June 30, 1936. R. F. DE BOER 2,046,107

ASH RECEIVER

Filed March 18, 1935

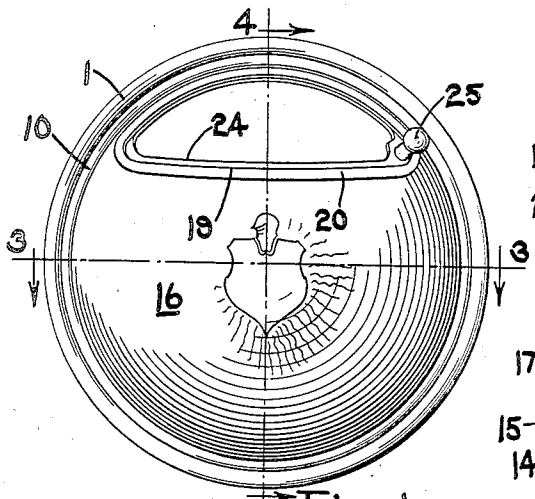


Fig. 1.

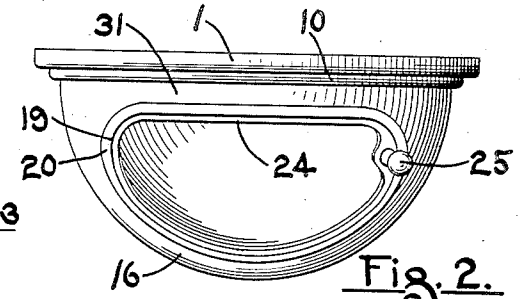


Fig. 2.

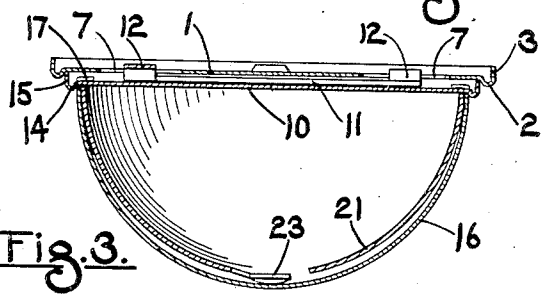


Fig. 3.

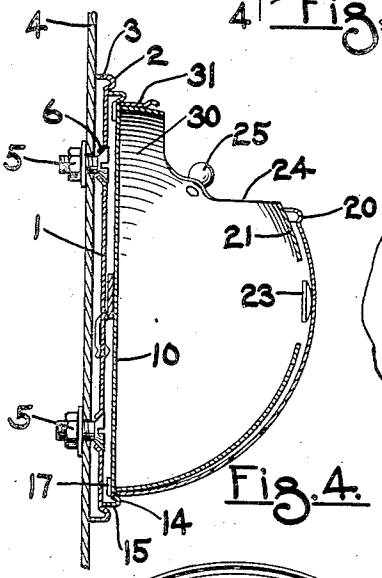


Fig. 4.

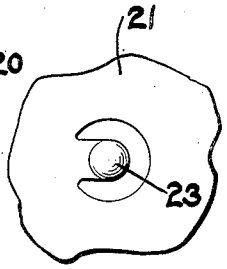


Fig. 5.

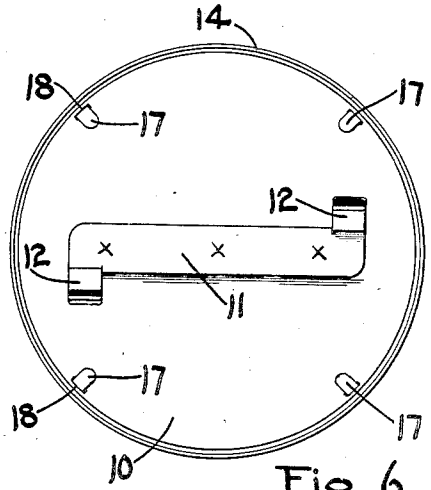


Fig. 6.

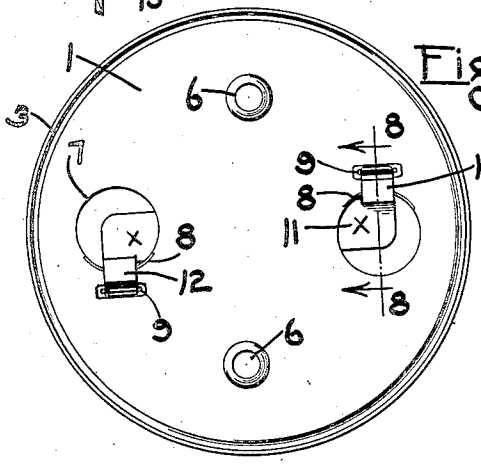


Fig. 7.

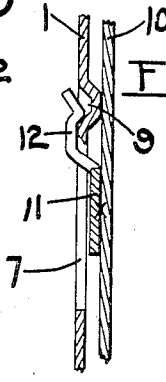


Fig. 8.

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ASH RECEIVER

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Application March 18, 1935, Serial No. 11,562

9 Claims. (Cl. 206—19.5)

This invention relates generally to a container and supporting means therefor and more particularly to an ash receiver which is adaptable for mounting and use in an automobile.

One object of the present invention is to produce an ash receiver which is convenient to use. This convenience results from the particular construction of the receiver and its style of mounting whereby it projects outwardly from the panel on which it is mounted. Thus it is readily visible and accessible.

Another advantage resides in its detachable mounting whereby it is easy to remove from the panel for the purpose of emptying the receiver of ashes and cigar or cigarette stubs. The removal of the receiver is easily accomplished by a slight rotation of the receiver, the receiver body itself serving a handle for causing this movement.

Another object of the present invention is to create an ash receiver which has means for closing the opening to the interior of the receiver whereby, when lighted cigarettes or the ashes therefrom are dropped into the receiver, the objectional smoke therefrom will not rise out of the receiver. Novel means is also provided whereby the closure means for the opening leading to the interior of the receiver is frictionally held in its open and closed positions. The closure means, operated manually by the user of the receiver, is of segmental spherical shape and, together with its attached plate, serves as a container for the refuse. Thus the refuse, which may contain a burning cigar stub, are held separated and somewhat spaced from the outer shell. This outer shell is etched as fragmentarily shown in Figure 1 of the drawing and it is desirable that the same should not be unduly heated for several reasons.

A further object of the invention is in the particular construction and design whereby a very ornamental receiver is produced having a pleasing segmental spherical shape and a symmetrical opening at the top thereof and also having a spherical front for the introduction of a painted or embossed design or emblem thereon. The segmental spherical shape is also very advantageous inasmuch as it materially cuts down eddy currents around the ash receiver, when the car is traveling and the windows or cowl ventilator more or less open, these eddy currents sometimes even whisking the ashes out of the receiver proper.

Another advantage of this invention is in the ease of installation of the receiver in a vehicle, the operation requiring only the drilling of two holes in the panel on which it is to be mounted and the back plate of the receiver mounted thereon by two screws passing through the back and the holes in the panel and then positioning the ash receiver onto the back plate by a simple rotative movement of the receiver.

An understanding of the invention and the simple and economical construction which has been produced may be had from the following description taken in connection with the accompanying drawing in which,

Fig. 1 is a front elevation of my novel ash tray.

Fig. 2 is a plan view of the same in open position ready to receive ashes therein.

Fig. 3 is a horizontal sectional view taken along the line 3—3 of Fig. 1.

Fig. 4 is a vertical sectional view taken along the line 4—4 of Fig. 1.

Fig. 5 is a fragmentary view of the inner or closure shell showing the spring finger thereon.

Fig. 6 is a rear view of the base plate of the ash receiver.

Fig. 7 is a rear view of the mounting plate with the base plate attached thereto.

Fig. 8 is an enlarged section taken along the line 8—8 of Fig. 7.

Similar numerals refer to similar parts throughout the several views.

Briefly described, my invention consists of four parts, an outer shell, an inner shell, a base plate and a mounting plate. The base plate is attached to the outer shell with the inner shell slidably mounted therebetween. The base plate has means for detachably mounting the receiver unit upon the mounting plate. The mounting plate is, of course, permanently attached to a supporting panel or the like.

Referring to Figs. 3 and 4 of the drawing, numeral 1 indicates the mounting plate which is formed with a bead 2 terminating in a circular flange 3. The flange 3 is held against the supporting panel or member 4 by means of bolts 5 extending through holes 6 in the base plate.

As clearly shown in Figs. 7 and 8, the mounting plate 1 has diametrically positioned openings 7 and 8 and stamped depressions 9, see Fig. 8, are located adjacent to these openings 7 and 8.

Referring now particularly to Fig. 6, numeral 10 indicates the base plate of the receiver proper. A clip support bar 11, having spring clips 12 extending therefrom, see Fig. 8, is permanently attached, as by welding, to the base plate 10. The spring clips 12 are bent as shown in Fig. 8 and consequently will engage the recesses 9 in the

mounting plate 1 as clearly shown in Fig. 7 upon rotating movement of the base plate 10.

The base plate 10 receives an outer shell 16 thereagainst by means of tangs 17 which extend through slots 18. The slots 18 are formed in the base plate 10 adjacent to the bead 14 which terminates in the flange 15. See Fig. 4. The tangs 17 are integrally formed with the outer shell member 16 and are bent over to hold the outer shell member 16 and the base plate 10 together.

Prior to attachment of the outer shell and the base plate an inner shell 21 is placed therebetween as shown in Figs. 3 and 4. This inner shell is of segmental spherical shape similar to the outer shell but is of a smaller diameter whereby it may be moved within the outer shell. The central portion of the closure shell 21 is stamped and cut away, see Fig. 5, to form a friction spring finger 23 which rides against the inner side of the outer shell. See Fig. 4. The edges of the inner or closure shell 21 engage against the base plate 10 to some degree.

The inner or closure shell 21 is cut away as indicated at 24 and a knob 25 is riveted adjacent one edge of this cut away portion as shown in Fig. 4. This riveting process causes an outward distortion of the inner shell 21 at this point and particularly adjacent its edge as indicated by reference numeral 30 in Fig. 4.

The outer shell is cut away as indicated at 19 and is bordered with a bead 20. This operation causes and permits a relatively narrow neck portion of the outer shell, this neck being indicated by the reference numeral 31, to be bulged outwardly and thus to permit relatively easy movement of the distorted portion 30 therealong. Thus it will be apparent that the inner shell may move freely at its intermediate position and will tighten up at either end of its movement.

Assembly and operation

The outer shell 16 is etched while it is in a flat plate and is then stamped to its substantially semi-spherical form and is formed with tangs 17 and the bordered cut away recess. As shown in Fig. 1 this recess is slightly larger than the recess in the inner shell. The base plate receives the tangs 17 and the inner shell is positioned between these two members. The tangs are bent over and the knob 25 of the inner shell extends through the opening in the outer shell as clearly shown in Figs. 1 and 2. The spring clips 9 of the base plate may now be inserted through the openings 7 and 8 of the mounting plate and rotated so as to bring them in the position shown in Fig. 7. The support bar 11 spaces the base plate 10 from the mounting plate 1 to prevent undesirable heat transfer therebetween and the spring finger 23 spaces the shells to serve a similar purpose. Otherwise, the emblem, see Fig. 1, may become discolored. This detachably mounts the receiver in its position ready for use.

The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. In combination, a base plate having a bead extending in one direction and then terminating in a flange extending in the other direction, a plurality of slots formed in the base plate inwardly from the bead, an outer shell having a segmental spherical shape and tangs equal in number to the slots and positioned to extend through said slots whereby the shell and the base plate may be held together, a second segmental spherical shell of lesser diameter than the first memtioned shell positioned therein, both of said shells having alined openings therethrough, means extending from the inner shell through the opening in the outer shell whereby the inner shell may be rotated a predetermined amount for the purpose described.

2. A receiver of the class described comprising, a base plate, an outer substantially semi-spherical shell fastened to the base plate and having an opening, a substantially semi-spherical inner shell of lesser diameter having a substantially similar opening therethrough and means for turning the inner shell relative to the outer shell to positions in which said openings are either in or out of registry.

3. A receiver as set forth in claim 2 but also having spring means for holding the two shells in spaced relationship.

4. A receiver as set forth in claim 2 but also having spring means for holding the two shells in spaced relationship, and also having a mounting plate upon which the base plate is mounted and positive means for spacing the base plate from the mounting plate.

5. A receiver as set forth in claim 2 combined with a knob attached to the inner shell adjacent one side of the opening therein and extending outwardly through the opening in the outer shell and serving to limit movement of the inner shell within the outer shell by engagement with opposite sides of the opening in the outer shell.

6. A receiver as set forth in claim 2 in which the inner shell has an easy rotating engagement with the outer shell adjacent said base plate and is of curvature to space it from the outer shell at other portions and spring means acting between the inner and outer shell acting to thrust the inner shell toward the base plate.

7. A receiver as set forth in claim 2 in which the inner shell is maintained out of contact with the outer shell at that part of its outer surface which is disclosed through the opening in the outer shell in turning.

8. An ash receiver adapted to be detachably mounted on an object and having heat insulating structure acting to resist heat transfer to said object and to the exterior surface of the ash receiver comprising, a mounting plate adapted to be attached to said object, a base plate detachably connected to said mounting plate, means for spacing the base plate from the mounting plate, an outer shell attached to said base plate on the opposite side from said mounting plate, an inner shell serving as an ash container located within the outer shell and means spacing the greater portion of its body from the outer shell whereby heat insulating air spaces are provided at substantially all sides of the ash container.

9. In a device of the class described, a back plate, a semi-spherical outer shell secured to the back plate and provided with an opening therein, and a semi-spherical inner shell rotatably disposed between the inner walls of the back plate and outer shell and provided with an opening therein adapted to register with the opening in the outer shell in its rotating movement, said inner shell having a finger tensionally engaging the inner wall of the outer shell.

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