures world's only fully stainless steel ice producing system giving the products a long lasting Quality and Durability
- Through this well established and viable business, manufacturing plant and transfer of technology and know-how, a potential buyer can look to cater to the entire Asian and neighboring market (including ANZ and Africa)

EXPECTATIONS:

- Patentee seeks alliance with Potential Licensees to assign Licensing Rights.
- Patentee is also interested in Sale of the Patent.
- Sale/ License for India, US and China markets
- Patentee/ Entity is also open to sale of full business, including company and other assets

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