Sept. 24, 1940. J. VISSER 2,215,626

ASH RECEPTACLE

Filed April 17, 1939

Fig. 1

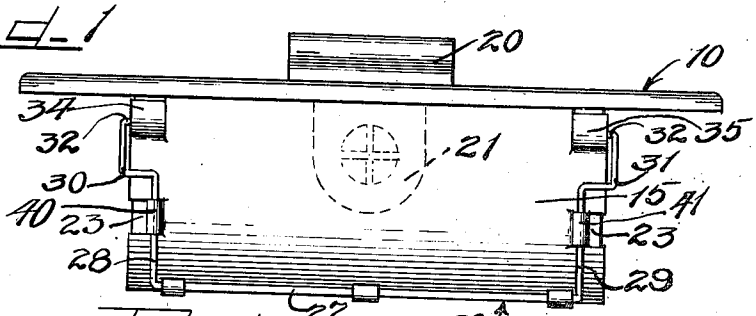


Fig. 2

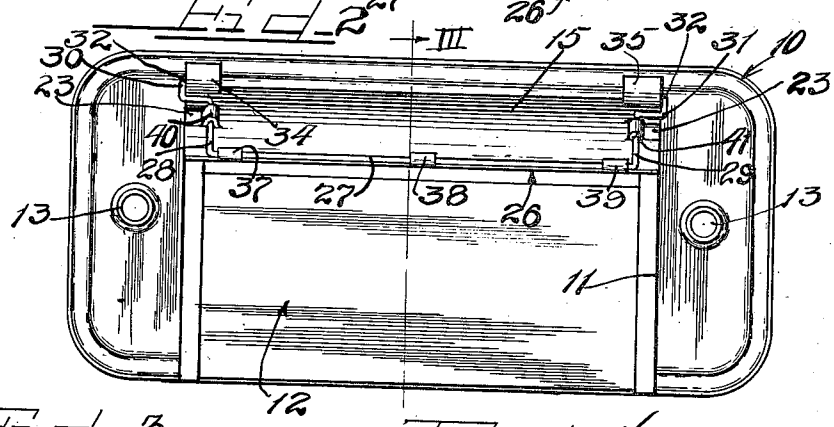


Fig. 3

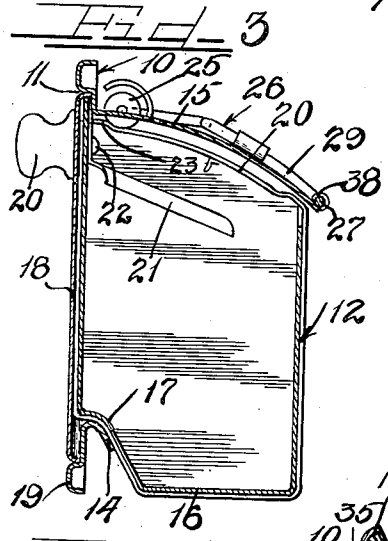


Fig. 4

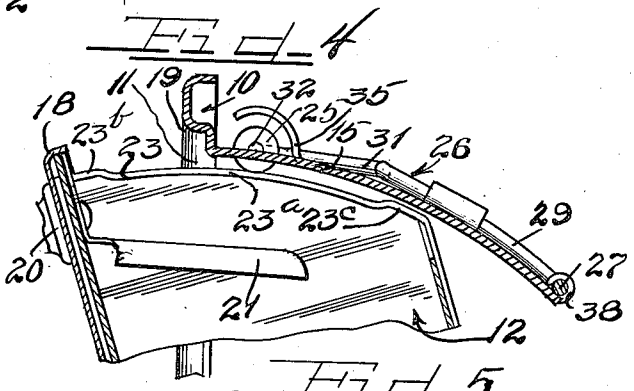


Fig. 5

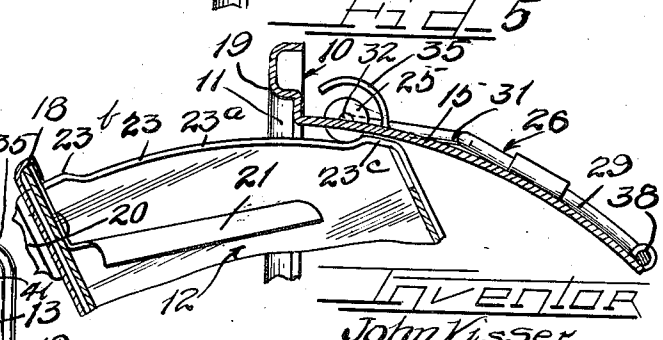
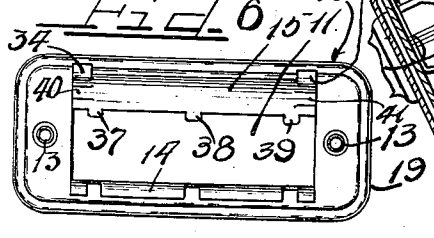


Fig. 6



Inventor
John Visser.

By Charles O'Neill Attys.

Patented Sept. 24, 1940 2,215,626

UNITED STATES PATENT OFFICE

2,215,626

ASH RECEPTACLE

John Visser, Grand Rapids, Mich., assignor, by mesne assignments, to Reconstruction Finance Corporation, Detroit, Mich., a corporation of the United States

Application April 17, 1939, Serial No. 268,416

6 Claims. (Cl. 206—19.5)

This invention relates to a container adapted to be moved into and out of a supporting structure, and more particularly to an ash receptacle tiltably disposed in a supporting panel.

An object of this invention is to provide an improved supporting structure for a container in which structure the container is adapted to be moved into and out of accessible position with a minimum amount of binding and friction.

Another object of this invention is to provide supporting structure for an ash receptacle with improved resilient means to exert a pressure on the receptacle to hold the receptacle against rattling in the supporting structure irrespective of whether the receptacle be in an open or closed position.

Still another object of this invention is to provide improved anti-frictional means for cooperation with a container in a supporting structure and by which the container may be maintained in a relatively tight anti-rattle fit in the structure.

A further object of the invention resides in the provision of improved anti-frictional means, as well as a supporting device therefor, for use in an ash receptacle assembly.

In the preferred embodiment of this invention as shown in the drawing hereto attached, there is provided a supporting structure having an opening through which a container is movable into and out of the structure, and in which some portion of said structure, preferably the portion used as a cover plate for the container, is provided with anti-frictional means for engaging a top side of the container to cooperate therewith as said container is moved into and out of said opening, said means being resilient for exerting a downward retaining pressure on the container supported in the structure.

Still another feature of the invention relates to the provision of container retaining means including an anti-frictional roller and some form of resilient supporting means therefor which preferably comprises a U-shaped spring clip carried by the portion of the container supporting structure that provides a cover for the container, said clip having free ends attached to the roller means.

A still further feature of the invention relates to a preferred way of forming the container receiving opening in a panel type supporting structure, which opening is formed by depressing rearwardly therefrom upper and lower portions, the uppermost of which serves as a cover for the container and the lowermost of which is formed into a supporting flange for the container; the upper portion or cover flange being notched out to provide the cover portion with integral lugs for holding a pressure applying device on the cover portion.

Other objects and features of this invention will more fully appear from the following detailed description taken in connection with the accompanying drawing, which illustrates a single embodiment thereof, and in which:

Figure 1 is a plan view of the preferred form of my novel container or ash receptacle structure;

Figure 2 is a rear view of the structure;

Figure 3 is a cross sectional view taken on the line III—III of Figure 2 looking in the direction indicated by the arrows and showing the container in a closed position;

Figure 4 is a cross sectional view on an enlarged scale corresponding to the upper part of Figure 3 but showing the ash container in a partially open position;

Figure 5 is a sectional view similar to Figure 4 illustrating the container in a fully open position; and

Figure 6 is a rear view of the panel structure alone, the container being removed, and showing the cover and bearing portions of the panel in the course of manufacture and partially formed into final shape.

As shown on the drawing:

The reference character 10 designates generally the panel or supporting structure which has an opening 11, in which is movably or tiltably disposed an ash container or receptacle 12. The panel 10 has a plurality of countersunk bolt or screw holes 13—13 by which the panel may be attached to an object on which the structure is to be mounted, such, for example, as the dash board of an automobile. It will also be noted from Figure 6 that the panel is recessed or, in other words, is provided with an outwardly extending peripheral bead 19 for a purpose to be referred to hereinafter.

The panel 10 and the receptacle 12 may be made of any suitable material but preferably are formed from metallic stampings.

The panel 10, as will be observed from Figure 6, has substantially a rectangular shaped opening 11 which is provided by depressing rearwardly from the body of the panel two portions 14 and 15 which are integral with the panel. The portion 14 is curved rearwardly and downwardly, as illustrated in Figure 3, so as to form a curved ledge or bearing on which the bottom of the re-

ceptacle is adapted to bear and to be bodily swung thereover.

The upper portion 15 is curved rearwardly and upwardly so as to form a cover for the container 12. This cover portion or plate is adapted to close the upper end of the container or ash receptacle when the receptacle is in the closed position illustrated in Figure 3.

The container 12 includes a bottom 16 (Figure 3) which at its one side is bent upwardly and curved into a bearing portion 17 adapted to rest and bear on the bearing flange 14 on the panel. This portion 17 is curved complemental to the bearing 14 so that the container may be bodily swung into and out of the panel opening 11.

The front side of the container 12 has secured to it an ornamented or finished front plate 18, which has an overall size larger than the front of the container and is adapted to seat in the recess of the panel defined by the peripheral bead 19 previously mentioned. This arrangement is such that when the container is in the closed position shown in Figure 3, the outer surface of the container front plate 18 is flush with the outer surface of the peripheral bead on the panel 10. It will also be noted that the front plate 18 is slightly spaced from the front side of the box (Figure 3) which spacing serves as an insulating space to prevent the heat of the contents or ashes in the box or receptacle 12 from injuring or marring the finish of the ornamental plate 18.

Also, the plate 18 is provided with a suitable handle 20 which is secured to the plate 18 by means of a bolt or screw 22 which also serves to secure to the container a cigarette or cigar snuffer 21. This snuffer is of the configuration illustrated in Figures 1 and 2 and is disposed wholly within the confines of the box or container 12. By reason of the fact that this snuffer is secured to the front side of the box, it is made easily accessible upon a slight opening of the ash receptacle or container.

The open or top side of the container 12 is provided with two parallel curved top edges 23 which are substantially the same general curvature as the cover 15, so that when the container is in its closed position, these edges are in close proximity and substantially parallel to the cover portion 15.

Each of these curved top edges or flanges of the container is provided with an intermediate slightly depressed section 23*a* and two slightly raised end portions 23*b* and 23*c* (Figures 4 and 5). These portions of the edges 23 are cooperable with anti-frictional rollers 25 of a resilient pressure applying device designated generally by the reference character 26 mounted on the supporting structure 10 preferably on the cover portion 15 and also preferably on the top side of the portion 15. As is evident from Figures 4 and 5, these spaced, aligned anti-frictional elements or rollers 25 are so arranged as to extend below the under surface of the cover plate 15 and to bear on the different portions 23*a*, 23*b*, and 23*c* of the curved container edges 23 depending upon the position of the container relative to the panel 10. When the container is in fully closed position as illustrated in Figure 3, the rollers are in engagement with the rear of the front raised portions 23*b* of the container top edges 23. When the container is in a partially open position as illustrated in Figure 4, the rollers are in engagement with the intermediate portions 23*a* of the edges 23. On the other hand, when the container is in a fully opened position, the rollers 25 are in engagement with the front of the rear raised portions 23*c* of the edges 23. These raised portions 23*b* and 23*c* constitute humps for holding the container in either a tight opened or a tight closed position. Obviously, in order to remove the container from the panel, it is first necessary to swing the container to the fully opened position as shown in Figure 5 and to thereafter exert a slight force upon the container so that the rollers 25 will raise sufficiently to allow the raised portions 23*c* of the edges 23 to move thereunder.

This raising or floating movement of the rollers 25 is provided by means of the resilient mounting by which these rollers are attached to the supporting structure 10 and in the present embodiment to its cover portion 15. More specifically, this structure includes a U-shaped spring wire having a longitudinally extending portion 27 and two spaced parallel legs 28—29, which have their ends offset in opposite directions as illustrated at 30 and 31 in Figure 2. These offset ends 30 and 31 of the U-shaped clip are disposed slightly beyond the ends of the cover portion 15, and each includes an inwardly extending pin portion 32 on which the corresponding roller 25 is rotatably mounted.

It will be perceived from Figures 4 and 5, that the axis of the roller 25 extends through the plane of the cover plate 15, and as a consequence it is necessary to notch out end sections of the cover plate to accommodate the rollers 25. This is effected by punching upwardly from the cover plate two curved lugs 34 and 35 (Figure 6) below which are disposed the two rollers 25. These rollers are resiliently mounted in the openings formed by reason of the punching out of the lugs 34 and 35 and are adapted to float or move up and down in response to the tilting or swinging of the container 12 to the different positions previously described.

This form of mounting prevents axial movement of the anti-frictional rollers 25 upon the bearing portion 32 as the resilient arms 30 and 31 act to stop outward movement and the adjacent portions of the supporting structure or cover portion 15 act to prevent inward movement of the rollers.

In order to properly anchor or secure the pressure applying device 26 to the top side of the cover plate 15, I have provided three integral lugs 37, 38, and 39 on the rear edge of the cover plate 15, which lugs, as illustrated in Figure 6, may be formed by punching such lugs out of some portion of the material slit to form the opening 11 therein. I prefer to use an opening of such height that all the material cut therefrom may be used to form the cover portion 15 and the lower flange portion 14. As shown in the preferred embodiment, lugs 37, 38, and 39 are formed by punching them out of the lower portion or flange 14 of the panel at the time that the two portions 14 and 15 are formed in a press from the metal of the panel. In Figure 6, these lugs 37, 38, and 39 are illustrated in the course of fabrication and prior to the turning of the lugs upwardly onto the cover for embracing the intermediate portion 27 of the U-shaped spring clip. As shown in Figures 1, 4, and 5, these lugs 37, 38, and 39 are rolled upwardly and turned about the portion 27 of the clip so as to anchor that portion to the top of the cover plate.

Also, at the same time that the lugs **37**, **38**, and **39** are formed, the cover plate **15** is split at its sides to provide for two other lugs **40** and **41**, which are later curled around the parallel legs **28** and **29** of the U-shaped clip, as shown in Figure 2. In this manner, the U-shaped clip is rigidly anchored to the top side of the cover plate and yet has freely flexible offset extremities on which the rollers **25** are mounted as previously described.

Any other suitable resilient means besides that illustrated may be used for mounting the anti-frictional rollers **25** upon any suitable portion of the supporting structure **10**, such as within the bead portion **19** or upon the panel adjacent the sides of the opening **11**, but I prefer the construction shown mounted upon the cover portion of the support **10**.

It is believed that the operation of my novel receptacle is evident from the foregoing description. It should be noted that irrespective of what position the ash receptacle or container **12** is moved relative to the opening **11**, the receptacle is at all times resiliently urged downwardly into tight engagement with the bearing **14** by the resiliently floating anti-frictional elements or rollers **25**. These rollers also serve to, in effect, latch the container in either the closed position shown in Figure 3 or the opened position shown in Figure 4, by reason of the particular cooperation of these rollers with the raised portions **23b** and **23c** of the top edges **23** of the container **12**.

It will, of course, be understood that various details of construction may be varied through a wide range without departing from the principles of this invention and it is, therefore, not the purpose to limit the patent granted hereon otherwise than necessitated by the scope of the appended claims.

I claim as my invention:

1. In a container assembly including a supporting structure having an opening and a container movable into and out of said opening, a cover plate for said container carried by said structure and provided with anti-frictional means for engaging a top edge of said container to cooperate therewith as said container is moved into and out of said opening, said means including roller means and a U-shaped spring clip including leg portions having free ends connected to said roller means, and an intermediate portion secured to said cover plate.

2. In a container assembly including a supporting structure having an opening and a container movable into and out of said opening, a cover plate for said container carried by said structure and provided with anti-frictional means for engaging a top edge of said container to cooperate therewith as said container is moved into and out of said opening, said means comprising an anti-frictional roller supported by a spring clip on said cover plate, said clip being fastened to the outer side of said cover plate, and said roller being arranged to engage said container edge on the under side of said cover plate.

3. In a container assembly including a supporting structure having an opening and a container movable into and out of said opening, a cover plate for said container carried by said structure and provided with anti-frictional means for engaging a top edge of said container to cooperate therewith as said container is moved into and out of said opening, said means including roller means and a U-shaped spring clip including leg portions having free ends connected to said roller means, and an intermediate portion secured to said cover plate, said clip being fastened on the outer side of said cover plate and having its free ends extending below the cover plate to the under side thereof and being connected to said roller means on the under side of the cover plate.

4. In a container assembly, a supporting structure for a container movable into and out of an opening in said structure, said structure comprising a panel having an opening therein formed by the separation of material depressed rearwardly therefrom to form two separated portions, one being at the top of the opening and being formed into a cover for the container and the other being at the bottom of the opening and formed into a supporting flange for the container, said cover plate having integral lugs notched out of the material struck out to form said opening, and also having resilient means for exerting a downward pressure on said container and which means is fastened to said cover plate by said lugs.

5. In a container assembly, a supporting structure for a container movable into and out of an opening in said structure, said structure comprising a panel having an opening therein formed by the separation of material depressed rearwardly therefrom to form two separated portions, one being at the top of the opening and being formed into a cover for the container and the other being at the bottom of the opening and formed into a supporting flange for the container, said cover plate having integral lugs notched out of the material struck out to form said opening, and also having resilient means for exerting a downward pressure on said container and which means is fastened to said cover plate by said lugs, said resilient means comprising a spring clip fastened to said cover by lugs and having a freely flexible end on which is mounted an anti-frictional roller for engaging an edge of the container.

6. In a container assembly including a supporting structure having an opening and a container movable into and out of said opening, a cover plate for said container carried by said structure and provided with resilient means for engaging a top edge of said container to cooperate therewith as said container is moved into and out of said opening, said means being supported on said plate and comprising a U-shaped pressure applying device including two leg portions secured to the cover plate and having freely flexible end portions constructed and arranged for pressure applying cooperation with the container below said cover.

JOHN VISSER.