Nov. 21, 1939. G. H. STEUERNAGEL ET AL 2,180,916

DISPENSING CARTON

Original Filed Oct. 15, 1937 2 Sheets-Sheet 1

Fig. 1.

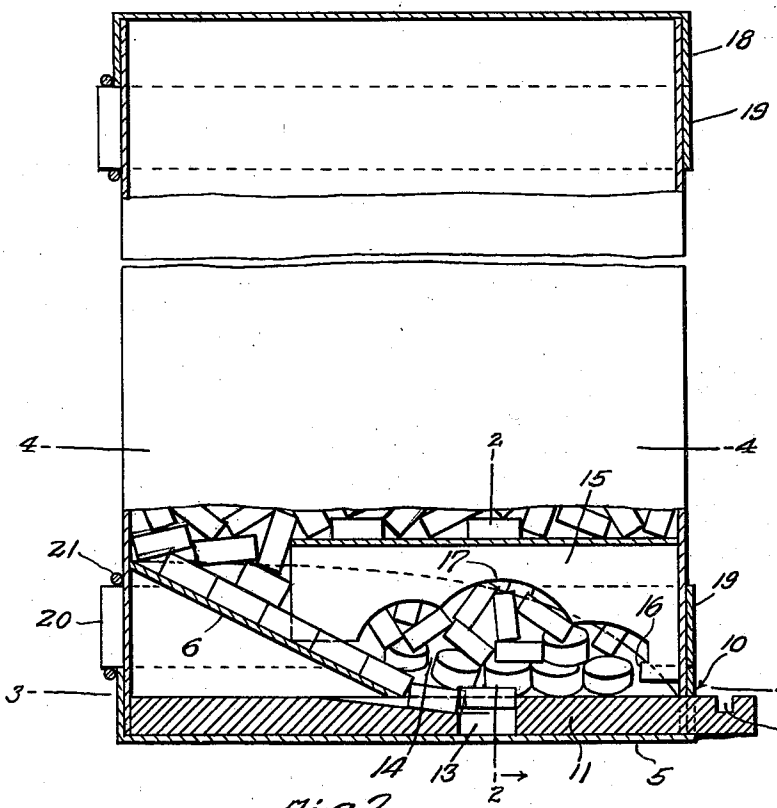


Fig. 2.

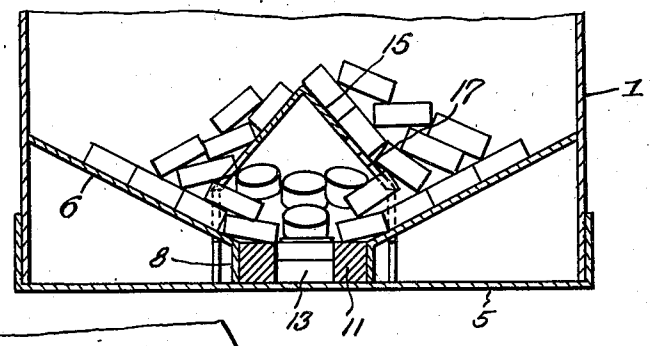
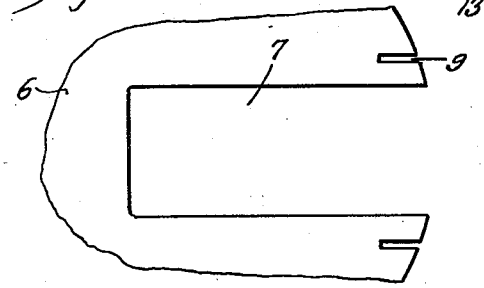


Fig. 5.



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Fig. 3.

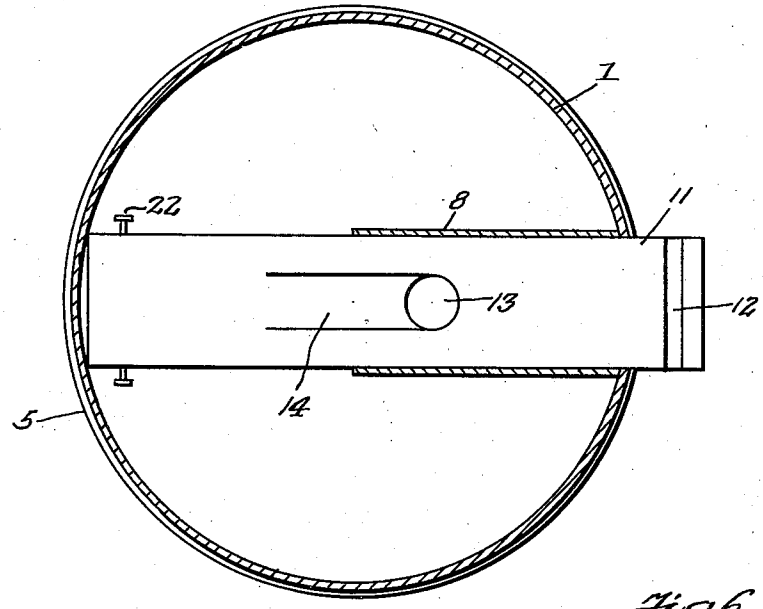


Fig. 6.

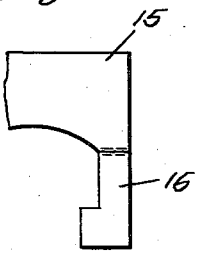
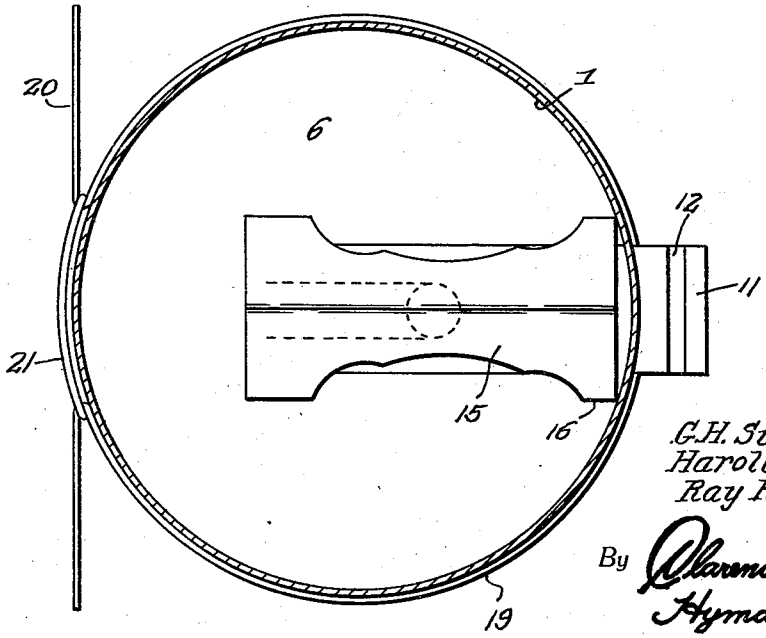


Fig. 4.



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UNITED STATES PATENT OFFICE

2,180,916

DISPENSING CARTON

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Application October 15, 1937, Serial No. 169,320
Renewed October 12, 1939

2 Claims. (Cl. 312—92)

This invention relates to dispensing means for cartons containing tablets of various kinds, the general object of the invention being to provide means whereby the tablets can be removed from the carton, one at a time, without exposing the other tablets in the carton to contamination.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a longitudinal sectional view through a carton constructed in accordance with this invention and showing tablets therein.

Figure 2 is a section on the line 2—2 of Figure 1 this view also showing some of the tablets in the device.

Figure 3 is a horizontal sectional view on the line 3—3 of Figure 1.

Figure 4 is a section on the line 4—4 of Figure 1.

Figure 5 is a fragmentary top plan view of the deflector member.

Figure 6 is a fragmentary view showing the depending parts of the ridge member.

In these views the numeral 1 indicates the body of the carton which is formed with the cap-like bottom part 5. A deflector member or false bottom 6 is placed in the lower part of the carton and this member is formed with a rectangular-shaped opening 7 therein which passes through one side edge thereof and depending flanges 8 extend from the side walls of this opening and contact the bottom 5. The rest of the member 6 slopes upwardly and outwardly from the walls of the opening, as shown, so as to direct tablets or other material in the carton, toward the opening. A notch 9 is formed in the front edge of the member 6 at each side of the opening 7. This member 6 is held in the lower part of the carton in any suitable manner such as by glue or otherwise. An opening 10 is formed in the front portion of the carton at the bottom thereof, the lower wall of this opening being formed by the bottom part 5 and an elongated substantially rectangular-shaped block 11 passes through the opening and between the flanges 8 and slides on the bottom 5. When the inner end of the block is in engagement with a rear wall of the carton the front end will be projecting from the carton so as to form a hand-hole and a groove 12 is formed in the upper face of the projecting part to prevent the hand from slipping therefrom. A circular opening 13 is formed in an intermediate part of the block and extends from the top through the bottom thereof and a forwardly sloping groove 14 is formed in the upper face of the block and extends rearwardly from the hole 13. The bottom of the groove slopes downwardly to the opening. The width of the groove is the same as the diameter of the opening and the diameter of the opening is slightly larger than the diameter of the tablets contained in the carton. The depth of the opening 13 is one and one-half times the thickness of a tablet. The depth of the groove where it joins the opening is half the thickness of the block. Of course, the purpose of this groove is to feed a tablet to a correct position in the hole or opening 13 and when a tablet is located in this hole or opening it leaves only space enough for half the thickness of another tablet. Thus if the second tablet enters the opening or hole or rests in the groove, the upper portion of such tablet will extend above the block and thus will be brushed back up the groove by the front wall of the carton when the block is pulled outwardly. This allows for but one tablet to be dispensed at a time.

Of course, the member 6 directs the tablet to the groove and opening in the block and we also provide an elongated ridge forming member 15 which has its rear portion resting upon a part of the member 6 and its front is formed with the depending parts 16 of substantially hook-shape which fit in the notches 9 of the member 6 so that the member 15 is held in shape and in position above the exposed part of the block in the carton. The side portions of the member 15 are formed with the recesses 17 so that tablets moving down the sloping parts of the member 6 can readily pass under the member 15 to reach the block. This member 15 acts as a hood to relieve the pressure of the bulk of the tablets in the carton from the block, allowing just enough tablets to reach the block to make it work surely and easily.

The top cap 18 may be sealed at the factory after the tablets have been placed in the carton and if desired upper and lower bands 19 can be placed around the carton with their ends extended as at 20 to form brackets for fastening to a wall or the like so that the carton will be suspended from the wall. A loop 21 has its ends receiving the end portions of each band and acts

to hold the band in position around the carton, as shown in Figure 4.

Thus it will be seen that we have provided inexpensive means for enabling tablets of various kinds to be removed one at a time from a carton so that the tablets are kept in a sanitary condition and are not contacted by a person removing some of the tablets from the container. As the top is sealed in place the only way one can remove tablets from the container is by operating the dispensing means and such means has a snug fit in the opening 10 so that the walls of this opening will act to clean dust and the like from the block as it is pushed inwardly and no dust or dirt can enter the opening.

Pins or projections 22 extend from the side portions of the inner end of the block to engage the inner ends of the flanges 8 to limit outward movement of the block.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A device of the class described comprising a container having an opening in the lower end of a side portion thereof, a member passing through the opening and slidably arranged on the bottom of the container, said member having a vertically arranged opening therein and a groove extending rearwardly from the opening, the bottom of the groove sloping downwardly to the opening, the groove entering the opening at an intermediate point in the length of the opening, a deflector member in the lower part of the container and supported from wall portions thereof, said deflector member having an opening therein extending from the approximate center of the member through an edge thereof, flanges formed on the member at the side walls of the opening and extending downwardly into engagement with the side edges of the sliding member, the forward portion of the sliding member being exposed by the opening in the deflector member, said deflector member sloping upwardly and outwardly from the sides and rear end walls of the opening to the side walls of the container and an elongated ridge forming member in the lower part of the container and supported from the deflector member, the said ridge forming member extending over and spaced above the opening in the deflector member and having openings in its side part for permitting the contents of the container to move down the deflector member to the exposed part of the sliding member.

2. A device of the class described comprising a carton for tablets or the like, said carton having a hole in the lower part of its front portion, an elongated sliding member engaging the bottom of the container and having one end passing through said hole, the projecting end forming a handle, said sliding member having a vertically arranged opening in the intermediate part thereof for receiving a tablet, a deflector member in the lower portion of the container and connected with wall portions thereof, said deflector member having an opening therein extending from a point adjacent the center thereof through the front edge thereof for exposing the forward portion of the sliding member and that part having the opening therein, the deflector member sloping upwardly and outwardly from the opening to the side walls of the container, and an elongated ridge forming member located in the lower part of the container and including side portions having parts engaging the deflector member, said ridge forming member being located over the opening in the deflector member and having its rear end open and its front end abutting the front lower portion of the container, the side portions of the ridge forming member having openings therein for the passage of the tablets down the deflector member to the slide member.

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