July 7, 1953 C. Q. CADMAN 2,644,601

ASH TRAY

Filed May 7, 1948

FIG. 1.

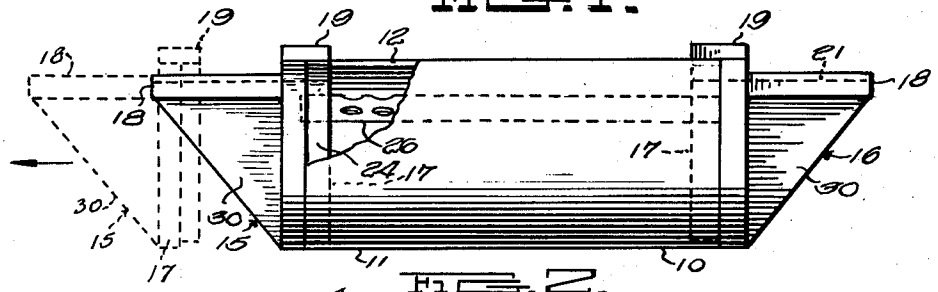
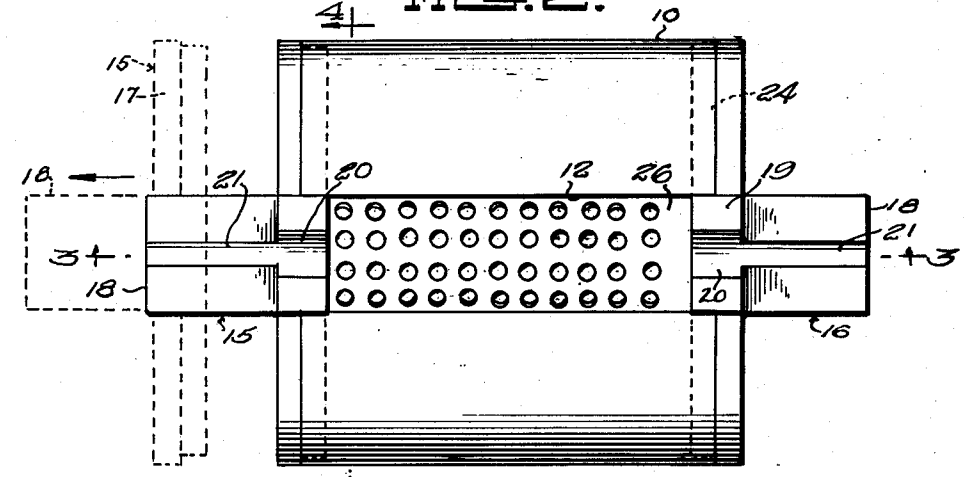


FIG. 2.



4 FIG. 3.

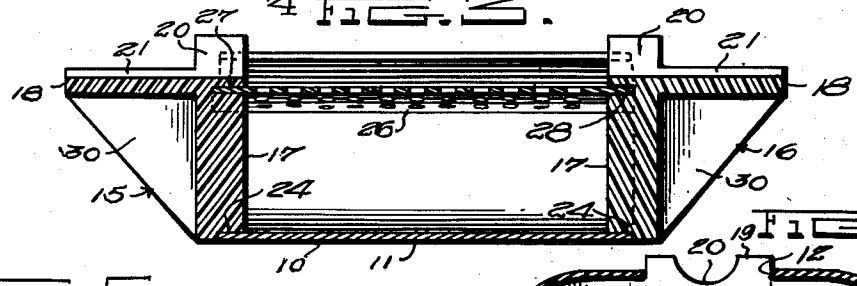


FIG. 4.

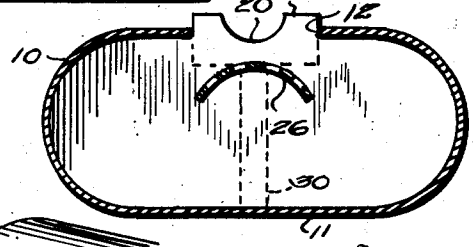
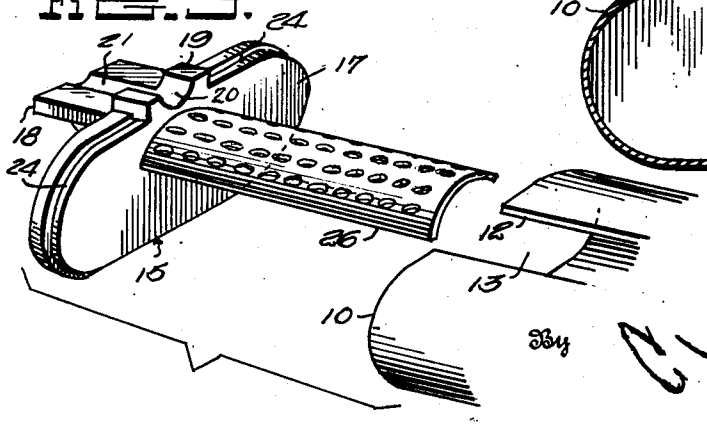


FIG. 5.



Inventor
COIN Q. CADMAN

By C. R. Parker
Attorney

Patented July 7, 1953

2,644,601

UNITED STATES PATENT OFFICE

2,644,601

ASH TRAY

Coin Q. Cadman, Silver City, N. Mex.

Application May 7, 1948, Serial No. 25,641

6 Claims. (Cl. 220—4)

1

This invention relates to ash trays.

In most ash tray structures, the ash receiving trays or like receptacles are open to view and become extremely unsightly after having been used for a relatively short time. In some constructions, covered receptacles have been provided, but devices of this character ordinarily are rather clumsy in appearance and expensive to manufacture, and the contents of the ash trays usually can be emptied only with difficulty.

An important object of the present invention is to provide a simple and highly attractive ash tray wherein the contents of the receptacle provided for receiving the ashes, cigarettes, are substantially hidden from view, thus preserving the neat appearance of the device even after it has been in use for a substantial length of time.

A further object is to provide an ash tray of this character which may be very easily emptied and cleaned when desired.

A further object is to provide a device of this character having a novel type of shield which hides the contents of the receptacle while at the same time providing convenient means whereby cigarettes and cigars may be extinguished.

A further object is to provide an ash tray having a relatively large open top to facilitate the entrance of ashes, cigarettes, thereinto, and wherein a shield is arranged beneath the opening and is substantially coextensive therewith to hide the contents of the receptacle from view while at the same time preserving the maximum capacity of the receptacle for receiving ashes and cigarettes.

A further object is to provide such an ash tray wherein cigarette supporting means is provided which prevents a cigarette from burning down and falling from the tray without actually gripping the cigarette.

A further object is to provide a novel and attractive ash tray of the general type referred to which may be easily and economically manufactured.

Other objects and advantages of the invention will become apparent during the course of the following description.

In the drawing I have shown one embodiment of the invention. In this showing:

Figure 1 is a side elevation of the ash tray, a portion of the receptacle being broken away;

Figure 2 is a plan view of the ash tray;

Figure 3 is a vertical longitudinal sectional view on line 3—3 of Figure 2;

2

Figure 4 is a vertical transverse sectional view on line 4—4 of Figure 2; and

Figure 5 is a fragmentary perspective view of portions of the ash tray shown separated.

Referring to the drawing, the numeral 10 designates the receptacle of the ash tray which may be formed of any preferably resilient material such as metal or plastic. The receptacle is shaped in cross section as shown in Figure 4 to provide a flat bottom 11 adapted to rest on a supporting surface. The receptacle 10 may be of any desired size and preferably is of such size as to provide ample capacity without frequent emptying.

The material of the body 10 has its edges terminating in substantial spaced relation as at 12 to provide an ash receiving opening 13 (Figure 5).

End members respectively indicated as a whole by the numerals 15 and 16 are provided for the receptacle 10. These end members may be formed of any suitable material and are preferably molded of plastic. The end members are respectively provided with vertical walls 17 and formed integral with these walls are oppositely extending projections 18. Each end wall 17 is provided with a vertically extending central portion 19 provided with a substantially semicircular notch 20. Each of the projections 18 is grooved as at 21 to form smooth continuations of the bottoms of the notches 20. Each groove 21 and its associated notch 20 is adapted to form a cigarette rest, the particular advantages of which will be referred to below.

Each end wall 17 is shouldered as at 24 to a shape corresponding to and adapted to be received in one end of the receptacle 10. This receptacle is cemented or otherwise permanently connected to the shoulder 24 of the end member 16 to form, in effect, an integral part thereof. The receptacle 11 tightly frictionally engages the shoulder 24 of the end member 15 so as to be normally fixed with respect thereto but removable for the purpose of emptying the receptacle.

A shield 26, preferably arcuate in cross section as shown in Figures 4 and 5, has one end extending into a correspondingly shaped recess 27 in the wall 17 of the end member 15. Such end of the shield 26 is preferably directly molded into the end member 15 to become, in effect, an integral part thereof. The opposite end of the shield is slidably receivable in a similarly shaped recess 28 formed in the wall 17 of the end member 16. Therefore, when the end member 15 is pulled away from the end member 16, the shield 26 will easily move out of the recess 28. It will

be noted that the shield 26, as shown in Figure 4, is substantially coextensive in width with the ash receiving opening 13. The shield is preferably no narrower than such opening and may be somewhat wider, if desired. The shield 26 is perforated, preferably throughout its length and width, as clearly shown.

While the end members 15 and 16 are relatively rugged solid moldings of plastic, they may be provided with reinforcing webs 30 between the end walls 17 and the projections 18 to insure against the breaking off of such projections in the event the ash tray is dropped. Moreover, the reinforcing webs 30 form convenient finger pieces when pulling the device apart for emptying and cleaning.

Operation

The operation of the device will be rather apparent from the foregoing description. The receptacle 10 and shield 26 are respectively carried by one of the plastic end members of the device. Preferably, the body 10 is carried by one end member and the shield 26 by the opposite end member, and the purpose of this is to completely remove the shield from within the body, as suggested in Figure 5, to render the interior of the body as well as the lower face of the shield 26 readily accessible for cleaning. It is for this reason that the shield 26 has one end molded in the recess 27 in the forming of the end member 15, with the body 10 permanently fixed to the end member 16.

In the use of the device, ashes may be knocked from a cigarette or cigar by engaging it with the shield 26, the perforations in which permit the ashes to pass through the shield. The transverse curvature of the shield facilitates the sliding thereover of any ashes which do not fall through the perforations. When a cigarette or cigar is to be extinguished, the end thereof may be pressed or rubbed against the shield 26, as will be apparent, whereupon the cigarette or cigar may be dropped into the tray and will slide or roll over the shield 26 into the bottom of the receptacle 10. This receptacle may be of any desired size and preferably is of a size to provide substantial capacity. The arrangement of the shield 26 substantially completely hides the contents of the receptacle from view, thus preserving the attractive appearance of the ash tray.

A cigarette may be laid in one of the grooves 21 and its associated notch 20 with the burning end over the shield 26. The relatively deep notches 20 under such conditions serve two functions. In the first place, they minimize the possibility that the cigarette may be knocked from the tray onto the supporting surface on which the tray rests. In the second place, without actually gripping the cigarette each of the notches surrounds the cigarette to a sufficient extent so that if the cigarette is left indefinitely in the position referred to, the relatively deep notches will extinguish the cigarette. Thus the cigarette is prevented from burning down to the point where the end lying in the groove 21 is lighter than the end overhanging the associated projection 18. It is usually under the latter circumstances that cigarettes fall from ash trays and cause unsightly burns on furniture. The present device prevents such accidents.

The receptacle may be very easily emptied. The thumb and middle finger of each hand may be placed on opposite sides of the webs 30 with the forefinger over the projections 18, whereupon the end members may be pulled apart as suggested in dotted lines in Figures 1 and 2. This separates the parts as shown in Figure 5, and the end of the receptacle adjacent the end member 15 will be completely open and unobstructed for the dumping of the ashes, cigarettes, and cigars therefrom. The parts may be reassembled by moving the open end of the receptacle 10 over and into frictional engagement with the shoulder 24 of the end member 15, or the device may be cleaned before such assembling of the parts. The complete removal of the shield 26 from the receptacle 10 renders the interior of the latter accessible for wiping or washing. Similarly, both the upper and lower faces of the shield 26 will be unobstructed so that they may be easily wiped or washed.

The end members 15 and 16 may be identical except that the notch 28 will be slightly wider than the thickness of the shield 26 to facilitate its entrance into and its removal from the notch 28. The provision of this notch is desirable in order to positively support the adjacent end of the shield 26 in the same manner that the opposite end of the shield is positively supported by its associated vertical wall 17. The same mold may be used for making both end members, it merely being necessary to provide a core member of the desired thickness adapted for association with the mold for forming the opening 28.

From the foregoing it will be apparent that the present device is attractive in appearance and capable of quite economical manufacture. Moreover, the device is highly efficient in use and is readily emptied and cleaned. The contents of the receptacle 10 are substantially completely hidden from view, thus preserving the attractive appearance of the device. The transverse curvature of the shield 26 not only facilitates the falling of ashes and cigarettes into the receptacle, but also permits the shield to be arranged closer to the top of the receptacle to better hide the contents of the receptacle without interfering with the free falling of cigarettes and cigar butts into the receptacle. In other words, the downward curving of both edges of the shield 26 provides adequate space between the shield and the edges 12 of the receptacle 10 to allow cigars and cigarettes to freely fall into the receptacle.

I claim:

1. An ash tray comprising a receptacle of sheet material bent transversely to form a receptacle with the edges of the sheet in spaced parallel relation to define a top opening, end members carried by said receptacle adjacent the ends of said opening, and a shield carried by said end members wholly within said receptacle in spaced relation to said opening and to the bottom of said receptacle, one of said end members being frictionally detachably connected to said receptacle and said shield being fixed to such end member and frictionally detachably connected to the other end member, whereby said one end member and said shield may be detached from said receptacle as a unit to facilitate emptying and cleaning of the ash tray.

2. An ash tray comprising a receptacle formed of a sheet of material bent transversely to form a receptacle with the edges of the sheet in spaced parallel relation defining an elongated top opening, a pair of end members having portions corresponding in shape to and projecting into the ends of said receptacle to secure them thereto, a shield arranged in said receptacle and substan-

tially coextensive in width with said opening, said end members having recesses receiving the ends of said shield to support it wholly beneath said opening and above the bottom of said receptacle, said shield being fixed in the recess of one of said heads and removably mounted in the recess of the other of said heads, the projecting portion of said one head being frictionally held in the adjacent end of said receptacle to be detachable therefrom, said receptacle being fixed to the projecting portion of the other of said heads.

3. An ash tray comprising a sheet of material bent transversely to form a receptacle having a central portion forming a supporting bottom and having the longitudinal edges of the sheet spaced from said bottom and projecting toward each other in spaced parallel relation, a pair of end members corresponding in shape to the cross sectional shape of said receptacle and having reduced portions corresponding in shape to the cross sectional shape of the interior of said receptacle and projecting into the ends thereof, a shield arranged in said receptacle and extending from end to end thereof, said end members having recesses corresponding in shape to and receiving the ends of said shield to support it above said bottom and beneath said opening, one end of said shield being permanently fixed in one recess and the other recess frictionally receiving the corresponding end of said shield, the end member in which the last-mentioned recess is formed being fixed to the adjacent end of said receptacle and the opposite end of said receptacle being frictionally engaged with the projecting portion of the end member at the opposite end of said receptacle whereby, when said end members are pulled apart, said shield will remain fixed to one of said end members and said receptacle will remain fixed to the other end member.

4. An ash tray comprising a sheet of material bent transversely to form a receptacle having a central portion forming a supporting bottom and having the longitudinal edges of the sheet spaced from said bottom and projecting toward each other in spaced parallel relation, a pair of end members corresponding in shape to the cross sectional shape of said receptacle and having reduced portions corresponding in shape to the cross sectional shape of the interior of said receptacle and projecting into the ends thereof, a shield arranged in said receptacle and extending from end to end thereof, said end members having recesses corresponding in shape to and receiving the ends of said shield to support it above said bottom and beneath said opening, one end of said shield being permanently fixed in one recess and the other recess frictionally receiving the corresponding end of said shield, the end member in which the last-mentioned recess is formed being fixed to the adjacent end of said receptacle and the opposite end of said receptacle being frictionally engaged with the projecting portion of the end member at the opposite end of said receptacle whereby, when said end

members are pulled apart, said shield will remain fixed to one of said end members and said receptacle will remain fixed to the other end member, said shield having its top convexly curved to facilitate the falling of ashes from said shield into said receptacle and said recesses corresponding in shape to the cross sectional shape of said shield to preserve the transverse curvature thereof and the inherent beam strength therein.

5. An ash tray comprising a receptacle formed of a sheet of material bent transversely to form a receptacle with the edges of the sheet in spaced parallel relation defining an elongated top opening, a pair of end members having portions corresponding in shape to and projecting into the ends of said receptacle to secure them thereto, a shield arranged in said receptacle and substantially coextensive in width with said opening, said end members having recesses receiving the ends of said shield to support it wholly beneath said opening and above the bottom of said receptacle, one end of said shield being frictionally releasably held in one of said recesses and the end of said receptacle opposite the frictionally held end of said shield being frictionally releasably engaged with said portion of the adjacent end member.

6. An ash tray comprising a receptacle formed of a sheet of material bent transversely to form a receptacle with the edges of the sheet in spaced parallel relation defining an elongated top opening, a pair of end members having portions corresponding in shape to and projecting into the ends of said receptacle to secure them thereto, a shield arranged in said receptacle and substantially coextensive in width with said opening, said end members having recesses receiving the ends of said shield to support it wholly beneath said opening and above the bottom of said receptacle, said shield having its top convexly curved, one end of said shield being frictionally releasably held in one of said recesses and the end of said receptacle opposite the frictionally held end of said shield being frictionally releasably engaged with said portion of the adjacent end member.

COIN Q. CADMAN.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
988,962	Baker	Apr. 11, 1911
1,567,894	Barcelona	Dec. 29, 1925
1,813,467	Smith	July 7, 1931
1,830,543	Heise	Nov. 3, 1931
1,864,569	Willauer	June 28, 1932
1,883,723	Groth	Oct. 18, 1932
2,224,893	Ames	Dec. 17, 1940
2,367,491	Ferguson	Jan. 16, 1945
2,501,980	Wolfe	Mar. 28, 1950

FOREIGN PATENTS

Number	Country	Date
364,390	Great Britain	Jan. 7, 1932