Feb. 27, 1945. E. M. COLLINS 2,370,231

CABINET

Filed Jan. 22, 1944

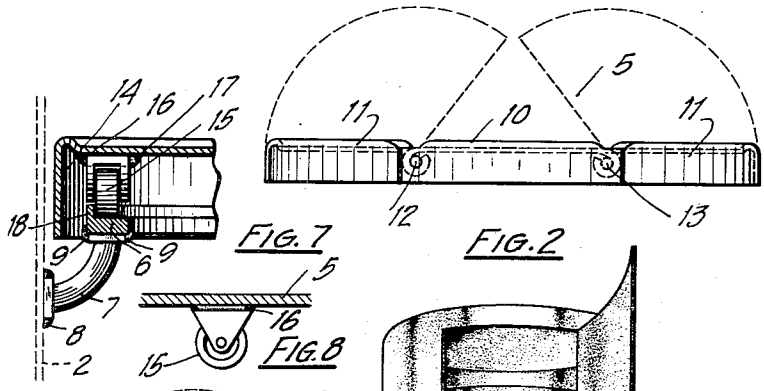


FIG. 2

FIG. 7

FIG. 8

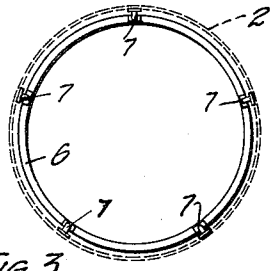


FIG. 3

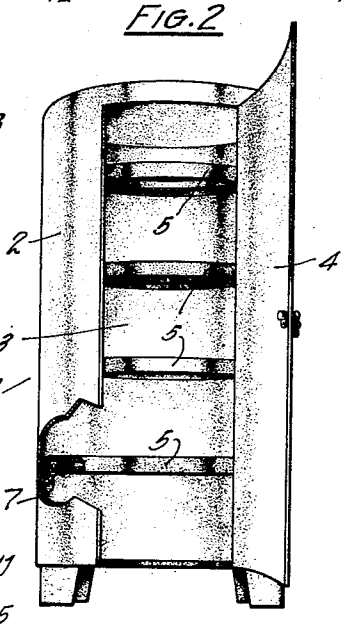


FIG. 1

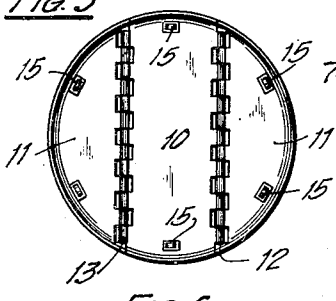


FIG. 6

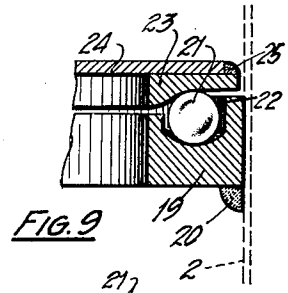


FIG. 9

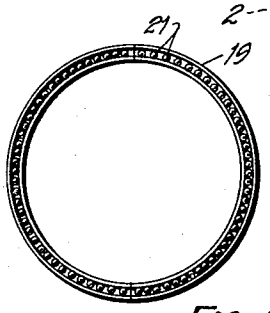


FIG. 4

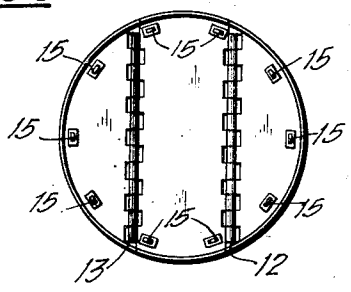


FIG. 5

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CABINET

Edith Mead Collins, Albany, N. Y.

Application January 22, 1944, Serial No. 519,374

2 Claims. (Cl. 312—183)

My invention relates to cabinets and particularly to an improvement in shelves for use therein.

In cabinets having shelves of any substantial depth from front to back it is difficult, as a rule, to reach articles on the back of the shelves. This is particularly difficult where there are many articles on the shelves.

It has heretofore been proposed to construct cylindrical cabinets having shelves therein which can be rotated on their supports so that any portion of a shelf may be brought to the front of the cabinet where it can be readily reached. It has also been proposed to construct cabinets with shelves therein which are collapsible or foldable to facilitate their removal from the cabinet. Such shelves however are so constructed that, as they are being folded or collapsed, they must be supported in some way other than on the regular supports in the cabinet. This is sometimes very difficult and is not easy in any case. Furthermore, such folding shelves of which I am aware require the shelves to be spaced much greater distances apart than is usually desirable, in order to provide clearance for the folding operation, thus resulting in considerable waste space.

One of the objects of my invention is to provide a cabinet having rotating shelves therein in which certain portions can be folded over other portions to effect at least a partial collapse of the shelf to facilitate its removal from the cabinet. Another object is to provide a cabinet having a plurality of partially collapsible, rotatable shelves therein which may be spaced comparatively closely together and yet be of such design that one of them may be folded and readily removed without disturbing the shelf above or below. Another object is to provide a rotating shelf in which the supporting track upon which the shelf rests, and the rollers, are protected from dirt, crumbs or other foreign matter which may fall from the shelf or from the shelves above and lodge thereon. A further object is to provide a shelf which can be folded while resting on its support so that it is not necessary to support it with one hand and fold it with the other.

With these objects in view my invention includes the novel elements and the combinations and arrangements thereof described below and illustrated in the accompanying drawing in which—

Fig. 1 is a perspective view of my cabinet with portions broken away to show certain details of construction;

Fig. 2 is a side elevation view of a shelf;

Fig. 3 is a bottom view of a track or shelf support;

Fig. 4 is a top view of a modified form of shelf support;

Fig. 5 is a bottom view of my preferred type of shelf;

Fig. 6 is a bottom view of a modified type of shelf;

Fig. 7 is a fragmentary sectional view through a marginal portion of my preferred type of shelf showing a roller and the shelf support;

Fig. 8 is a fragmentary sectional view through a portion of a shelf adjacent a roller and showing a side elevation view of a roller; and

Fig. 9 is a fragmentary sectional view through a marginal portion of a shelf and a support of the type shown in Fig. 4.

Referring to the drawing, 1 is a cylindrical cabinet comprising a casing 2 having an opening 3 therein extending substantially from top to bottom and which is adapted to be closed by the door 4. Within the cabinet, as illustrated, are four shelves 5 which are both foldable and rotatable.

In the preferred species, each shelf is supported on a circular track 6 which in turn is supported on a plurality of circumferentially spaced brackets 7 welded or otherwise secured to the interior of the casing, as shown at 8. The track is preferably welded or otherwise fixed to the brackets 7, as shown at 9.

Each of the shelves comprises a center section 10 and oppositely disposed side sections 11 which are hingedly connected to the center section as shown at 12 and 13. The hinges, preferably extend entirely across the shelf as shown in Figs. 5 and 6. Each of the shelves is made preferably of sheet metal and has a depending peripheral flange 14. On the bottom of the preferred form of shelf are a plurality of circumferentially spaced rollers 15 adapted to ride on the track 6 and which are welded to the bottom of the shelf as shown at 16 and 17. In the preferred type of shelf shown in Fig. 5 the center section 10 is provided with a roller 15 closely adjacent the end of each hinge and the side sections 11 of the shelf are each provided with three spaced rollers. By positioning a roller at each end of the hinge on the center section it will be apparent that, when the side sections 11 are folded up as indicated by the dotted lines in Figure 2 the center section of the shelf will remain stable, because it is supported at each of its four corners, and its upper surface will remain horizontal. Thus, when it is desired to remove the shelf it is merely necessary to swing the side portions upwardly about the hinges until they come together over the central

section whereupon plenty of space is provided at each side of the center section to grasp the shelf by the hands and withdraw it from the cabinet. Preferably, but not necessarily, the door opening in the side of the cabinet is somewhat greater in width than the center section of the shelf so that when the shelf is grasped by the hands it may be readily withdrawn through the opening in the side of the cabinet without tilting it.

The shelf shown in Fig. 6 is substantially identical with the shelf shown in Fig. 5 except that the center section is provided with only two diametrically disposed rollers. When the side sections 11 are folded over the center section 10 it may tilt slightly due to the fact that it is not supported at each of the four corners and therefore it is less desirable than the type shown in Fig. 5.

By reference to Fig. 7 it will be noted that the track 6 is provided on the outside with an upstanding peripheral flange 18 which maintains the shelf centered thereon. It will also be noted that the depending flange 14 on the shelf extends below the track so that nothing falling from the shelf or from the shelves above can lodge on the track.

In Figs. 4 and 9 I have shown a modified type of shelf support comprising the trough-like track 19 which is welded to the inside of the casing as shown at 20. A multiplicity of bearing balls 21, preferably formed of stainless steel ride or roll in the trough 22 and an annular element 23 welded to the lower peripheral portion of the shelf 24, as shown at 25, rides on top of the balls.

From the foregoing it will be apparent that by dividing the shelf into three sections the shelves may be spaced very much closer together in the cabinet and yet provide sufficient clearance for removal without interference than in the case where the shelves are divided into only two sections. Furthermore, when the side sections of my shelves are folded up the entire shelf is still stably supported on the track.

What I claim is:

1. A cabinet comprising an interiorly cylindrical casing, a circular track in said casing, spaced brackets securing said track in said casing in spaced relation to the interior side wall thereof, a circular shelf in said casing comprising a central section and oppositely disposed side sections each having rollers secured to the bottom thereof and resting on said track, whereby said shelf may be turned in said casing, and hinges extending substantially entirely across said shelf connecting said side sections to said central section and adapted to permit said side sections to be swung upwardly and towards each other over said central section, whereby partially to collapse said shelf to facilitate its removal from the casing; each of said sections being provided with a depending peripheral flange extending downwardly between said track and the interior of said casing to prevent matter falling over the side of said shelf from lodging on said track.

2. A cabinet comprising an interiorly cylindrical casing, a circular track and means securing said track to the interior side wall of said casing in spaced relation thereto, a circular shelf comprising separate sections and hinges connecting said sections together, whereby said shelf may be collapsed to facilitate its removal from said casing; each of said sections having rollers on the bottom thereof resting on said track and so correlated and disposed with respect to said hinges as to maintain the upper surfaces of said sections substantially in the same plane; and each of said sections being provided with a depending peripheral flange extending downwardly between said track and the interior side wall of said casing and in spaced relation to said side wall; whereby matter falling over the side of said shelf may fall to the bottom of said cabinet and will not lodge on said track.

EDITH MEAD COLLINS.