

Integrated design of box body based on rotary development of sustainable packaging

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Abstract

Now the box body used for packaging in the process of use, a variety of condiments or small items storage can not be met at the same time, usually have shortcomings, such as occupy a large space, need to use a separate box to store. This design is to provide a revolving box body for packaging. Multiple second box bodies designed in the first box can be exchanged in turn by putting in or taking out items, and it is more convenient to put in or take out small items in the box body. In view of this, this revolving box body design is proposed to develop sustainable packaging.

Keywords

Rotation; Packing; Box body; design.

1. Box design analysis

The utility model relates to a rotating box body used for packaging, which has the following characteristics: a first box body, the uppermost part of the box board of the first box body is provided with a first box body opening; The first rotating shelf comprises a rotating button, a first rotating shaft and a plurality of first suspended shaft arms. The rotating button is arranged outside the first box body, and the first rotating shaft is designed inside the first box body. The rotating button passes through the box plate of the first box body and rotates with the first rotating shaft. A plurality of the first suspended shaft arms rotating along the first radial design with the shaft in the first rotation with the shaft; The second part of the rotating shelf, which rotates synchronously with the first rotating shelf, comprises a second rotating shaft and a plurality of second hanging shaft arms, the second rotating shaft is designed in the first box, and a plurality of second hanging shaft arms along the radial design of the second rotating shaft in the second rotating shaft; The topmost parts have a second box body with a second box body opening, and each first suspended shaft arm is connected to an end point of each second box body, and each second suspended shaft arm is connected to an end point of the first suspended shaft arm far from each second box body. The opening position of the second box body for each second box body can be changed to the direction of the opening of the first box body.

A rotating box body used for packaging, characterized by the size of the opening of the first box body and the size of the opening of the second box body.

According to the design problem and solve the requirements of the rotary box body used for packaging, its characteristics are displayed in the second box body for a hexahedron less side structure, similar to the drawer type, the first connecting parts block and the second connecting parts block separate design in the second box with two side box plate protruded and toward the first box body opening direction.

Box body design problems and solution requirements 3 rotary box body used for packaging, its characteristics are shown in that the first suspended shaft arm and the second suspended shaft arm are separated by six different Settings, the six first suspended shaft arm along the first rotating shaft with the circumferential distribution, the six second suspended shaft arm along

the second rotating shaft with the circumferential distribution. The technical field for packaging relates to a rotary packaging box, specifically a kind of packaging.

2. Background technology

This design is to provide a rotating way for the packaging of the box body, in the field of packaging. It includes the first outer box body, the first rotating shelf and several internal second box bodies. The top part of the box board of the first box body is designed with openings; The shelf driving the first rotation in the first box body includes the outermost rotation button, a rotating shaft connected to the first rotation button and a plurality of shaft arms suspended in the first part. The rotating button directly passes through the box plate of the first box body and drives the rotation of the first rotating shaft. A plurality of first part suspended shaft arms are designed along the radial direction of the rotating shaft on the first rotating shaft; The second rotating shelf includes a second rotating shaft and a plurality of second suspended shaft arms.

3. Comprehensive design content

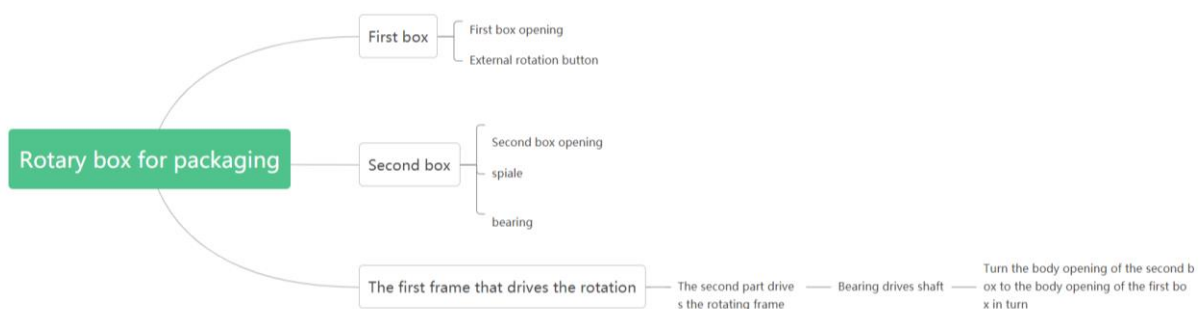
In this better execution of the design, the size of the first box opening mentioned above is equal to the size of the second box opening.

In the specific execution case of this design, the second box body above has two connecting parts blocks, namely the first connecting part block and the second connecting part block. The first connecting part block and the second connecting part block form relative positions. The design of the connecting shaft in each first hanging shaft arm and the design of the bearing in each first connecting shaft is the first to drive the rotation of the shelf, the first bearing design in the hanging shaft arm used to far cut off the end of the rotating shaft, the two end parts of the first connecting shaft are separated to distinguish the first bearing and the first connecting parts block connection; And so on.

In this case of better execution of design, the above second box body is a hexahedron with less side structure, similar to the drawer type, in the two sides of the second box body box plate separate design of the first and second connecting parts block, and protrusive in the direction of the first box body opening.

In a good execution case of this design, the above first suspended shaft arms are divided into six different Settings. The six first suspended shaft arms are evenly distributed radially inward along the circumference of the first rotating shaft, as is the second suspended shaft arm. The thinking flow of the rotating box body used for packaging is shown in Table 1.

Table 1 Thought flow chart of the rotary box used for packaging



4. Realization form and execution mode

The following will be described in combination with the attached drawings and technical schemes of this design, so as to make the purpose, technical schemes and advantages of specific implementation examples of this design more clear. Obviously, the specific implementation case is a part of this design, not the whole. The components of this design concrete execution instance are usually described and shown here in the accompanying figure.

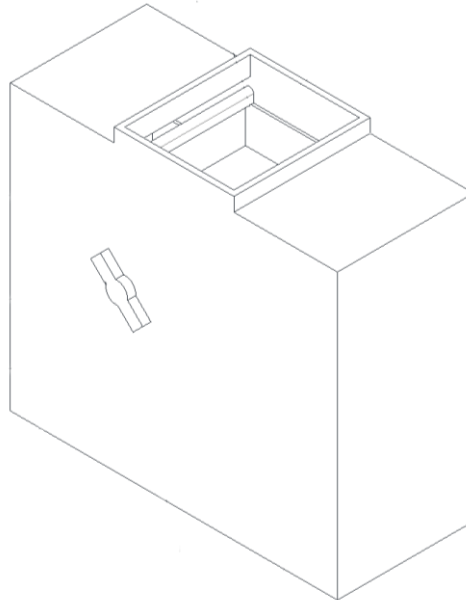


Figure 1 Structure diagram of the rotary box used for packaging

The structure diagram of the rotating box body used for packaging is shown in Figure 1. This particular example provides a rotating box body used for packaging, including the first box body, the first rotating shelf, multiple second box bodies and the second part of the rotating shelf. Wherein, the first rotating shelf, a plurality of second box bodies and a plurality of second box bodies are designed in the first box body, and a plurality of second box bodies are designed in the first rotating shelf and a plurality of second box bodies are designed in the first rotating shelf and a plurality of second box bodies. By rotating to drive the rotating shelf, the second box is separated to distinguish the direction of the opening to the first box body, and the rotating shelf is rotated to ensure the opening of the second box body upward.

The schematic diagram of the box body used for rotary packaging and the schematic diagram of the first section structure of the box body used for rotary packaging are shown in Figure 2. The first box body consists of a board for the first box, a board for the second box, a board for the third box, a board for the fourth box, a board for the fifth box and a board for the sixth box. Among them, the first box uses board and the second box uses board to form a relative setting, the third box uses board and the fourth box uses board to form a relative setting, the fifth box uses board and the sixth box uses board to form a relative setting; In addition, the first box is separated from the three, five and four boxes by the four end points of the board, while the second box is separated from the three and one box by the four end points of the board and the far end points of the board. Similarly, the fifth box is separated by one and four boxes by the ends of the board. Three separates five from six, and four separates five from three. It is understood that the first box is framed by a board, the second box by a board, the third box by a board, the fourth box by a board, the fifth box by a board and the sixth box by a board to form the cavity of the first box body, and the third box by a board as the top plate of the first box body. In addition, the third box is provided with a first box opening, through which items can be put into or taken out of the second box.

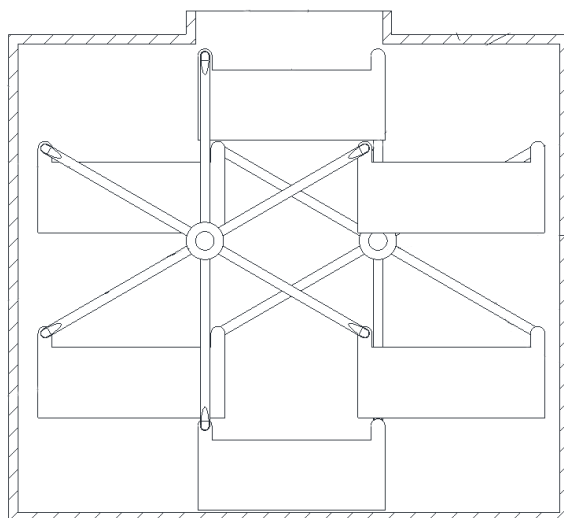


Figure 2. Schematic diagram of the first type of sectional structure of the box body used for packaging

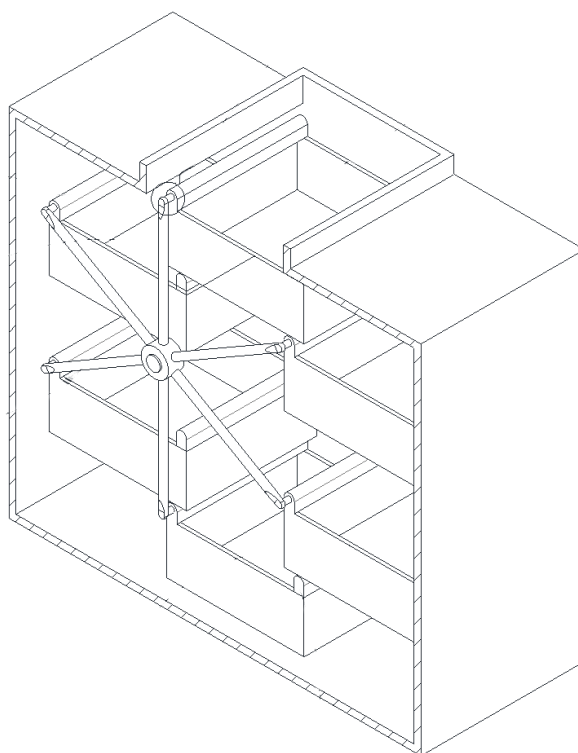


Figure 3. Schematic diagram of the second section structure of the rotary box body used for packaging

The schematic diagram of the second type of section structure of the box body used for packaging in rotary mode is shown in FIG. 3, the schematic diagram of the first type of section structure of the box body used for packaging in rotary mode, the schematic diagram of the second type of section structure of the box body used for packaging in FIG. 3, and the schematic diagram of local enlargement in FIG. 4. The first rotating rack consists of a rotating button, a first rotating shaft, six first suspended shaft arms, a first connecting shaft and a first bearing. Among them, the rotating button is designed outside the first box body, and the first rotating shaft is designed inside the first box body. The rotating button passes directly through the first box plate of the first box body and is connected with the first rotating shaft, which is turned by

the rotating button. The six first suspended shaft arms rotate along the first shaft with the radial design of the shaft in the first rotation with the shaft.

The second part of the rotating frame includes a second rotating shaft, six second suspended shaft arms, a first connecting shaft and a first bearing.

5. Conclusion

In summary, the rotary box body used for packaging of the design of the specific implementation includes a first box body, a first rotating shelf, a second box body and a second part of the rotating shelf. The uppermost part of the box plate of the first box body is provided with the first box body opening; The first rotating shelf comprises a rotating button, a first rotating shaft and a plurality of first suspended shaft arms. The rotating button passes directly through the box plate of the first box body and is associated with the rotation of the first rotating shaft, and a plurality of first suspended shaft arms along the radial design of the first rotating shaft in the first rotating shaft; And so on, the second part drives the second part. Multiple second box users can take turns through the opening of the first box body to put in or take out items. It has the characteristics of convenient use and simple structure.

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