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J. F. PETERS ET AL

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INTEGRAL HINGE FOR SHEET METAL CONTAINERS

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Fig. 2

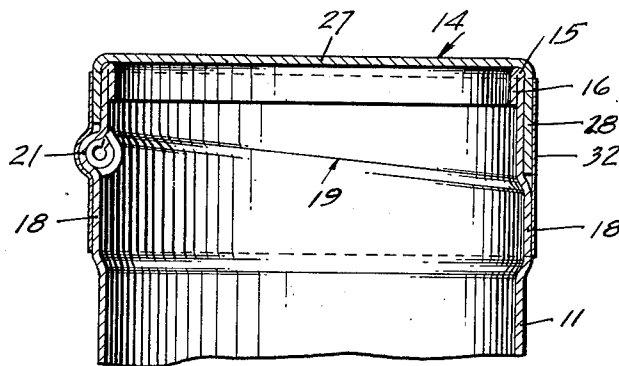


Fig. 3

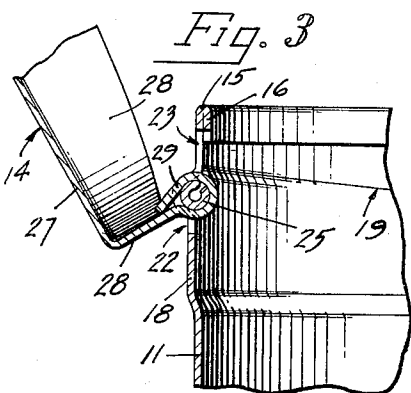


Fig. 1

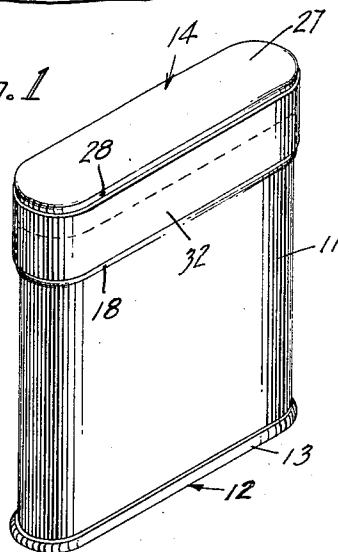
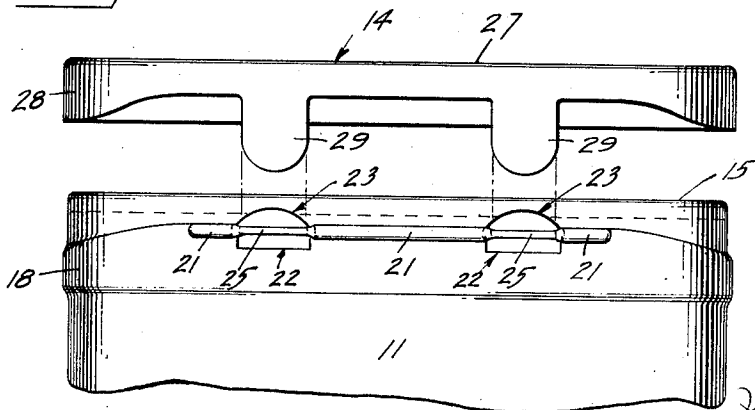


Fig. 4



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INTEGRAL HINGE FOR SHEET METAL CONTAINERS

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2 Claims. (Cl. 220—31)

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The present invention relates to containers or cans and has particular reference to a sheet metal can having a hinged cover and a projecting bead formed to receive the cover so that the can and cover may be sealed by a removable tape.

An object of the invention is the provision of a sheet metal can having an outwardly projecting bead and a hinge cover the bead being of such shape and size as to better receive the cover which is formed with a depending flange wall which extends down adjacent the bead and is flush with the outside wall of the bead to provide a uniform surface for application of a sealing tape which extends over the adjacent flush edges of the cover and the bead when the cover is in closed position on the can.

Another object is the provision of such a can wherein a novel wireless hinge element is formed integrally with the bead for attaching the cover to the can in a manner which does not interfere with the application of the sealing tape over the hinge element.

Another object is the provision of such a can wherein the cover end of the can is reinforced with an inwardly disposed hem setting off a smooth uniform seat edge for the hinge cover.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

Figure 1 is a perspective view of a sealed can embodying the instant invention;

Fig. 2 is an enlarged transverse section taken through the upper end of the can shown in Fig. 1;

Fig. 3 is a view similar to Fig. 2 taken through the hinge portion of the can and showing the cover in an open position, with parts broken away; and

Fig. 4 is an enlarged back view of the can and its cover arranged in separated position prior to assembly, with parts of the can broken away.

As a preferred embodiment of the invention the drawings illustrate a sheet metal tobacco can made preferably of tin plate or the like material and adapted to be sealed with a removable sealing tape. This can comprises an oblong shaped tubular body 11 having at one end a bottom closure member 12 (Fig. 1) secured thereto in a suitable seam 13 and at its opposite or upper end a hinged slip cover 14.

The can body 11 is provided with a smooth

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even top edge for the reception of the cover 14. For this purpose the upper marginal edge portion of the body is turned inwardly and downwardly against the inner surface of the body thus providing a smooth seat edge 15 (Figs. 2 and 3) for the cover and forming a flat hem 16 which reinforces the upper edge of the body. This hem extends completely around the body.

Below the hem 16 and in spaced relation thereto the body 11 is formed with an outwardly projecting flat bead 18. This bead extends completely around the body. Along the opposite rounded ends of the body the upper edge of the bead tapers upwardly along an inclined line 19 (Fig. 2). The bottom edge of the bead extends straight across these rounded corners of the body. These edge lines of the bead merge into a comparatively wider bead section extending across the back of the body.

Hinge elements for the cover 14 are provided in the wide section of the bead 18 along the back or rear wall of the body. For this purpose the bead along its upper edge is formed with an elongated outwardly extending curved bead projection 21. At two places adjacent and along the length of this bead projection a portion of the bead 18 and a portion of the rear wall of the body 11 are cut away to form single continuous clearance openings 22, 23 respectively (Figs. 3 and 4). A portion of the metal of the bead at these clearance openings is compressed into cylindrical shape forming a pair of spaced hollow wireless hinge pintles 25 for the cover 14. These pintles by such compression are slightly reduced in diametrical dimension.

The cover 14 is formed with a flat top 27 surrounded by a depending flange 28 of varying depth which corresponds with and conforms to the upper edge 19 of the inclined or tapered body bead 18. This facilitates its hinging action on the body and when the cover is in closed position on the body the bottom edge of its flange 28 is closely adjacent to the upper edge of the body bead. Therefore when the cover is in closed position there is only a slight space between the lower edge of the cover flange and the top edge of the body bead. Its outer surface is substantially flush with the outer surface of the projecting body bead 18.

Along the back edge of the cover 14 its flange 28 is formed with a pair of hinge lugs 29. These hinge lugs extend through the clearance openings 22, 23 and are curved around the pintles 25. In this manner the cover is hingedly connected

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to the body 11 so that it may be swung into open or closed position as desired.

After the can is filled with its contents and the cover 14 is closed, the can is sealed with a removable sealing tape 32 (Figs. 1 and 2). This sealing tape is applied over the depending flange 28 of the cover and the flat bead 18 of the body. The tape extends completely around the body and thus seals the crevice between the cover flange and the body bead 18 and also seals the rear body wall clearance openings 22, 23 for the hinge lugs 29. The hinge pintles 25 formed from the material of the bead 18 and the body 11 are disposed in the clearance openings so that they project very little beyond the bead 18 and thus are readily covered by the sealing tape without any undue interference.

When it is desired to open the can the sealing tape may be pulled off or if desired may be cut along the terminal edge of the cover flange. The cover may then be readily hinged to open position and may be repeatedly used as a reclosure for the can.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

We claim:

1. A sheet metal container comprising a tubular body terminating at its upper end in an inwardly turned peripheral flat hem to provide a smooth cover seat, said body having parallel front and rear walls and outwardly curved connecting end walls, said body adjacent its open end having a wide flat bead projecting outwardly from the plane of the body and extending completely around the body, said bead at the rear wall of said body having an elongated curved integral projection constituting a wireless hinge pintle on said body, said rear body wall being cut away to form a clearance opening adjacent said pintle, and a container cover having a depending peripheral flange provided with a curved hinge lug extending through said clearance opening and embracing the aforesaid hinge pintle on said body rear wall, the lower peripheral edge of said cover flange on opposite sides of said hinge lug conforming and being closely contiguous to the upper peripheral edge of said flat body bead when the cover is in closed position engaging

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the smooth hemmed seat of said body to constitute a substantially flush surface between adjacent outer surfaces of the container cover and body for the reception of a removable tape to surround and seal the container.

2. A sheet metal container comprising a tubular body terminating at its upper end in an inwardly turned peripheral flat hem to provide a smooth cover seat, said body having parallel front and rear walls and outwardly curved connecting end walls, said body adjacent its open end having a wide flat bead projecting outwardly from the plane of the body and extending completely around the body, said bead tapering from a narrow portion along the front body wall to a comparatively wider portion along the rear body wall, the upper portion of said bead at the rear wall of said body having an elongated outwardly curved projection having spaced compressed portions of reduced diameter constituting wireless hinge pintles on said body, adjacent portions of said flat bead and the rear body wall being cut away to form spaced continuous clearance openings on opposite sides of said pintles, and a container cover having a depending peripheral flange provided with spaced curved hinge lugs respectively extending through said clearance openings and embracing the aforesaid hinge pintles of reduced diameter on said body bead projection, the lower peripheral edge of said cover flange between and on opposite sides of said hinge lugs conforming and being closely contiguous to the upper peripheral edge of said flat tapered body bead when the cover is in closed position engaging the smooth hemmed seat of said body to constitute a substantially flush surface between adjacent outer surfaces of the container cover and body for the reception of a removable tape to surround and seal the container.

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