March 7, 1939. R. F. DE BOER 2,149,586

ASH RECEIVER HINGE

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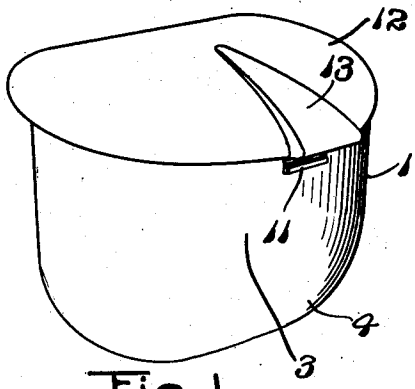

Fig. 1.

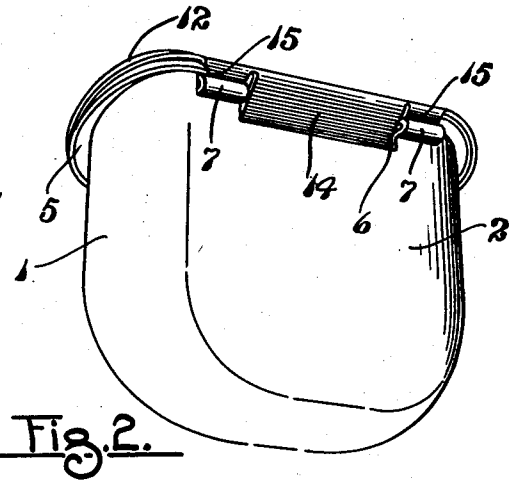

Fig. 2.

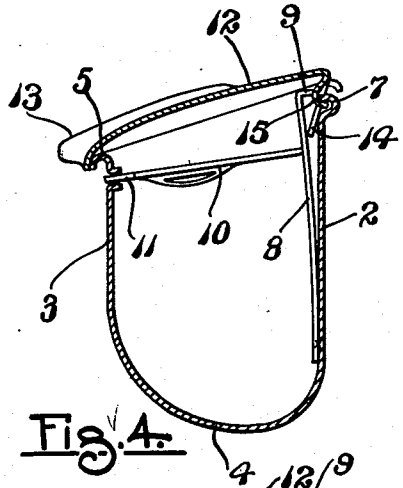

Fig. 4.

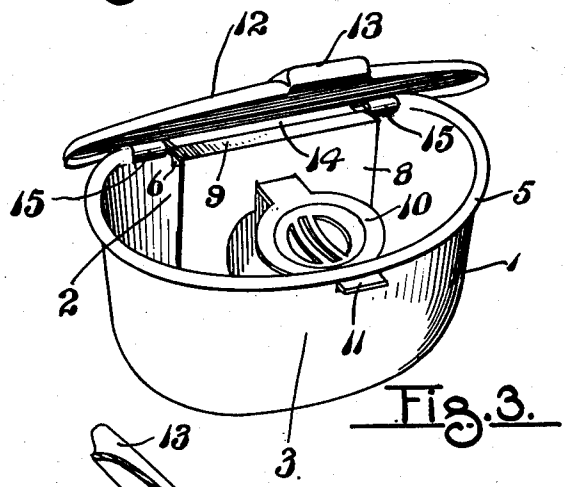

Fig. 3.

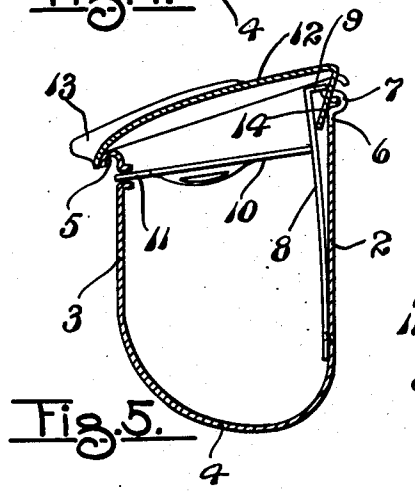

Fig. 5.

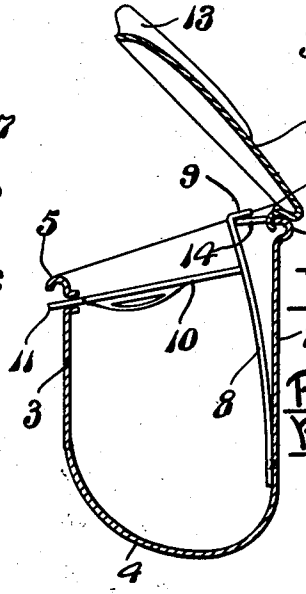

Fig. 6.

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UNITED STATES PATENT OFFICE

2,149,586

ASH RECEIVER HINGE

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Application May 8, 1937, Serial No. 141,420

8 Claims. (Cl. 206—19.5)

This invention relates to ash receptacles, and more particularly to novel construction of hinge arrangement between a holder or receptacle for ashes which is open at its upper end, and a lid adapted to close the open upper end of the receptacle, the lid and the receptacle being formed so as to provide a simple, economical and practical hinge connection between them. With my invention the lid may be applied to the receptacle without the use of tools and the two parts effectively hinged together, thereby providing a closed receptacle in which the lid may be lifted to an open position or moved to a closed position, and in either of which positions it is yieldingly held.

The invention is fully disclosed in the accompanying drawing and may be understood with reference thereto, taken in connection with the following description.

In the drawing:

Fig. 1 is a perspective view looking at the receptacle from what may be termed its front, and with the lid therefor in closed position.

Fig. 2 is a similar and somewhat enlarged perspective view looking at the repectacle from its opposite side and showing the hinge structure between the receptacle and lid.

Fig. 3 is a perspective view showing the lid in open position.

Fig. 4 is a vertical section with the lid closed.

Fig. 5 is a similar vertical section at a different plane, and

Fig. 6 is a vertical section on the same plane as that shown in Fig. 4 with the lid open.

Like reference characters refer to like parts in the different figures of the drawing.

The receptacle 1 is formed from sheet metal having a vertical back 2, a vertical front 3 spaced therefrom and integrally connected by means of rounded ends, the bottom 4 also being of curved and rounded form as shown. The upper end of the receptacle is open and a rim 5 is made continuously around the upper edges at the front and ends and partly into the back, said rim, however, being cut away at the major part of the back leaving a recess 6. At each end of the recess the metal of the back is formed into a lip 7 substantially of U-shape as shown, and open at the front side.

A plate 8 of spring material is permanently secured, as by spot welding, adjacent its lower end to the back 2 and extends upwardly and at its upper end portion is formed with a rearwardly turned lip or flange 9 which extends in practice the full width of the member 8. From the body of the plate 8 a snuffing member 10 is stamped and turned substantially at right angles to the plate, being integrally connected thereto at its rear end and thence extending to the front 3 of the receptacle and having an integral lip 11 which passes through a slot in said front 3 at a point a short distance below the rim 5 previously described. The spring plate 8 has a limited movement at its free upper end portion away from the back 2 but normally its tendency is to move toward said back 2 and lie as close thereto as the connection of the lid about to be described will permit.

The lid 12 is stamped from a plate of sheet metal and is formed at its forward portion and between its ends with an upwardly embossed finger engaging member 13. At its rear end a part 14 of substantially the same width as the plate 8 is turned to extend downwardly and forwardly as shown, and at each end thereof substantially U-shaped lips 15 are formed with open sides to the rear, the same being adapted to cooperate with the reversely formed lips 7 at the upper edge of the back 2 of said receptacle.

The hinge is applied to the back by placing the same over the open upper end of the receptacle and with the part 14 underneath the flange 9 of the spring plate 8. Then by moving the lid bodily forward, the U-shaped lips 15 will pass by and engage with the lips 7 as shown in Fig. 4, and will be held snugly in cooperative relation thereto by the force of the spring plate 8. The cooperating reversely positioned U-shaped lips 7 and 15 provide a hinge construction such that the lid may be lifted to open position as shown in Figs. 3 and 6, or turned to closed position as shown in the remaining figures. When lifted to open position the member 14 at its free edge moves upwardly and against the spring plate 8 until the flange 9 is reached, which provides a stop against further opening movement of the lid, that is, the lid moves from the position shown in Fig. 4 to that shown in Fig. 6, springing the plate 8 in a forward direction. When the lid reaches its uppermost position it is held therein by the force of the spring, the line of force of which passes above the pivotal axis about which the lid 12 turns. On turning the lid in a downward direction for a short distance the line of force of the spring plate 8 passes below such pivotal axis and the lid is snapped to closed position and held yieldingly in such position until lifted by engaging underneath the projecting front end of the finger portion 13.

With this construction the assembly merely consists in manually applying the lid to the re-

ceptacle. When once assembled the lid is held securely against disengagement. No tools are required for the assembly. The complete receptacle with its attaching lid and with the snuffer at 10 requires only three pieces of sheet metal. The snuffer 10 is adapted to be engaged by the lighted end of a cigar or cigarette to snuff the light, the ashes or any burning particles or the cigar or cigarette passing downwardly through the snuffer as is evident.

This ash receiver receptacle is adapted to be detachably inserted in a suitable decorative outside casing which is ordinarily attached to the dash of an automobile or to the inner sides of the automobile body in convenient position to be accessible to the driver or passengers who can readily lift the lid and dispose of ashes from cigars or cigarettes or the butts thereof in the receptacle and instantly close the lid. This receptacle with the attached lid is readily removable from its enclosing casing or emptying whenever needed.

The structure described is of a very practical and economical form and has been manufactured and sold in large quantities.

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. A receptacle having a vertical back, a lid therefor, said back of the receptacle and rear edge of the lid having cooperating oppositely positioned U-shaped bends bearing against each other to provide a hinge connection between the receptacle and lid, and a spring member attached to the inner side of the back and extending upwardly and terminating in a rearwardly turned flange, said lid having a forwardly and downwardly extending portion extending from its rear edge against said spring member below said flange, as specified.

2. In a construction of the class described, a sheet metal support having, at its edge, two spaced apart U-shaped bends open at one side, a lid of sheet metal having two spaced apart U-shaped bends at one edge open at one side, the open side of said U-shaped bends being in substantial opposition to each other whereby the free edge portions of said bends may enter the recesses of opposed U-shaped bends and thereby provide a pivotal connection between the support and lid, and spring means mounted upon the support and extending upwardly and terminating in a rearwardly turned flange combined with a cooperating part integral with the lid and extending forwardly and downwardly from the same edge thereof as the bends thereon and between the same into engagement with said spring means, as specified.

3. An ash receiver comprising, a vertical receptacle of sheet metal open at its upper end, a lid of sheet metal for said ash receiver, separable hinge members at the upper edge of the back of said receptacle and at the rear edge of said lid having interengagement whereby the lid may be turned to open or closed position with respect to the open upper end of said receptacle, and spring means mounted within and on the back of said receptacle combined with cooperating means on the lid for yieldingly holding the hinge members in cooperative engagement but permitting their separation by pressure upon said lid to move the same forward, as specified.

4. A construction containing the elements in combination defined in claim 3, said spring member comprising a plate of spring steel having a section struck therefrom and bent horizontally forward and passing at its front end through the front side of the receptacle.

5. An ashes holding receptacle of sheet metal open at its upper end, the upper edge of said receptacle being cut away to provide a relatively long horizontal recess therein, the metal at each end of said recess being formed into a substantially horizontal U-shaped bend open at its forward side, a lid of sheet metal having a downwardly and forwardly extending part at its rear edge of less width than the length of said recess in the receptacle, said lid at its rear edge and at each end of said forwardly and downwardly extending part being formed with a U-shaped bend opening to the rear, whereby said U-shaped bends on the back of the receptacle and on the lid may be interengaged, and a plate of spring metal positioned vertically within the receptacle and secured adjacent its lower end to the back thereof and extending upwardly substantially to the upper end of said receptacle, and formed with a rearwardly turned flange at its upper end which extends over said forwardly and downwardly turned part at the rear edge of said lid, as and for the purposes specified.

6. A construction containing the elements in combination defined in claim 5, said spring plate having a portion cut therefrom at three sides and connected integrally to the plate at its upper end and extending forward horizontally to and passing slidably through the front side of said receptacle, as specified.

7. In a device of the class described, a receptacle having an open upper end, a covering lid therefor, readily separable interengaging hinge elements at the upper edge of the back of the receptacle and at the rear edge of said lid, a yielding spring member attached to the back of the receptacle inside the same, and means on the lid against which said spring member bears to hold the hinge engaging elements in operative relation to each other, said spring member being yieldable to permit connection of the lid and receptacle or disconnection thereof.

8. A receptacle having an open side, a cover therefor, means for pivotally connecting said receptacle and cover, said connecting means being separable by movement transverse to the axis of said pivot, spring means acting to maintain said separable means in connecting relation, and means coacting with said spring means serving to positively limit opening of said cover.

RUDOLPH F. DE BOER.