April 23, 1940. J. D. RODOLFA 2,198,091

ROTATABLE SERVER

Filed June 27, 1938

Fig. 1

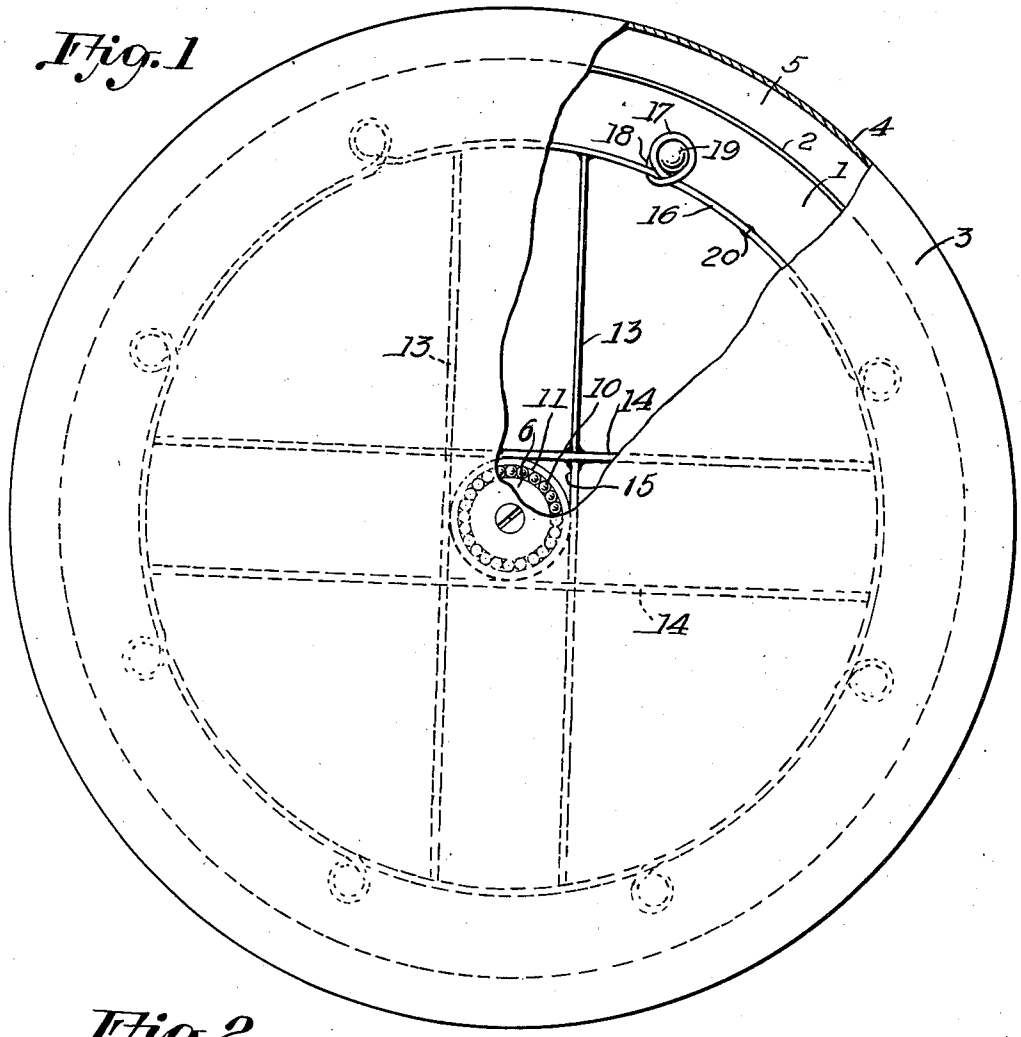
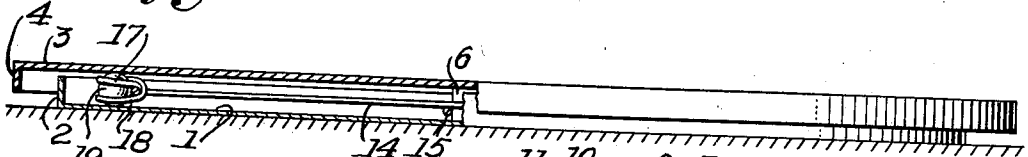


Fig. 2



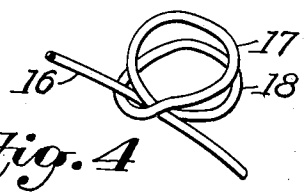


Fig. 4

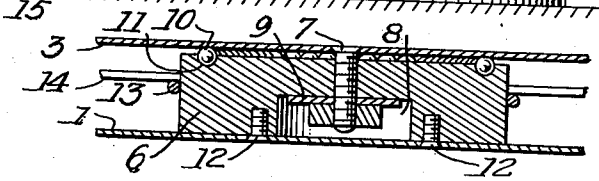


Fig. 3

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UNITED STATES PATENT OFFICE

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ROTATABLE SERVER

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Application June 27, 1938, Serial No. 216,053

1 Claim. (Cl. 311—34)

The present invention relates particularly to a portable means that may be disposed in any desired position on a table and rotated by hand to bring any desired article thereon within easy reach of the operator.

It is one object of the invention to provide a device of the character indicated that may be easily adjusted or positioned on a table to best serve the persons seated about the same and according to their disposition and number.

It is another object of the invention to provide a device of the character indicated that may be hung upon a wall or otherwise stored away in small space when not in use.

Still another object is to provide a device of the character indicated that will be strong and durable and easily operated when in use, and one which may be quickly and easily assembled by unskilled labor.

It is a further object to provide a device of the character indicated that will be simple in form and construction, economical to manufacture, that consists of few parts, and is highly efficient in its practical application.

In the drawing:

Figure 1 is a plan view of a device embodying my invention, partly in section, and a part being broken away.

Figure 2 is a side elevation of the same, with a part being shown in section.

Figure 3 is an enlarged section through the central bearing member of the device.

Figure 4 is a perspective sketch of one of the ball-bearing cages.

In the particular embodiment of the invention herein shown and described, 1 indicates a circular sheet-metal plate having an upturned circumferential flange 2 formed thereon, and 3 indicates another sheet-metal plate having a downwardly turned circumferential flange 4 formed thereon. The diameter of plate 3 is somewhat larger than that of the plate 1 so that the one overhangs the other as at 5.

At 6 is shown a circular bearing and spacing member mounted upon the under side of the plate 3 by means of a bolt 7, a recess 8 being formed in the member to receive the nut 9. The bolt 7 is disposed in the axis of rotation of plate 3, and disposed in concentric relation to said axis is an annular row of ball-bearings 10 operating in a raceway 11. The plate 3 seats on these bearings, so they carry the load when the device is in use.

The plate 1 is disposed in concentric relation to the axis of plate 3 and is secured to the member 6 by means of screws as 12.

While the member 6 with the ball-bearings thereon satisfactorily support the central portion of plate 3, it is necessary to provide additional supporting means for the outer portion of the plate, and this without interfering with its free rotation. It is also desirable that this support be easily placed in position or removed therefrom, and particularly that it be light in weight and durable, and operate freely without the use of lubricants.

As a supporting means for the peripheral portion of plate 3 I provide a wire framework consisting of crossed wires 13—14 forming a central frame 15 encompassing, and rotating upon, member 6. To the outer ends of these wires is secured a wire annulus 16 having a number of ball-bearing cages formed therein.

Each ball-bearing cage is formed by twisting the wire into two loops as at 17—18, the two loops being spaced on opposite sides of the plane of the annulus. By spreading the loops a little the ball-bearing 19 may be inserted therebetween. The bearing 19 is slightly larger in diameter than the diameter of the loops, therefore when the loops are pressed back into position the bearing is held in place but is free to revolve. In the present case a single wire forms the annulus and eight cages for as many ball-bearings, the two ends of the wire being joined at 20.

When the device is constructed and assembled as described it may be adjusted in any desired position on a table, and loaded with dishes and food to its full capacity, yet it will rotate easily at a touch of the hand. This is so because the construction permits the use of few and large bearings, and the several parts are relatively rotatable, except the plate 1 with respect to member 6.

While in the foregoing description plate 3 is referred to as the top plate, it is obvious that when the device is placed on a table the plates may be reversed in position, the smaller plate 1 being disposed uppermost. In this case the operation of the device is the same, and in some cases this arrangement may be desirable since the dishes placed on plate 1 may be allowed to overhang the distance 5 without danger of being struck by any object on the table when rotating.

It is to be understood, of course, that while I have herein disclosed but one specific embodiment of the invention, changes in form, construction, and method of operation may be made within the scope of the appended claim.

I claim:

The combination with a rotatable server com-

prising a base plate, a circular bearing member concentrically and fixedly mounted thereon, and a top plate concentrically and rotatably mounted in the bearing member to overlie the base plate in spaced parallel relation thereto; of a bearing structure for the outer portion of the top plate comprising, pairs of rigidly connected crossed wires disposed to form a central frame adapted to rotatably engage the circular bearing member and extending outwardly therefrom in tangential relation thereto, an annulus mounted on the outer portions of said wires in concentric relation to the said bearing member, and twisted to form spaced ball-bearing cages, and balls mounted to rotate freely in the cages and rotatably support the top plate on the base plate.

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