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2,060,504

SHEET METAL CONTAINER

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Fig. 1.

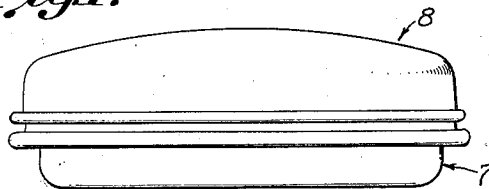


Fig. 2.

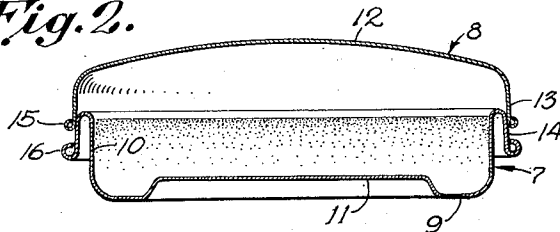
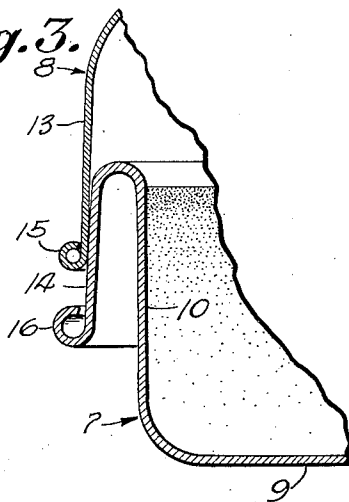


Fig. 3.



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SHEET METAL CONTAINER

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4 Claims. (Cl. 220—42)

The invention pertains to small sheet metal containers or boxes such as are used for containing shoe polish and the like; and it has for its primary object, the production of a box or container of this character, capable of being opened readily without the aid of an opening instrumentality such as a key commonly provided in the case of shoe polish boxes.

Another object is to provide a box of the character indicated having base and cover sections simply constructed from two thin sheets of metal and respectively formed with tapering seating portions frictionally held in interfitting engagement and releasable by a relative flexing movement between the two portions produced for example by striking the edge of the box against a rigid object.

The objects of the invention thus generally stated, together with other and ancillary advantages, are obtained by the preferred construction and arrangement illustrated in the accompanying drawing forming part hereof, wherein:

Figure 1 is an edge elevational view of a box embodying my invention and of the type suitable for use in containing shoe polish and the like.

Fig. 2 is a central vertical sectional view through the box.

Fig. 3 is a fragmentary sectional view through one side edge portion of the box and showing the interfitting relation of the base and cover sections on an enlarged scale.

In the preferred embodiment of the invention selected for purpose of illustration, my improved box comprises a relatively shallow base 7 and a cover 8, each formed from a thin sheet of metal. The base has a bottom wall 9 and a substantially vertical wall 10, the bottom wall being formed with a centrally raised portion 11 for stiffening purposes. Similarly the cover has a top wall 12 with a depending peripheral skirt or side flange 13, the top wall being preferably dome shaped in contour.

To provide seating portions adapted to be held frictionally in interfitting engagement and at the same time permit of easy removal of the cover, the latter is made substantially larger in diameter than the side wall 10 of the base, and this wall 10 is provided with an external flange 14 bent outwardly and downwardly from the upper edge of the side wall in laterally spaced relation thereto: The cover flange 13 is similarly inclined outwardly and downwardly, but at an angle to the vertical slightly less than that of the base flange 14. The lower edge of the cover flange is rounded through the provision

of an out-turned bead 15. Also the base flange terminates in an out-turned bead 16.

It will be observed that the cover flange 13 provides a flat tapering seating portion, the lower part of which is enageable with the flat annular tapering seat formed by the base flange 14; and because of the difference in the degree of taper between the two flanges, when the cover is pressed into closed position, the parts interengage frictionally with the flanges yielding slightly so that the frictional engagement is maintained due to the resiliency of the metal, or in other words, with a spring-like action.

In view of this construction, the cover may be readily disengaged from the base by producing a relative flexing movement between the two interfitting flanges. This is accomplished in practice by striking the bead 16 of the base flange against a suitable rigid object. It will be observed in this connection that the bead 16 constitutes an outward extension terminating somewhat beyond the bead 15 of the cover flange.

While the degree of taper of the flange 13 may vary with a corresponding variation in the taper of the flange 13, I have found that in the case of a box filled with shoe polish, an angle of approximately four degrees between the base flange 14 and the adjacent side wall 10 is satisfactory. With the parts thus proportioned, it is possible merely by striking the bead 16 against a rigid object, not only to loosen the cover, but to effect its complete disengagement therefrom with a popping action.

It will be evident that I have provided a box or container of the type adapted for use as a container of shoe polish or the like, which is of a very advantageous character. Notwithstanding the absence of the usual opening key, the cover may be quickly and easily dislodged from the base. Moreover, the construction is exceedingly simple so that the box is susceptible of manufacture at a low cost.

I claim as my invention:

1. A box of the character set forth, comprising a base having a bottom wall and a peripheral upright side wall, a cover having a top wall and a peripheral flange of a diameter throughout its vertical plane surface substantially greater than said side wall of the base, said cover flange tapering outwardly and downwardly and terminating in a rounded lower edge, and said base having an annular flange formed integral with its side wall and bent outwardly and downwardly at an angle slightly greater than the inclination of the cover flange, said two flanges being adapted to inter-

engage frictionally with each other, and an annular bead on the lower edge of the base flange projecting outwardly beyond said rounded lower edge of the cover flange in the assembled relation of the parts.

2. A container of the character set forth comprising a base having a bottom wall and a peripheral upright side wall, said base having an annular flange formed integral with its side wall and bent outwardly and downwardly at an angle only slightly inclined from the vertical, said base flange being throughout its area of substantially greater diameter than said side wall, a cover having a top wall and a peripheral flange of a diameter to fit over the base flange, said cover flange tapering outwardly and downwardly at an angle slightly less than the inclination of said base flange and being adapted at its lower part to engage frictionally with said base flange, said base flange being relatively yieldable in a generally radial direction away from said lower part of said peripheral flange to effect a release of the two flanges and thereby separation of the cover from the base.

3. A container of the character set forth comprising a base having a bottom wall and a peripheral upright side wall, said base having an annular flange formed integral with its side wall and bent outwardly and downwardly at an angle only slightly inclined from the vertical, said flange having an annular bead on its lower edge projecting outwardly therefrom, a cover having a top wall and a peripheral flange of a diameter to fit over the base flange, said cover flange tapering outwardly and downwardly at an angle slight-

ly less than the inclination of said base flange, a reinforcing bead on the lower edge of said cover flange projecting outwardly less than said annular bead on said base flange, the beaded lower part of said cover flange being adapted to engage frictionally with said annular flange in assembly of the parts, and said base flange being slightly yieldable in a generally lateral direction away from the coacting part of said cover flange to effect a release of the two flanges and thereby separation of the cover from the base upon striking said annular bead of said base flange against an unyielding object.

4. In combination in a container of the character described, an annular base part and an annular interfitting cover part, said base part having a bottom wall and a peripheral upright side wall including an annular flange integral therewith and bent outwardly and downwardly at an angle of about four degrees from the vertical, an annular reinforcing bead on the lower edge of said flange and projecting outwardly substantially beyond the outer plane of the flange, and said cover having a top wall and a substantially rigid peripheral flange of an internal diameter to fit over the base flange, said cover flange tapering outwardly and downwardly at an angle slightly less than said base flange so as to engage frictionally with the latter flange when the parts are forced together, disengagement of said parts being effected with a popping action upon striking said reinforcing bead against a relatively unyielding object to flex said base flange slightly inwardly relative to said cover flange.

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