

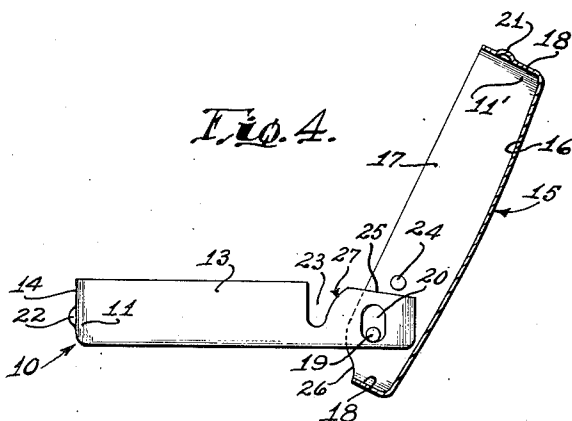
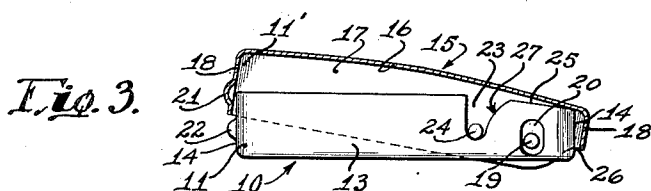
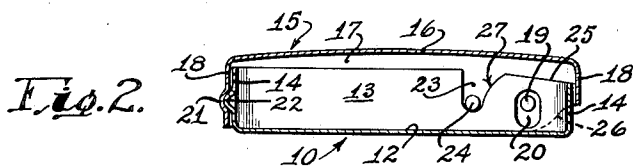
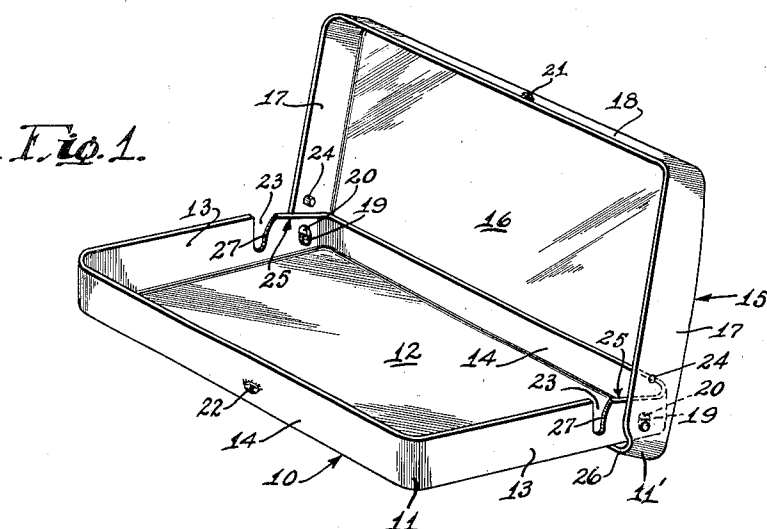
April 16, 1940.

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2,197,481

SHEET METAL CONTAINER

Filed Oct. 27, 1938



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UNITED STATES PATENT OFFICE

2,197,481

SHEET METAL CONTAINER

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Application October 27, 1938, Serial No. 237,230

5 Claims. (Cl. 220—36)

The present invention relates to sheet metal containers of the type ordinarily employed in the marketing of medicinal products such as tablets, powder and the like. Such containers ordinarily include a shallow body and a cover having a depending flange embracing the side and end walls of the body, the cover being adapted to be slipped onto and off of the body and being permanently hinged to the body by a pintle which passes through a series of knuckles formed on the rear side wall of the body and the cover flange. Cooperating means on the front side wall of the body and the cover flange serves to yieldingly retain the cover in closed position. To remove the cover it is necessary to grasp the container in one hand and then pry off the cover with the finger nail of the other hand. Ordinarily, considerable force is required to remove the cover, with the result that the container is jarred in the hands and the contents thereof is spilled.

The principal object of the invention is to provide an improved container of this character designed to overcome the above limitations and in which the container body and cover are hinged together in such a manner that when pressure is applied to the container adjacent the hinge on one side thereof, the other side will be released. Another object of the invention is to provide such a container in which the cover is hinged to the body by pin and slot connections in such a manner that upon opening of the container, the rear end of the cover will pass around the rear end of the body and underlie the same to completely uncover the contents of the container and facilitate access thereto. Yet another object of the invention is to provide such a container which, when the cover has been thus passed around the rear end of the container body, is possessed of a degree of stable equilibrium even when the container is empty so that the same may be supported in open position on a plane surface. A still further object of the invention is to provide a container in which the fulcrum axis for pivotal movement of the cover on the body upon application of pressure to the container is well forward of the hinge connection between the parts so that positive opening of the container will take place with the application of a small degree of pressure.

The provision of a container suitable for marketing medicinal products which is relatively simple in its construction, one which requires no excess metal over the conventional container of this sort and which requires no beading or flanging operations in the formation of the hinge

joint, and one in which the cover and body move freely relative to each other and will not become jammed, are further desirable features that have been borne in mind in the development of the present invention.

Other objects and advantages of the invention will become apparent hereinafter.

In the accompanying drawing:

Fig. 1 is a perspective view of a container constructed in accordance with the principles of the invention showing the cover in full open position;

Fig. 2 is a transverse vertical sectional view taken medially through the closed container;

Fig. 3 is a side elevational view of the partially opened container, the cover being shown in section; and

Fig. 4 is a sectional view similar to Fig. 3 with the cover substantially in its fully open position.

In the drawing, a container body 10 of substantially rectangular form with rounded corners 11 includes a bottom 12 and continuous upstanding side and end walls 13 and 14 respectively.

A cover 15 conforming generally in configuration to that of the body 10 having rounded corners 11', and including a top 16 and depending side and end flanges 17 and 18, is pivoted for rocking movement to the body 10, the pivotal connection between the two parts consisting of protuberances 19 formed in alignment on the inside of the cover side flanges 17 near the rear of the container and which project into vertical slots 20 formed in the side walls 13. The slots 20 are somewhat wider than the diameter of the protuberances 19 and thus a loose hinge connection between the cover and body is formed.

Locking lugs 21 and 22 formed on the front cover end flange 18 and front end wall 14 respectively serve to yieldingly maintain the cover closed on the body.

A pair of notches 23 are formed in the side walls 13 at regions forwardly of the slots 20. The depth of the notches is preferably approximately one-half the width of the side walls 13 and the bottoms of the notches are rounded as shown. A pair of protuberances 24 formed in alignment on the inside of the cover side flanges 17 at points forwardly of the protuberances 19 are adapted to rest upon the bottoms of the notches 23 as shown in Fig. 2 when the cover is in its closed position on the body. These protuberances 24 and the bottoms of the notches 23 form the pivotal axis for rocking movement of the cover on the body as will presently be set forth.

The overall height of the side and end flanges 17 and 18 is less than that of the side and end

walls 13 and 14 so that no sharp edges are presented at the bottom of the container when the latter is closed. Cut-away portions 25 at the upper edges of the side walls 13 and similar cut-away portions 26 at the lower edges of the side flanges 17 at the rear of the container provide clearances in order that the cover may be rocked from closed to open position on the body 10. The height of the rear end wall 14 and of the rear end flange 18 is reduced accordingly.

Referring now to Fig. 2, it will be noted that because the slots 20 are amply large to permit play of the protuberances 19 therein upon initial application of pressure to the rear portion of the container, the cover will be rocked upon the body with the protuberances 24 resting upon the bottoms of the notches 23. Such rocking movement of the cover on the body is accompanied by a movement of the protuberances 19 downwardly in the slots 20 until such time as these latter protuberances engage the bottoms of the slots whereupon the fulcrum axis for the cover will shift rearwardly to the hinge connection and upon further rocking movement of the cover on the body the protuberances 24 will rise out of the notches 23 as shown in Fig. 4. One side of each notch 23 is curved as at 27 to provide a clearance for the protuberances 24. In moving to its extreme open position the rear portion of the cover 15 passes over and around the rear end of the body 10 and the cover comes to rest with the bottom 12 of the body 10 engaging the rounded rear corners 11' of the cover.

In the full open position of the cover as shown in Figs. 1 and 4, the container possesses a degree of stable equilibrium and may be supported in open position on a plane surface. This feature is important not only for display purposes but also is advantageous in the packaging of the tablets or other commodity wherein the containers may be aligned and spaced on a moving conveyor and filled. The covers 15, upon movement of the conveyor, may be caused to engage an abutment positioned in the path thereof and will fall to closed position on the bodies 10 or at least to the partially closed position shown in Fig. 3 whereupon slight pressure thereon will serve to fully close the containers.

Modifications may be resorted to within the spirit and scope of the appended claims.

I claim:

1. A sheet metal container comprising a rectangular body having upstanding walls, a rectangular cover including depending walls designed to telescope over the walls of said body, means pivotally connecting the body and cover including a pair of pins and notches functioning as the pivot during initial swinging of the cover from a closed position, a pair of pins and oversized slots providing a loose pivot which functions following said initial swinging of the cover, and certain walls of the body and cover being of reduced height whereby the cover may swing about said pivots.

2. A sheet metal container comprising a rectangular body having upstanding walls, a rec-

tangular cover including depending walls designed to telescope over the walls of said body, means pivotally connecting the body and cover including a pair of pins and notches functioning as the pivot during initial swinging of the cover from a closed position, a pair of pins and oversized slots providing a loose pivot which functions following said initial swinging of the cover, and certain walls of the body and cover being of reduced height whereby the cover may swing about said pivots, said notches opening through the upper edge of opposed walls of the body and each including a curved wall adapted to engage the corresponding pins and shift the cover laterally relative to the body during the latter stages of the closing movement thereof.

3. A sheet metal container comprising a rectangular body having upstanding walls, a rectangular cover including depending walls designed to telescope over the walls of said body, means pivotally connecting the body and cover including a pair of pins and notches functioning as the pivot during initial swinging of the cover from a closed position, a pair of pins and oversized slots providing a loose pivot which functions following said initial swinging of the cover, and certain walls of the body and cover being of reduced height whereby the cover may swing about said pivots, said pair of pins and notches being spaced inwardly from the pins and slots.

4. A sheet metal container comprising a body having a bottom, opposed front and rear walls, end walls connecting the other walls, said end walls each having a notch in its upper edge in proximity to the rear wall, a vertical slot between each of said notches and the rear wall, the rear wall of each notch being curved upwardly toward the rear wall of said body, a cover adapted to be telescoped over said body and including a top, opposed end walls, opposed front and rear walls connecting the end walls, said rear walls of the body and cover and an adjacent portion of the end walls of the body being reduced in height, a pair of pivot pins projecting inwardly from each end wall of the cover, one of each pair of pins loosely fitting in the corresponding slot and the other pin normally projecting into the corresponding notch, said pins and curved wall of the slots operating during a portion of the closing movement of the cover to shift the latter forwardly relative to the body.

5. A sheet metal container comprising a rectangular body having upstanding walls, a rectangular cover including depending walls designed to telescope over the walls of said body, means pivotally connecting the body and cover including a pair of protuberances and notches functioning as the pivot during initial swinging of the cover from a closed position, a pair of protuberances and oversized slots providing a loose pivot which functions following said initial swinging of the cover and certain walls of the body and cover being of reduced height whereby the cover may swing about said pivots.

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