Sept. 1, 1936. J. I. RUSSAKOV 2,052,801

ROTARY SUPPORT

Filed April 6, 1935 2 Sheets-Sheet 1

Fig. 1

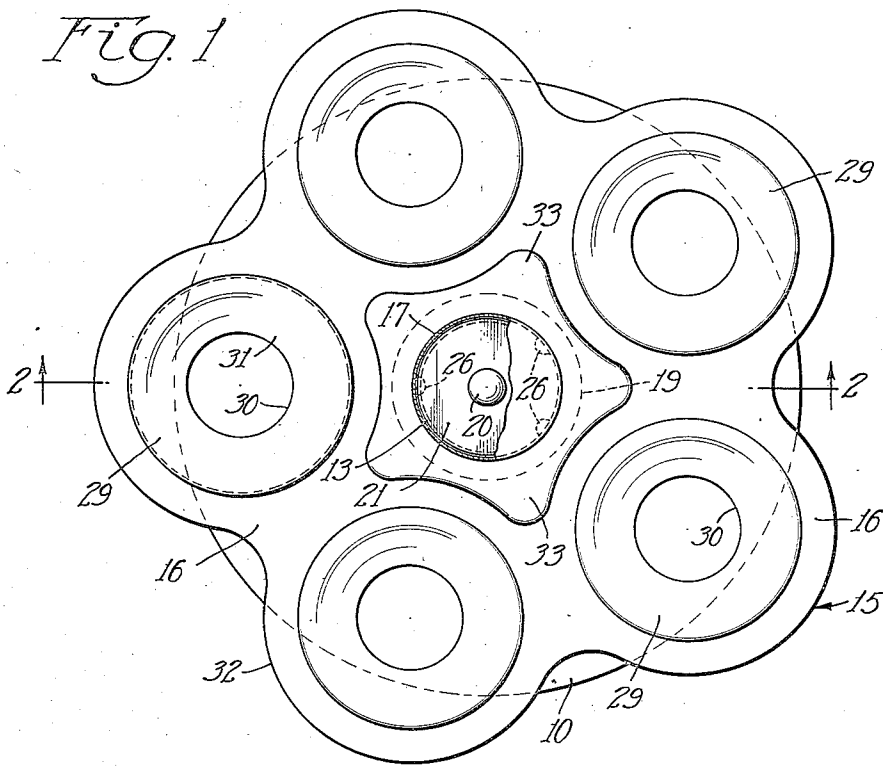


Fig. 2

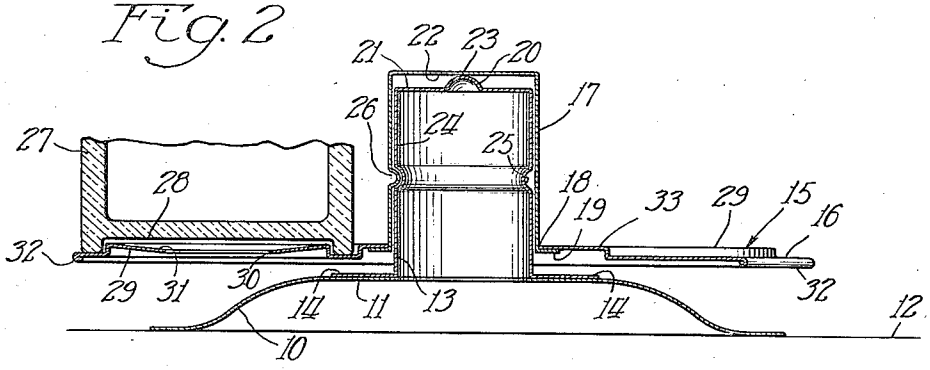
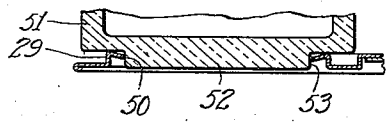


Fig. 3



Inventor
Jacob I. Russakov
By:
A. Trevor Jones
Atty.

Sept. 1, 1936. J. I. RUSSAKOV 2,052,801

ROTARY SUPPORT

Filed April 6, 1935 2 Sheets-Sheet 2

Fig. 4

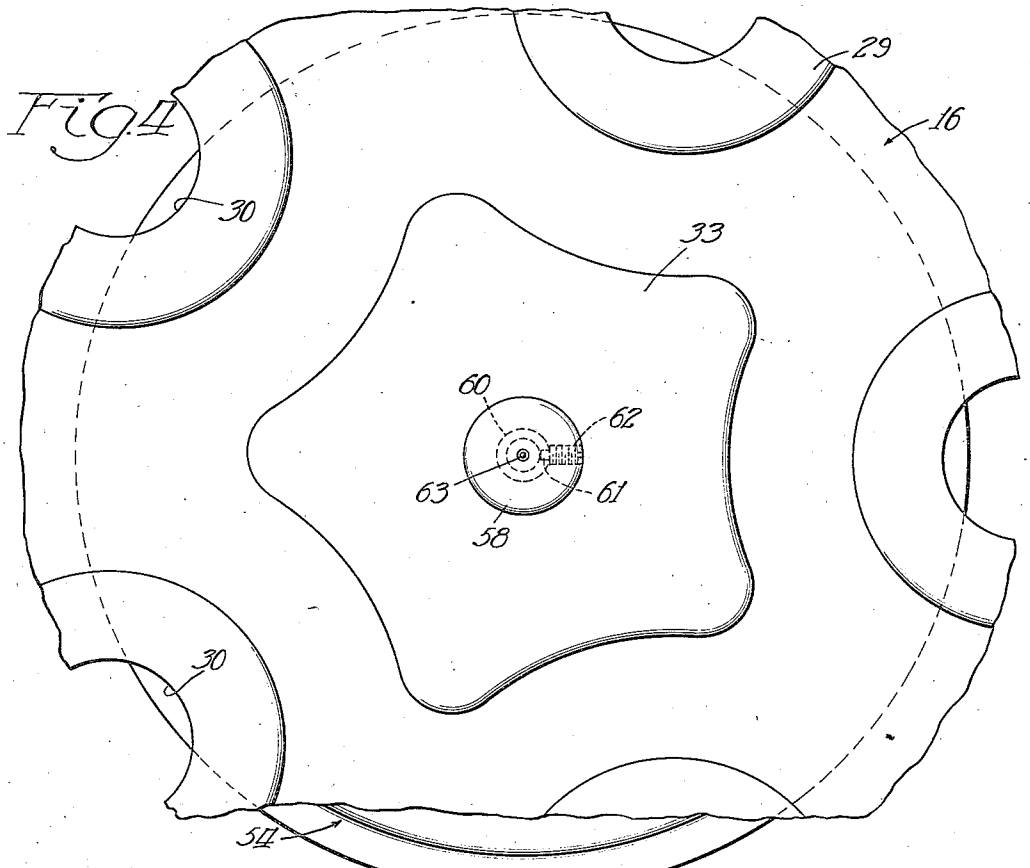
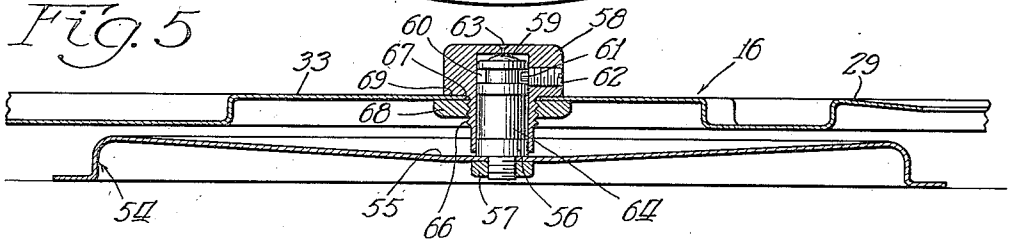


Fig. 5



Inventor
Jacob I. Russakov
By:
A. Trevor Jones Atty.

Patented Sept. 1, 1936 2,052,801

UNITED STATES PATENT OFFICE

2,052,801

ROTARY SUPPORT

Jacob I. Russakov, Chicago, Ill.

Application April 6, 1935, Serial No. 14,997

2 Claims. (Cl. 211—77)

This invention relates to rotary supports more particularly for the display or temporary storage of foods, confections and the like.

The invention is of particular utility in connection with a support of the class described for use in a refrigerator for preserving foods more efficiently and conveniently, and among other objects, the invention aims to provide an improved device of this kind.

Other objects and advantages will be apparent from the following description, taken together with the accompanying drawings, in which—

Figure 1 is a plan view of the main part of the support with the containers absent, parts being shown in section for clearness of description; Figure 2 is a vertical section taken on the line 2—2 of Fig. 1, looking in the direction of the arrows, with a partial sectional view of one of the containers associated with the structure of Fig. 1; Figure 3 is a slightly modified form showing a different interlocking relationship between the container and the main supporting member but still retaining the same general principle of operation; Fig. 4 is a fragmentary plan view of an alternative bearing means; and Fig. 5 is an axial cross-section of the form shown in Fig. 4.

In the illustrative construction shown in the drawings, and turning first to Figs. 1 and 2, I have shown a circular sheet metal base 10 dished upward centrally as at 11 to provide a somewhat elevated pedestal to rest upon a floor, shelf or other surface 12. Centrally of the upwardly dished part 11 is secured a cylindrical bearing member 13, in this instance in the form of an inverted metallic cup having a peripheral flange 14 by which it is secured as by welding to the base 10.

Mounted on the base 10 is the revolvable member indicated generally by the numeral 15 and comprising a platform-like or tray portion 16 and the bearing portion 17, the latter adapted to have a friction-minimizing bearing on the bearing portion 13 of the base. In this instance, the tray 16 is of pressed sheet metal, as will be more particularly described at a later point, and is perforated centrally at 18 to have snugly passed therethrough the bearing portion 17 which in this instance is in the form of an inverted metallic cup having a peripheral flange 19 which may be secured as by welding to the under side of the tray 16 at the margins of the perforation 18.

Thus the bearing portions 17 and 13 together form a turret-like bearing means upstanding centrally of the base and revolvable tray and rotatably connecting these parts, the bearing portions 13 and 17 having relative rotation, the part 13 being normally stationary and the part 17, with the tray 16, revolving thereabout. The bearing portions 13 and 17 have a snug telescoping relation, but at the same time providing a free rolling fit, and to reduce friction therebetween to a minimum, I have provided anti-friction means between the inner and outer cups. As here shown, for this purpose, the inner portion 13 is formed with a central axially and upwardly directed spheroidal nub 20 on its upper outer face 21 upon which the inner upper face 22 of the outer bearing member 17 rotatably rests. Thus the faces 21, 22 of the bearing members are spaced apart except at the reduced area 23 provided by the apex of the nub 20, the weight of the tray 16 with the containers thereon, being sustained principally by the nub 20.

Desirably the base 10 and tray 16 are further interconnected to prevent casual separation of these parts, while permitting their relative rotation as described, and for this purpose, in this instance, I have shown the inner bearing member 13 indented in its vertical cylindrical wall 24 to form an annular groove 25 in which mating indentations 26 on the outer member 17 may be received and may move during the turning movement of the parts, thus preventing axial displacement of the parts 13 and 17, while permitting their free relative rotation.

The main supporting member or tray 16, which is carried by the bearing portion 17, as just described, is advantageously of substantially greater area than the base 10 and has circumferentially arranged about its periphery a plurality, in this instance five, locations for food jars or containers, one of which is indicated at 27. Some slight interengagement between the tray 16 and the container 27 is desirable, both to predetermine the location of each container on the tray and also to guard against shifting of the container during rotation of the tray. For this purpose, and assuming that the containers 27 are cylindrical, which is their simplest form, I have shown the bottom of the container 27 upwardly and exteriorly recessed as at 28 to snugly receive therein the circular upwardly directed embossments 29 pressed from the metal of the tray 16. These embossments 29 are advantageously centrally perforated as at 30 to provide drainage for moisture which may accumulate therein and to further facilitate such drainage the surface of the embossments margining the perforation 30, slopes

downwardly thereto as clearly shown at 31 in Fig. 2.

To economize on the metal stock for the tray 16, the tray, as best shown in Fig. 1, is conveniently formed with a non-circular perimeter, as by reducing the radial area of the metal of the tray between the containers 27. Also, to provide a smooth edge for the tray 16, eliminating the danger of cutting or scratching by this outer edge, the metal at its periphery is desirably curled downwardly and inwardly as best shown at 32 (Fig. 2), forming a finishing bead which at the same time, by being downwardly turned, does not interfere with the placing of the containers 27 on the tray in position as indicated on the embossments 29.

The central area of the tray 16 is also desirably upwardly embossed as at 33 in a somewhat ornamental configuration adding to the appearance and strength of the tray, as well as providing a recess upon the under side of the tray to which the shoulder or flange 19 of the bearing member 17 may be welded as already explained. Thus the central and circumferential embossments and the shoulder 19 are in a common plane spaced upwardly from the main body of the tray 16, enhancing the appearance and strength thereof while making it economically of sheet metal.

As shown in the modification of Fig. 3, the perforation 30 in the form of Figs. 1 and 2, may be enlarged as shown at 50 to occupy more or substantially all of the internal area of the embossment 29, and the container 51 may have a somewhat reduced bottom portion 52 which is received in the perforation 50, the shoulder 53 between the reduced bottom 52 of the container and the main part thereof providing an interlocking engagement with the edge of the perforation 50 to prevent casual displacement of the container upon the same principle as already described with respect to the other views.

Turning now to an alternative bearing means shown in Figs. 4 and 5, the base 54 is of an inverted cup-like form, generally similar to the base 10 but in this instance is dished downwardly as at 55 about the upstanding bearing member 58. Also as shown in this alternative construction, the bearing member 56 is of machined metal to be riveted or, as here specifically shown, bolted by the nut 57 to the base 54. Telescoping over the inner bearing member 56 is the outer inverted cup-like bearing member 58 also, in this form, of machined metal and rotatably supported on the inner bearing member 56, the principal contact being upon the boss-like upward projection 59 of the inner member. The inner member has the machined peripheral groove 60 near its upper end in which is loosely received a pin-like projection 61 carried by the outer bearing member 58 as by a set screw 62 in the radial wall of the latter. The outer bearing member in its axial wall may advantageously have an oil aperture 63 providing access for a lubricant to the meeting surfaces of the parts, and to further reduce or minimize friction therebetween the inner bearing member may have a diametrically reduced intermediate portion 64.

In this construction shown in Figs. 4 and 5, the tray 16 is shown secured medially of the upper and lower ends of the outer bearing member 58, the outer bearing member having a reduced threaded shank 66 which passes downwardly through a central aperture 67 in the pressed metal tray 16, a nut 68 then clamping the margins of the aperture 67 to the shoulder 69 of the bearing member. The nut 68 also provides a supporting shoulder for the tray 16 received within the upwardly directed recess formed by the under side of the embossment 33 and in the plane of the embossment. The downwardly dished formation 55 of the base 54 tends to compensate for the downwardly projecting extension 66 of the bearing member 58 and the bearing parts may be thus made smaller and more compact while at the same time retaining the advantages of stability and ease of rotation with a minimum of friction.

So constructed and arranged, the device is strong and yet simple, while providing a quiet and easily turned structure. In each case it will be noted that the base and container interlock at points spaced inwardly from the outer edge of the container, one desirable result being that the interlocking means are concealed.

Having described my invention, I claim:

1. In a rotary support structure of the class described, a pressed sheet metal tray of a generally circular configuration, said tray having a central embossment upwardly pressed from the main portion of said tray, a plurality of other upwardly pressed embossments arranged circumferentially of said tray and spaced apart from each other and from said central embossment but whereby all of said embossments are in a common plane offset upwardly of the main body portion of the tray to enhance the appearance and strength thereof, said circumferential embossments being adapted each to be spanned by one of a plurality of containers or the like received on said tray about said central embossment and removably retained in position on said tray by engagement each with one of said circumferential embossments.

2. In a rotary support structure of the class described, a pressed sheet metal tray, said tray having a central embossment upwardly pressed from the main portion of said tray and a central perforation in said embossment, a plurality of other upwardly pressed embossments arranged circumferentially of said tray and spaced apart from each other and from said central embossment but whereby all of said embossments are in a common plane offset upwardly of the main body portion of the tray, and a bearing member passing through said central perforation and having a shoulder receiving and supporting the edges thereof whereby said shoulder is also in the plane of said embossments and spaced above the main body of the tray in the upwardly extending recess provided by the said central embossment and enhancing the appearance and strength of the structure.

JACOB I. RUSSAKOV.