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Ochi

(54) **FACILITY COMPRISING FOOD AND DRINK INFRASTRUCTURE, AND METHOD OF ATTRACTING CUSTOMERS TO FACILITY**

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(57) **ABSTRACT**

To provide either a facility comprising a plurality of stores that offer food and drink, and that treats customer seating for the plurality of stores as a shared space, or a method of attracting customers to said facility. This facility comprises: a traveling wheeled vehicle, which is capable of carrying customers on a tour of the shared space; and rotating tables. The rotating tables are configured such that tables are positioned upon rotating devices. The rotating devices comprise upper rotating bodies, further comprising central gears which are positioned in the centers of bases. The rotating devices further comprise: drive motors that are capable of rotationally driving the central gears; and casters that support the upper rotating bodies. The traveling wheeled vehicle and the rotating tables are positioned in the shared space.

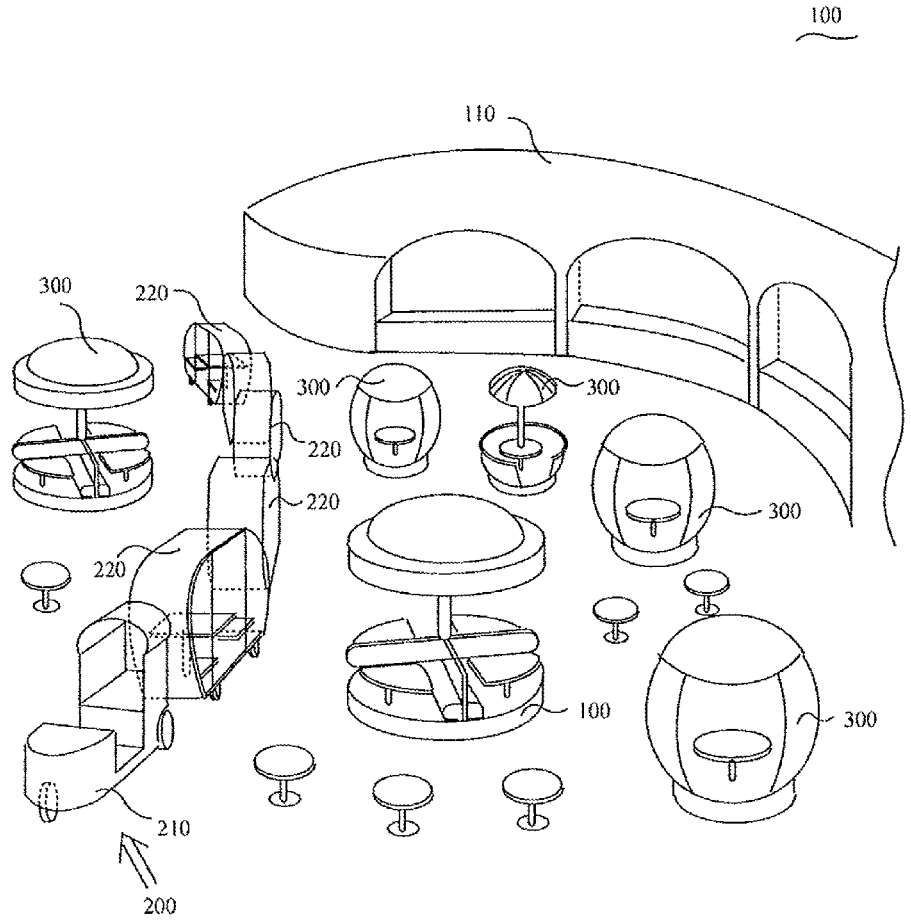


FIG. 1

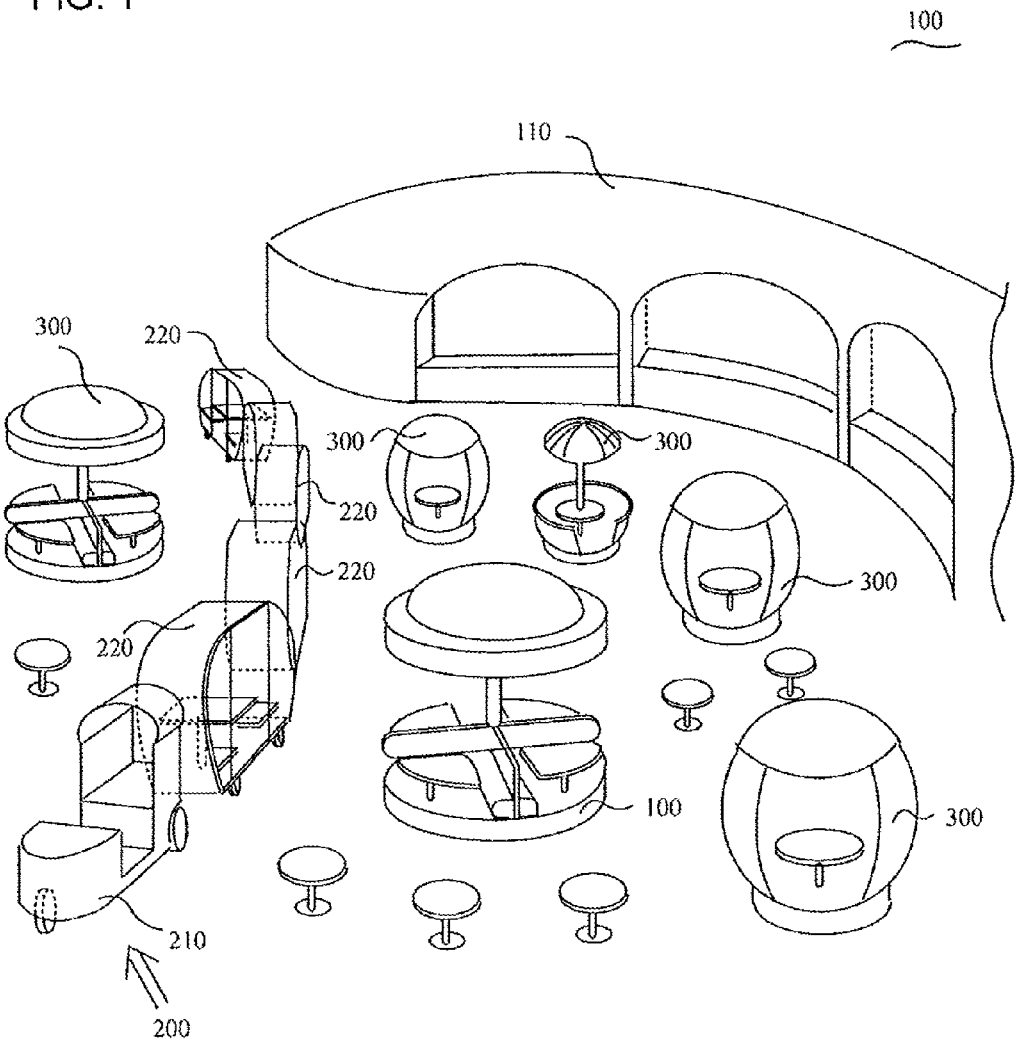
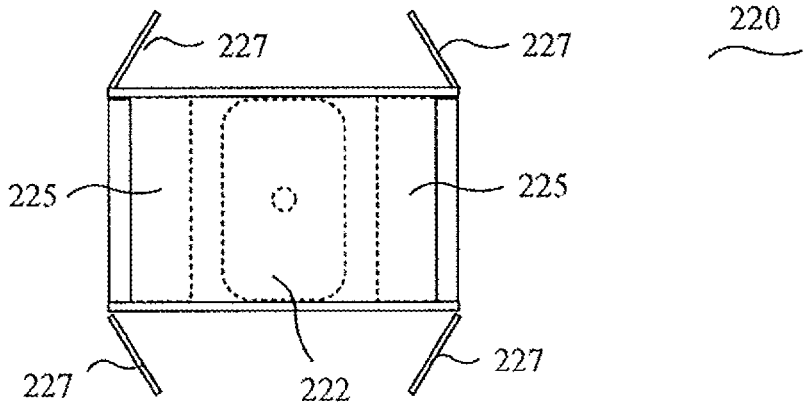


FIG. 2

(A)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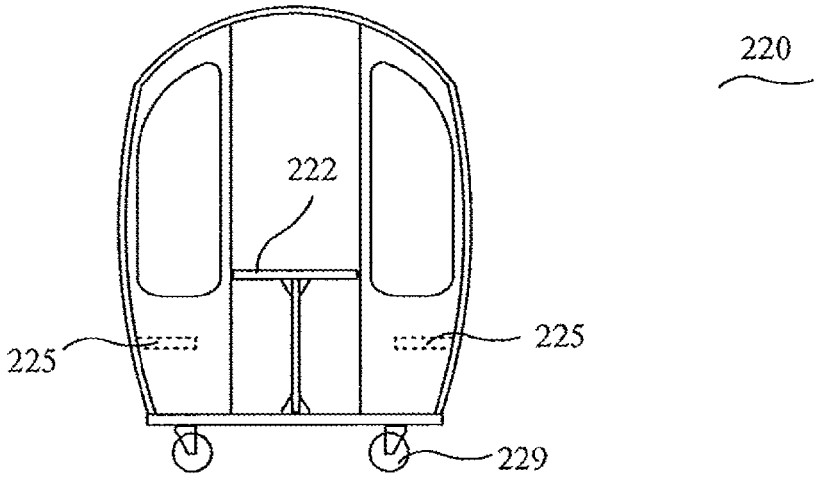
(B)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(C)

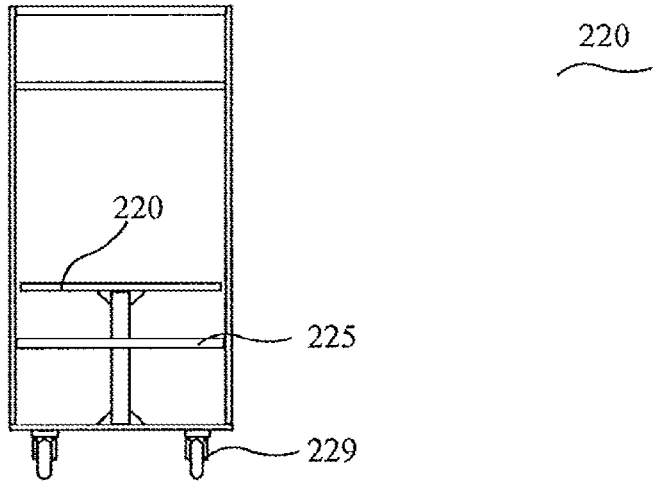
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FIG. 3

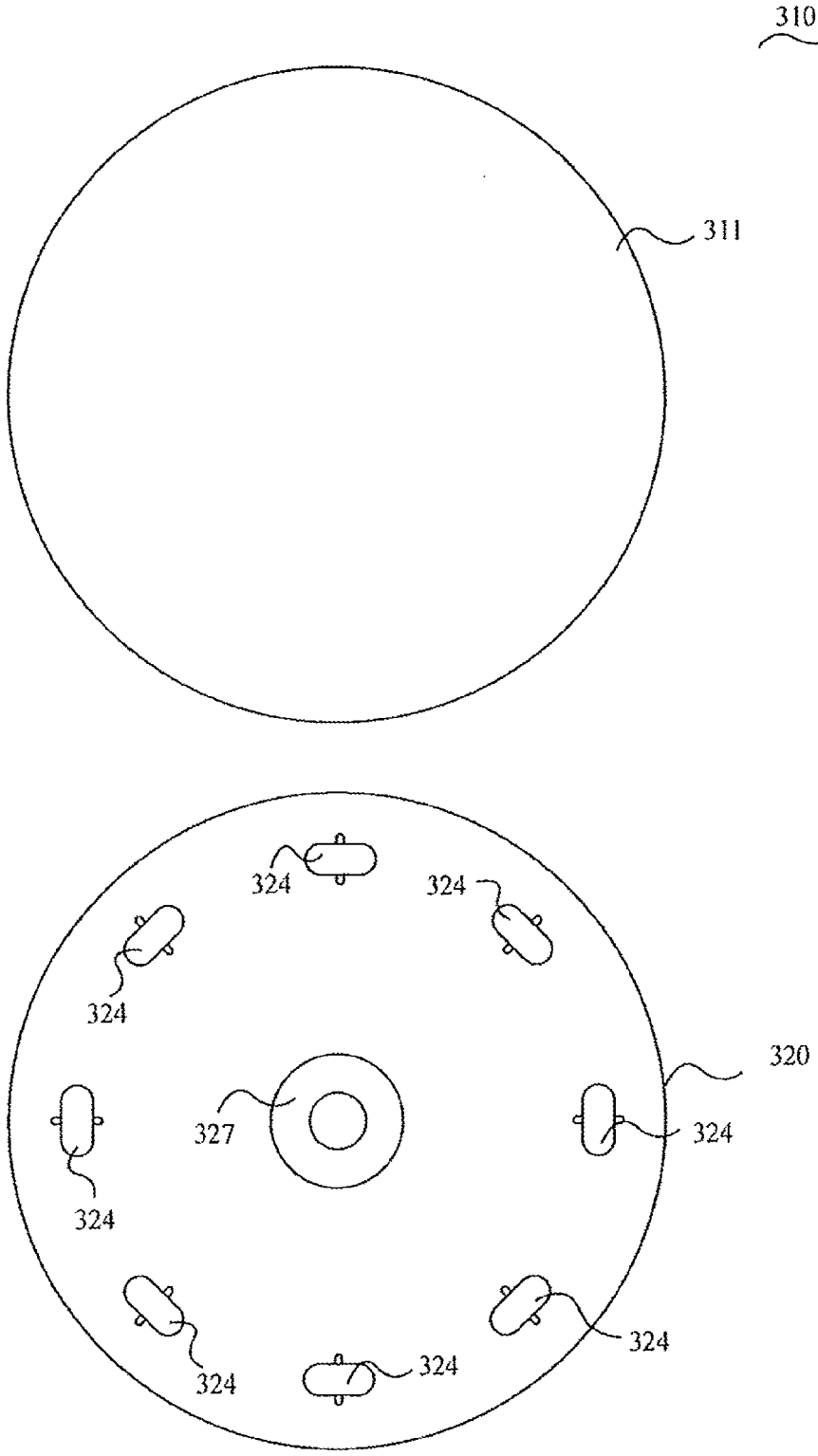

FIG. 4

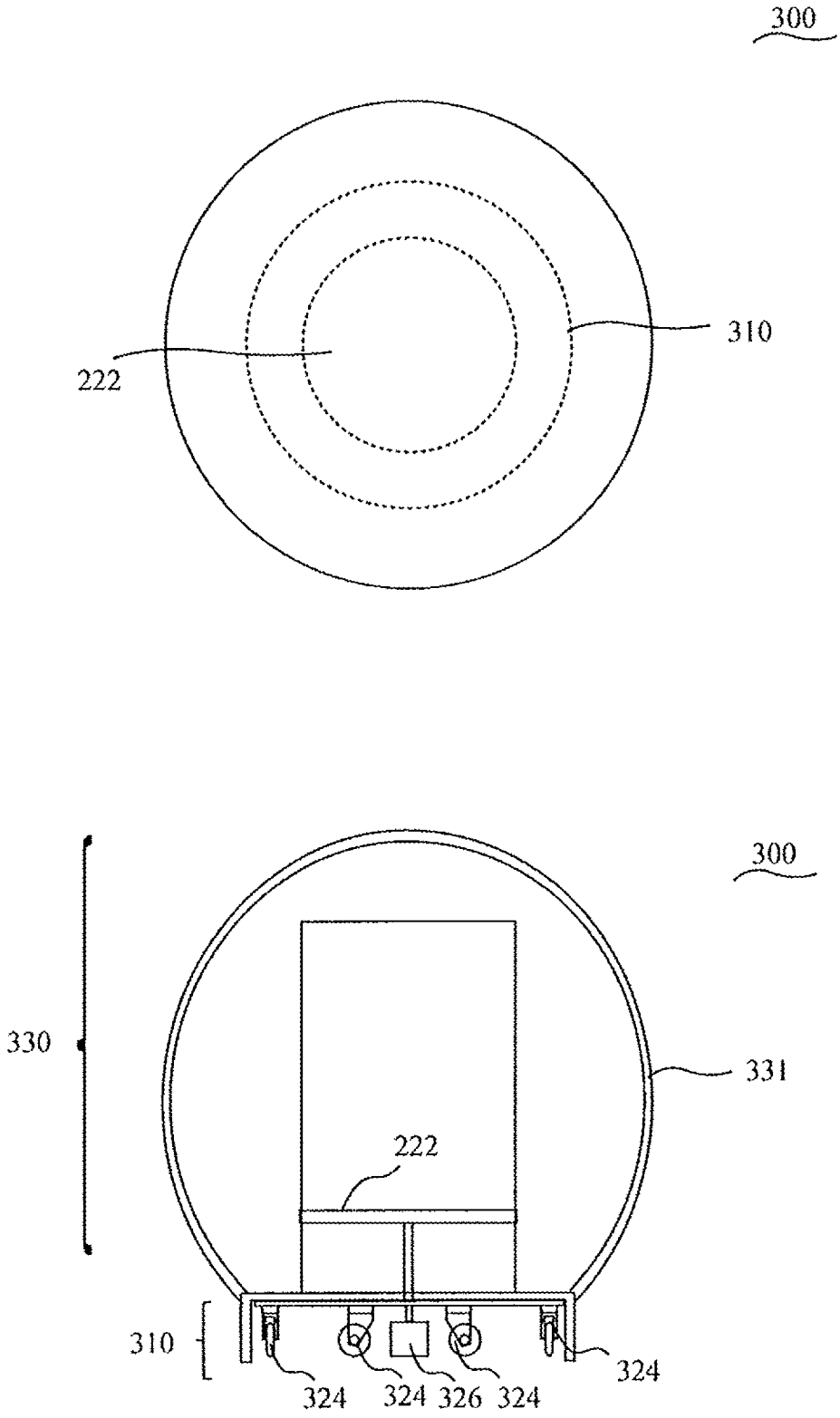

FIG. 5

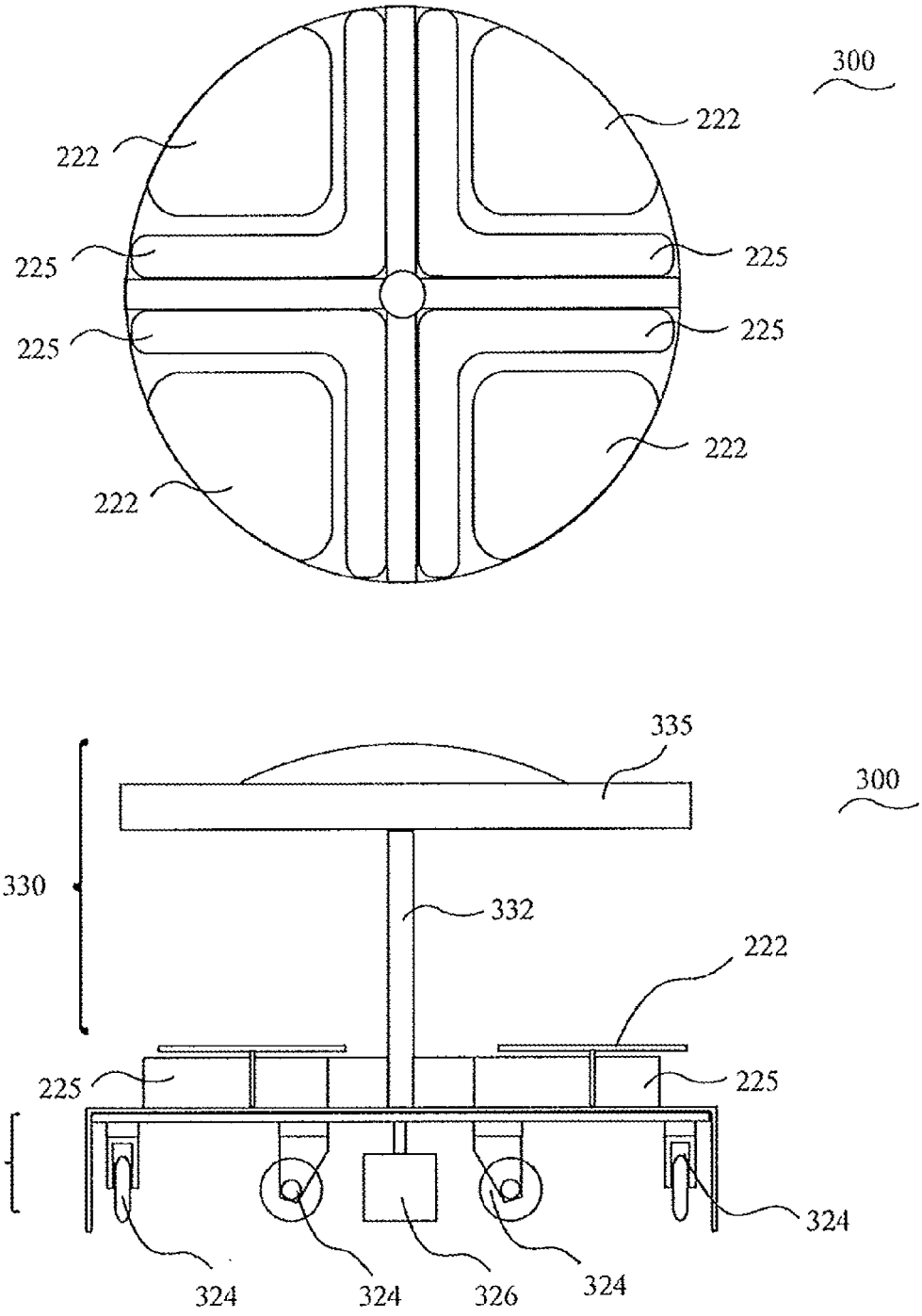
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FIG. 6

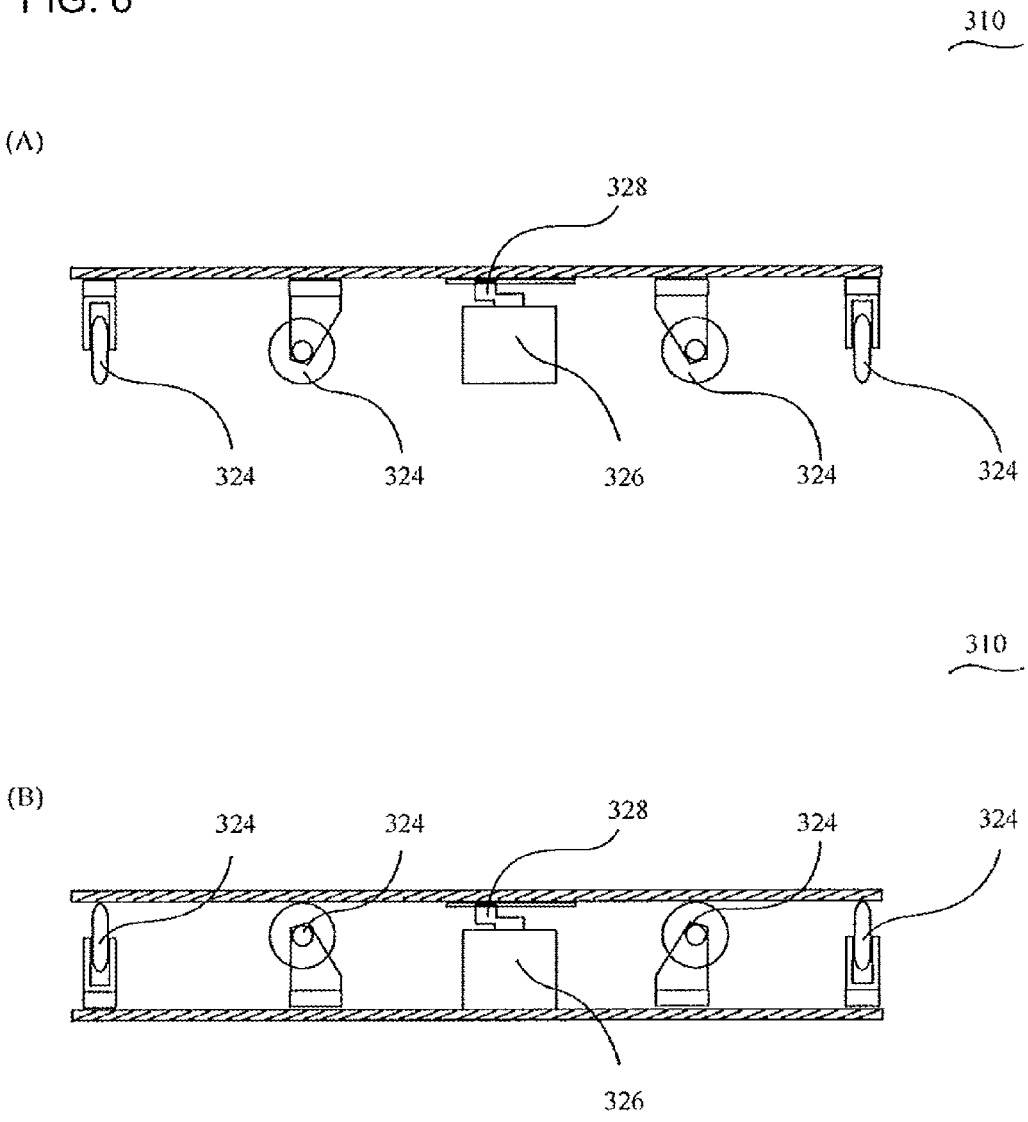
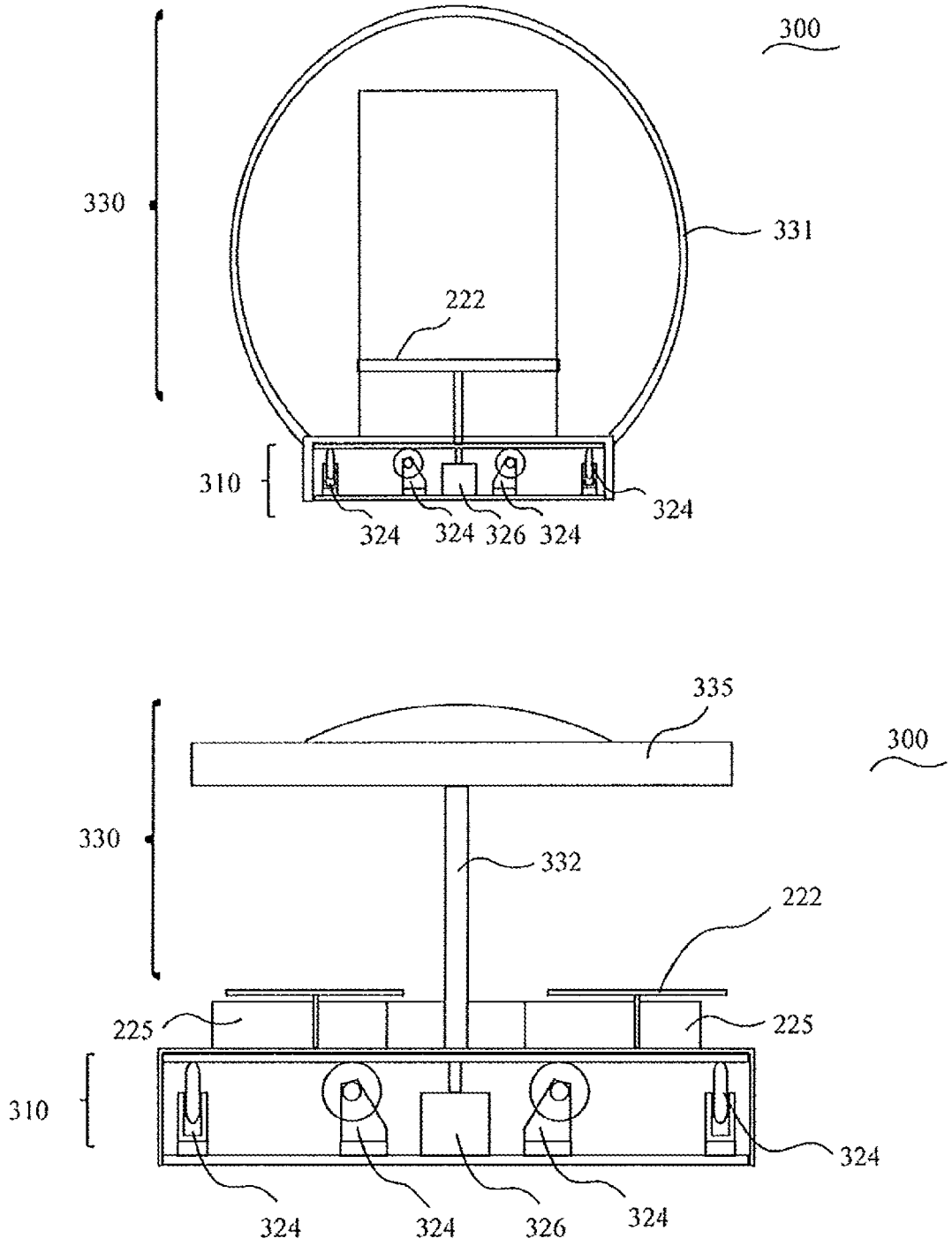


FIG. 7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FACILITY COMPRISING FOOD AND DRINK INFRASTRUCTURE, AND METHOD OF ATTRACTING CUSTOMERS TO FACILITY

TECHNICAL FIELD

[0001] This Invention relates to facility comprising food and drink infrastructure and method of attracting customers to said facility.

BACKGROUND ART

[0002] Currently, the facilities such as food courts (meaning an indoor space for providing a variety of adjacent restaurant booth and a shared space for self-service meals, the same shall apply hereinafter) are spreading rapidly in a shopping mall and an airport. Because seats can be commonly used by dividing the shop by each menu regarding the cuisine, every shop doesn't need the seats. Furthermore, it is used by many families because the seat portion (hereinafter called a sharing space) can be set widely. For example, the food court is disclosed with reference to the technology of the call system in the following patent document.

[0003] Related Art Documents

[0004] Patent Document:

[0005] Patent Document 1:

[0006] Japanese Registered Utility Model No. 3158842

SUMMARY OF THE INVENTION

Problem Invention is to Solve

[0007] Because the conventional food court offers the cuisine of various genres, the sharing space must make an average design. Therefore, there was highly tendency that customers will soon tire of it. On the other hand, many customers coming to the food court have family, so if a facility for keeping the interest of the child is installed in the sharing space, for a child, it will become frequent to come to the food court. An object of the present invention is to make available a facility capable of making the further more interest of customers, and method of attracting customers to said facility, in the facilities where a plurality of store has a shared seat (sharing space).

Means for Resolving the Problem

[0008] This Invention to achieve the object is a method of attracting customers to a facility comprising a plurality of stores that offer food and drink, and that treats customer seating for the plurality of stores as a shared space. A method of attracting customers to a facility of this invention is provided with a step of placing a traveling wheeled vehicle capable of carrying customers on a tour of the shared space and provided with a step of placing a rotating table. The rotating tables are configured such that tables are positioned upon rotating devices. The rotating devices comprise upper rotating bodies, further comprising central gears which are positioned in the centers of bases. The rotating devices further comprise a drive motor capable of rotationally driving the central gears, and casters that support the upper rotating body. The rotating table is configured by placing a table and a chair to the rotating device, the traveling wheeled vehicle and the rotating tables are positioned in the shared space.

[0009] By above configuration, the upper rotation body rotates by the center gear rotated by center gear drive motor. Furthermore, by a caster's supporting the load coming from the upper part, the small rotation device strong about weight coming from the upper part can be easily configured thus without complicated mechanism. Furthermore, by placing the traveling wheeled vehicle in the sharing space, customers become able to board traveling wheeled vehicle. In accordance with an aspect of the present invention, the drive motor may be fixed to the sharing space. Alternatively, a lower rotating body for fixing the above drive motor is provided to the rotating device, an upper rotating body is stacked in the lower rotating body while aligning their central axes. And, placing a caster for supporting the upper rotating body to the lower rotation body, in the state a wheel of the caster upturned.

[0010] In accordance with an aspect of the present invention, customers become able to eat in the vehicle by employing the table to the traveling wheeled vehicle. Furthermore, a crank placed in the center of top surface of the base substance in lieu of the central gear, and rotating shaft for pivotally supporting the crank can be rotationally driven by a drive motor, thus the upper rotating body makes eccentric rotating.

[0011] Another invention to achieve the object is a facility comprising a plurality of stores that offer food and drink, and that treats customer seating for the plurality of stores as a shared space. And, this facility comprises a traveling wheeled vehicle which is capable of carrying customers on a tour of the shared space and comprises a rotating table. The rotating devices comprise a base substance and comprise an upper rotating bodies comprising central gears which are positioned in the centers of base substance. And, the rotating devices further comprise a drive motor capable of rotationally driving the central gears, and casters that support the upper rotating body. The rotating table is configured by placing a table to the rotating device, and the traveling wheeled vehicle and the rotating tables are positioned in the shared space.

[0012] In accordance with an aspect of the present invention, the drive motor may be fixed to the sharing space. Alternatively, a lower rotating body for fixing the above drive motor is provided to the rotating device, and the upper rotating body is stacked in the lower rotating body while aligning their central axes. And, placing a caster for supporting the upper rotating body to the lower rotation body, in the state a wheel of the caster upturned. In accordance with an aspect of the present invention, a table may be comprised in the traveling wheeled vehicle. Furthermore, a crank placed in the center of top surface of the base substance in lieu of the central gear, and rotating shaft for pivotally supporting the crank can be rotationally driven by a drive motor, thus the upper rotating body makes eccentric rotating.

[0013] In accordance with an aspect of the present invention, a slip ring for supplying electric power to the playground equipment may be provided. Even if rotating device for playground equipments rotates, electric power is supplied to a playground equipment placed in the rotation device upper part. Furthermore, a torque limiter may be mounted in the rotation axis of the drive motor, for controlling a driving torque of the rotation axis within predetermined value.

[0014] A playground equipment may be placed in the sharing space. For example, the playground equipment such as climbing equipment, rotary playground equipment, iron rods, slide, swing, jungle gyms, aerial ladders, and seesaws and combination of playground equipment may be placed in the facility which placed in the sharing space of the present invention or method of attracting customers to a facility.

Effects of the Invention

[0015] This invention is a facility comprising a plurality of stores that offer food and drink, and that treats customer seating for the plurality of stores as a shared space, or a method of attracting customers to the facility. And, this facility comprises a traveling wheeled vehicle, which is capable of carrying customers on a tour of the shared space and further comprises a rotating table. The rotating devices comprise a base substance and comprise an upper rotating body comprising central gears which are positioned in the centers of base substance. The rotating devices further comprise a drive motor capable of rotationally driving the central gears, and casters that support the upper rotating body. The rotating table is configured by placing a table and a chair to the rotating device, and the traveling wheeled vehicle and the rotating tables are positioned in the shared space.

[0016] By above configuration, the upper rotation body rotates by the center gear rotated by center gear drive motor. Furthermore, by a caster's supporting the load coming from the upper part, the small rotation device strong about weight coming from the upper part can be easily configured thus without complicated mechanism. Furthermore, by placing the traveling wheeled vehicle in the sharing space, customers become able to board traveling wheeled vehicle, so the customers of families can be attracted in facility of this Invention coming with the aim of above rotating table and traveling wheeled vehicle.

BRIEF DESCRIPTION OF DRAWINGS

[0017] FIG. **1** is a perspective view illustrating outlined configuration of facility in accordance with an embodiment of the present invention.

[0018] FIG. **2** is a top, side and front elevation view illustrating outlined configuration of a traveling wheeled vehicle provided to the facility in accordance with an embodiment of this Invention.

[0019] FIG. **3** is a top view illustrating outlined configuration of a rotating device provided to the facility in accordance with an embodiment of this Invention.

[0020] FIG. **4** is a top view and front elevation view illustrating outlined configuration of a rotating table provided to the facility in accordance with an embodiment of this Invention.

[0021] FIG. **5** is a top view and front elevation view illustrating an outlined configuration of a rotating table provided to the facility in accordance with an embodiment of this Invention.

[0022] FIG. **6** is a front elevation view illustrating outlined configuration of a rotating device provided to the facility in accordance with an embodiment of this Invention.

[0023] FIG. **7** is a front elevation view illustrating an outlined configuration of a rotating table provided to the facility in accordance with an embodiment of this Invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0024] A specified embodiment of facility **100** is explained hereinafter with reference to the accompanying drawings. FIG. **1** is an outline schematic view showing whole configuration of facility **100** of the present invention, FIG. **2** is a drawing of a traveling wheeled vehicle **200** provided to the facility **100** of this invention, FIG. **3**, FIG. **4**, and FIG. **5** show a drawing explaining a rotating table **300** provided in the facility **100** of this invention. However, the details of the all parts which do not directly-relate to the present invention will be omitted.

[0025] (Traveling Wheeled Vehicle)

[0026] In the facility **100** of this Invention, we assume the facility comprising a plurality of store seen in so-called food court using the shared seats. And, the facility **100** of this invention comprises a traveling wheeled vehicle **200** capable of travelling between seats in facility **100**, and comprises a table provided on a rotating device **310**. At first, a traveling wheeled vehicle **200** is explained.

[0027] A traveling wheeled vehicle **200** of this invention comprises one leading vehicle **210** and one or more subsequent vehicle **220**. A drive motor for coupling the subsequent vehicle **220** and travelling in the facility **100** is provided to the leading vehicle **210** provided to the traveling wheeled vehicle **200**. And, the drive motor drives the driving wheel provided to the leading vehicle **210**. A driver seat for seating of driver driving the leading vehicle **210** is comprised to the leading vehicle **210**, and furthermore a handle capable of controlling the driving wheel is provided to the position capable of operating in the driver seat.

[0028] Plurality of subsequent vehicle **220** is connected next to the leading vehicle **210**. For example, a configuration (joint member) capable of coupling the leading vehicle **210** or other subsequent vehicle **220** is provided at the outside both ends of the subsequent vehicle **220**. Furthermore, a subsequent seat **225** capable of sitting and a table **222** having the predetermined height is provided to the subsequent vehicle **220**. Among subsequent vehicles **220**, any one of the subsequent vehicles **220** connects to the leading vehicle **210** by the joint member, and the subsequent vehicle **220** of the latter part connects to said one subsequent vehicle **220**. Traveling wheeled vehicle **200** of this Invention is configured by connecting the subsequent vehicles **220** required. In accordance with the present invention, a table **222** is provided in the subsequent vehicle **220**, so the customers can eat in the subsequent vehicle **220**. Furthermore, regarding a door of the subsequent vehicle **220**, with the door closed, a door has a clearance gap capable of placing the cuisines on the table of vehicle **220**. For example, a door on its left and right is formed of a double door, and with the double door closed, the table **222** in the vehicle **220** have a clearance gap of the degree capable of placing the cuisine plates.

[0029] Furthermore, a chair (subsequent seat) **225** is formed, by attaching a seat board in such a way as to project from the side wall portion of the subsequent vehicle **220**. A seat board is mounted on the side wall portion (the height the customers can sit).

[0030] (Rotating Table)

[0031] As shown in FIG. **1**, a rotating table **300** to eat in the state of rotating is provided in the facility **100** of this invention. For example, the rotating table **300** is configured by placing a table **222** and a chair **225** to the rotating device **310**. That is, the table and chair rotates by rotating the rotating device **310**. Above rotating device **310** comprise an upper rotating body and a bottom rotating body. The upper rotating body comprises top substrate **311** (FIG. **3** shows circle-shaped substrate **311**, but if trouble-free against rotation, it may be a rectangle and a polyline shape). A rail (not shown) for rotating the after-mentioned casters **324** may be placed to the upper rotation body **311**.

[0032] A bottom substrate **320** comprises a central gear **327**, a drive motor **326** for driving the central gear **327**, and a

caster **324**. At first, a central gear **327** is placed on center location where the bottom substrate **320** (a circular shape is employed in this invention, but any shapes may be applied) for the bottom rotating body is seen from a top. Of course, an axis of revolution of the gear **327** is placed corresponding to the central axe of the bottom substrate **320**. And, a drive motor **326** is placed to the vicinities of the central gear **327**. So that the center gear **327** is rotatable by the drive motor **326**, a roller chain is wound on the center gear **327** and the rotation axis of the drive motor **326**, and it is configured so that the center gear **327** rotates via the roller chain if the rotating shaft of the motor **326** rotates.

[0033] Furthermore, plurality of caster **324** is placed to the bottom rotating body, in plane with the center gear **327** and the drive motor **326**. Regarding plurality of casters **324**, opposing casters **324** are placed symmetrically to the center of bottom rotation body(bottom substrate), and adjacent casters are placed at equal intervals. The upper substrate **311** rotates depending on rotation of the casters **324**. Therefore, the casters **324** of the bottom substrate **320** support the upper substrate **311**, in the present invention.

[0034] Then, top substrate **311** and bottom substrate **320** are combined. At first, in the state upturning the surface where the casters **324**, the center gear **327**, and the drive motor **326** are placed, the bottom substrate **320** is placed on the floor. And, putting the center of the bottom substrate **320** on the top substrate **311**, the upper substrate **311** is piled on the bottom substrate **320**. At this time, the rotating device **310** of the present invention is formed by engaging the center gear **327** to the upper substrate **311** so that the upper substrate **311** rotates when center gear **327** of the bottom substrate **320** rotates. For maintenance, it is desirable that the center gear **327** is engaged removable to the upper substrate **311**.

[0035] The rotating table **300** is configured by placing a table **222** and a chair **225** to the rotating device **310** above. As shown in FIG. **5**, a roof **335** supported to a strut **332** may be placed to the rotating device **310**. A switch (not shown) for operating the drive motor **326** is provided to the rotating device **310**, and a rotating speed of the drive motor **326** may be configured to be controllable by the switch. Furthermore, in the present invention, the number of revolutions of drive motor **326** placed to bottom substrate **320** is controllable by inverter (not shown). A control unit stores the most suitable number of revolutions beforehand, and the drive motor **326** is rotationally driven based on the number of revolutions.

[0036] Furthermore, a torque limiter (not shown) and a slip ring are placed in the lower part of the central gear **327**, and the rotation device **310** rotates via the torque limiter and slip ring. That is to say, a torque limiter for protecting the drive motor **326** from a surplus torque and a torque sensor for detecting running torque are provided between output shaft (mean rotating shaft) of the drive motor **326** and the center gear **327**. As the torque sensor, a contact-type torque sensor may be used, alternatively a noncontact torque sensor may be used too. If a torque detected by the torque sensor is beyond an expected limit, a rotary power from the drive motor **326** is not transmitted to the central gear **327** by the torque limiter

[0037] Instead of placing the drive motor **326** on the bottom substrate **320**, the drive motor **326** may be fixed to the floor For example, a drive motor **326** is fixed on floor by an anchor, and the caster **324** is fixed downward (the direction that a wheel of the caster **324** contacts with in floor) to the undersurfaces of the top substrate **311**. The configuration that employed bottom substrate **320** is shown in FIG. **7**, and configuration to fix the drive motor **326** to the floor in substitution for the bottom substrate **320** is shown in FIG. **4**, FIG. **5**.

Description of the Preferred Embodiment 2

[0038] The rotating table **300** that makes eccentric rotation can be configured by configuring the rotating device **310** used for preferred embodiment 1 as follows. Regarding the configuration other than after-mentioned eccentric shaft, it is same as the rotating table **300** described with detailed description of the preferred embodiment 1. Therefore, regarding the configuration except the eccentric shaft, drawing and illustration is omitted.

[0039] As shown in FIG. **6**, after-mentioned eccentric shaft is used for the rotation axis of the drive motor **326**. That is, as shown in FIG. **8** (B), by providing an eccentric shaft (e.g., crank **328**) comprising a handle for extending the shaft apart from the rotation axis of drive motor **326**, the rotating shaft of the drive motor is displaced within a specified range. That is, one end of the crank **328** rotates on a same axis as the rotation axis of the drive motor **226**, and the other end of the crank **328** makes eccentric rotation around the rotation axis (mean that it rotates around the position apart from the rotation axis). Of course, a switch (not shown) for operating a drive motor **326** is provided to the rotating device **310**. A rotating speed of the drive motor **326** may be configured to be controllable by the switch. Of course, the rotating device **310** shown in FIG. **6** comprises an upper rotating body (top substrate **311**) and a bottom rotating body (bottom substrate **320**). And, the upper rotating body is a circle-shaped substrate, and the bottom rotating body comprises a center gear **327**, a drive motor **326** for driving the center gear **327** and a caster **324**, each caster **324** supports the upper rotating body.

[0040] A regulation means for regulating the auto-rotation of the upper rotating body can be provided. An elastic body (a rubber or a spring are preferably used) connecting between the bottom substrate **320** for placing the drive motor **326** and the upper rotating body **311** is used as the regulation means. If the regulation means can be configured to regulate auto-rotation of upper rotating body, any alignment method thereof is preferable. Instead of placing the drive motor **326** on the bottom substrate **320**, the drive motor **326** may be fixed to the floor. For example, a drive motor **326** is fixed on floor by an anchor, a caster **324** is fixed downward (the direction that a wheel of the caster **324** contacts with in floor) to the undersurfaces of the top substrate **311**.

Others Example of Detailed Description of the Preferred Embodiment

[0041] In the facility **100** of this invention, other than the traveling wheeled vehicle **200** and rotating table **300** explained with detailed description of the preferred embodiment 1 or 2, by placing the playground equipment such as iron rods, jungle gyms, overhead ladders, and seesaws and combination of the playground equipment, it can be configured as a facility **100** of the indoor amusement grounds type or method of attracting customers to an indoor amusement grounds-shaped facility.

INDUSTRIAL APPLICABILITY

[0042] This invention is either a facility comprising a plurality of stores that offer food and drink, and that treats customer seating for the plurality of stores as a shared space, or a method of attracting customers to said facility. And, a facil-

ity of this invention comprises a traveling wheeled vehicle and rotating table. Customers boards the traveling wheeled vehicle, and the vehicle can make a round trip in sharing space. The rotating table is configured to placing a table in the rotating device, and the rotating device comprises a lower rotating body and upper rotating body. The lower rotating body comprises a base substance, a central gear placed in the top center of base substance, and a drive motor which can rotationally drive the central gear. The upper rotating body is stacked to the lower rotating body while aligning their central axes, and the upper rotating body is supported by the caster provided in the lower rotating body in the state a wheel of the caster upturned. And, the traveling wheeled vehicle and the rotating tables are positioned in the shared space.

[0043] By above configuration, the upper rotation body rotates by the center gear rotated by center gear drive motor. Furthermore, by a caster's supporting the load coming from the upper part, the small rotation device strong about weight coming from the upper part can be easily configured thus without complicated mechanism. Furthermore, by placing the traveling wheeled vehicle in the sharing space, customers become able to board traveling wheeled vehicle, so the customers of families can be attracted in facility of this Invention coming with the aim of above rotating table and traveling wheeled vehicle, which makes them industrially useful.

LEGEND

[0044] **100** facility
[0045] **110** store
[0046] **200** traveling wheeled vehicle
[0047] **210** leading vehicle
[0048] **220** subsequent vehicle
[0049] **300** rotating table
[0050] **310** rotating device
[0051] **311** upper rotating body
[0052] **320** bottom rotation body
[0053] **327** central gear
[0054] **326** central gear drive motor
[0055] **324** caster

1. A method of attracting customers to a facility:
forming a sharing space by a seat of plurality of stores offering food and drink;
placing a traveling wheeled vehicle capable of carrying customers on a tour of the shared space;
placing a rotating device provided with a base substrate, with an upper rotating body having a central gear positioned in the centers of base substrate , with a drive motor capable of rotationally driving the center gear, and with a caster for supporting the rotating body, in the sharing space; and
placing a rotating table for placing a table in the said rotating device, in the sharing space.

2. The method according to claim **1**, wherein the drive motor is fixed to the sharing space.

3. The method according to claim **1**, further comprising:
placing a lower rotating body for fixing the above drive motor provided to the rotating device;
placing the upper rotating body being stacked in the lower rotating body while aligning their central axes; and
placing a caster for supporting the upper rotating body in the state a wheel of the caster upturned is provided to the lower rotation body.

4. The method according to claim **1**, further comprising placing a table provided to the traveling wheeled vehicle.

5. The method according to claim **1**, further comprising:
placing a crank placed in the center of top surface of the base substance in substitution for the central gear;
rotationally driving a rotating shaft for pivotally supporting the crank via the drive motor; and
placing the upper rotating body capable of making eccentric rotating.

6. A facility comprising:
a plurality of store for offering food and drink;
a facility for making sharing space by a seat of plurality of store;
a traveling wheeled vehicle capable of carrying customers on a tour of the shared space;
a rotating device provided with a base substrate, with an upper rotating body having a central gear positioned in the centers of base substrate, with a drive motor capable of rotationally driving the center gear, and with a caster for supporting the rotating body; and
a rotating table for placing a table in the said rotating device, in the sharing space.

7. The facility according to claim **6**, wherein the drive motor is fixed to the sharing space.

8. The facility according to claim **6**, wherein
the rotating device is provided with a lower rotating body having the base substance, central gear, and drive motor;
said upper rotating body is stacked in the lower rotating body while aligning their central axes; and
the caster for supporting the upper rotating body in the state a wheel of the caster upturned is provided to the lower rotation body.

9. The facility according to claim **6**, wherein a table provided to the traveling wheeled vehicle.

10. The facility according to claim **6**, further comprising:
a crank placed in the center of top surface of the base substance in substitution for the central gear,
a rotating shaft for pivotally supporting the crank can be driven rotationally via the drive motor; and
the said upper rotating body makes eccentric rotating.

* * * * *