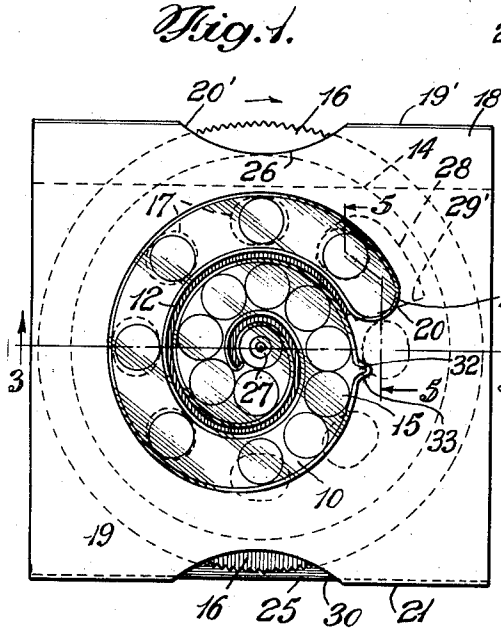
Aug. 11, 1959 F. G. COX, JR 2,899,046

SPIRAL ONE-AT-A-TIME DISPENSER

Filed Nov. 5, 1957 2 Sheets-Sheet 1

Fig. 1.



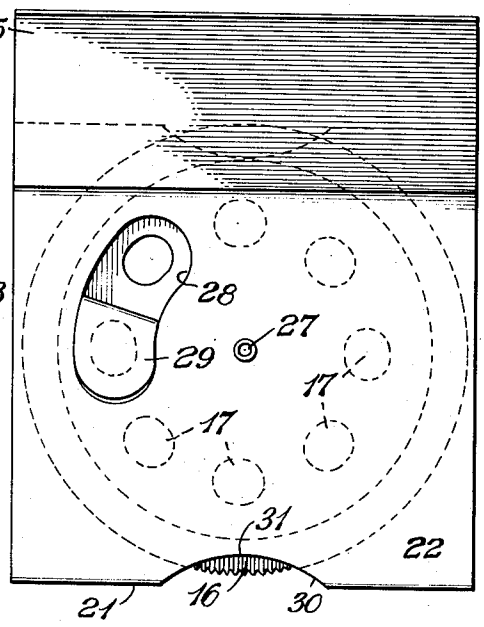


Fig. 2.

Fig. 3.

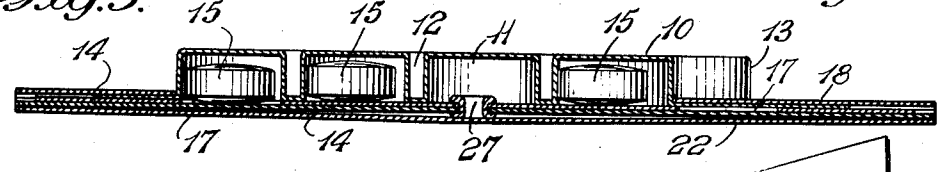


Fig. 4.

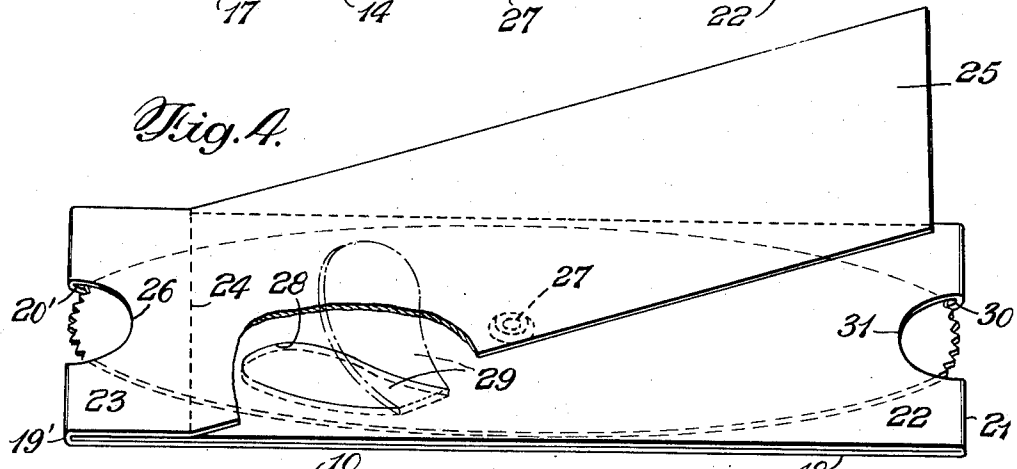
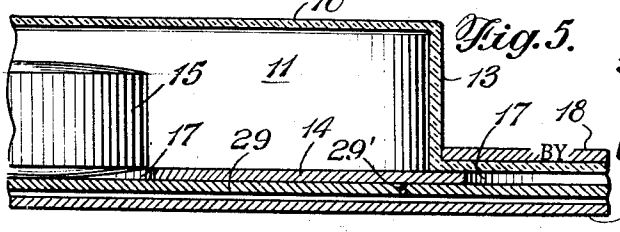


Fig. 5.



INVENTOR

Frank G. Cox, Jr.

BY Cameron, Kirkam & Sutton

ATTORNEYS

Aug. 11, 1959 F. G. COX, JR 2,899,046

SPIRAL ONE-AT-A-TIME DISPENSER

Filed Nov. 5, 1957 2 Sheets-Sheet 2

Fig. 6.

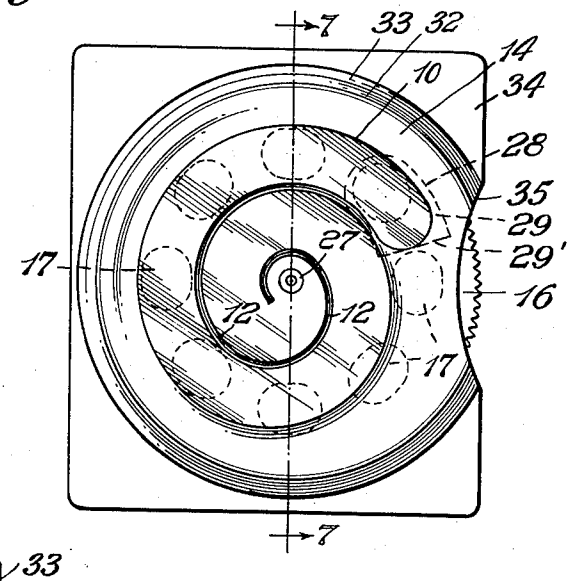
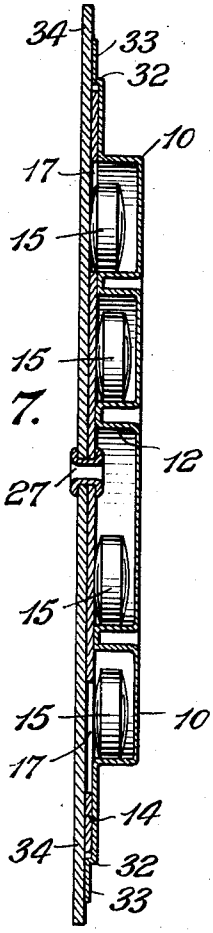


Fig. 7.



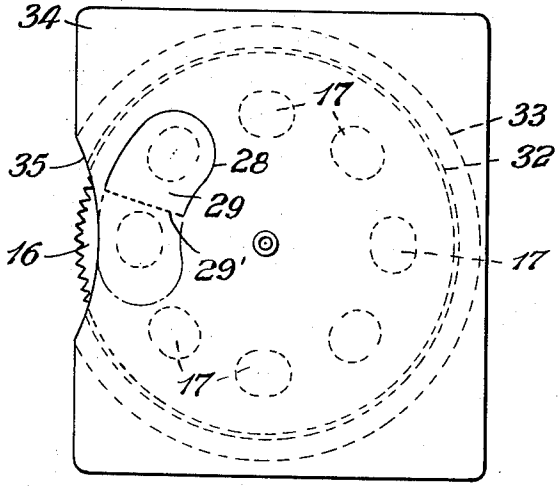


Fig. 8.

INVENTOR

Frank G. Cox, Jr.

BY Cameron, Kerkam & Sutton

ATTORNEYS

United States Patent Office 2,899,046 Patented Aug. 11, 1959

2,899,046

SPIRAL ONE-AT-A-TIME DISPENSER

Frank G. Cox, Jr., Philadelphia, Pa.

Application November 5, 1957, Serial No. 694,573

7 Claims. (Cl. 206—42)

This invention relates to dispensers and more particularly to spiral one-at-a-time dispensers in which the objects to be dispensed are arranged in spiral magazine lying in a plane and provided with a dispensing opening adjacent an end of the spiral.

Heretofore various types of dispensers have been provided for dispensing pellets such as medicinal tablets suitable for carrying in the pocket of the user. Such a dispenser if it is to be either purchased separately by the user or provided with the tablets or medicinal pellets to be dispensed must be of relatively cheap construction and at the same time of dirt tight construction so that the contents will not be contaminated in the pocket of the user. Such a dispenser should have a positively actuated dispensing assistant to assure the movement of a tablet or pellet to the dispensing opening when a pellet or tablet is desired and the contents of the magazine should be clearly visible so that the number of tablets or pellets remaining can be easily ascertained. If the dispenser is to be given to the user with the tablets or pellets sold therein then the dispenser should be so constructed that suitable advertising or instructional matter may be easily printed and clearly displayed thereon.

With these several objects in view the novel spiral one-at-a-time dispenser of the present invention includes a spiral magazine formed of suitable transparent material such as a plastic with the turns thereof lying flat in a single plane. This magazine is mounted in or on a casing made of suitable material such as heavy paper, cardboard or plastic. A circular dispensing assistant or disc provided with pockets arranged in a circle about its periphery forms the bottom of the magazine and is mounted on a pivot for manual rotation to bring each tablet in succession upon rotation of the disc to a dispensing opening formed in the casing. This dispensing opening may be provided with a tab-type closure. The casing may be provided with a flap which normally overlies the tab-type closure of the dispensing opening to keep the tab in closed position before the dispenser is sold to the user and this flap may be scored for ready removal by the user of the dispenser.

A spiral one-at-a-time dispenser of the type generally discussed above is capable of various mechanical embodiments within the scope of the present concept and two such embodiments are shown in the accompanying drawings to illustrate the invention. These illustrative embodiments of the present invention should in no way be construed as defining or limiting the same and reference should be had to the appended claims to determine the scope of the present inventive concept.

In the accompanying drawings, in which like reference characters indicate like parts, Fig. 1 is a view from above of a preferred embodiment of the one-at-a-time spiral dispenser of the present invention showing the spiral magazine provided with a toe which mounts in a corresponding opening in the casing to assist in securing the magazine in the casing;

Fig. 2 is a view from beneath of the embodiment of Fig. 1;

Fig. 3 is a cross sectional view on the line 3—3 of Fig. 1;

Fig. 4 is a view of the embodiment of Fig. 1 showing the back flap raised and the tab of the dispensing opening raised to permit dispensing of a pellet or tablet;

Fig. 5 is an enlarged cross sectional view on the line 5—5 of Fig. 1;

Fig. 6 is a view from above of another embodiment of the dispenser of the present invention in which the spiral magazine is suitably adhered to a base;

Fig. 7 is a cross sectional view of the embodiment of Fig. 6 on the line 7—7 thereof; and

Fig. 8 is a view from beneath of the embodiment of Fig. 6.

Referring now to the embodiment of Figs. 1–5, a spiral magazine **10** is suitably formed from transparent or clear plastic material such as cellulose acetate or the like with the flat spiral turns **12** thereof starting at a central point **11** and turning about themselves outwardly to a toe-shaped end **13** and having a projection **32** adjacent thereto. The outer periphery of magazine **10** is provided with a circular flange **14**. It is to be understood that turns **12** forming the spiral magazine are spaced sufficiently to accommodate the desired pellet or tablet **15** to be dispensed.

A manually actuated circular dispensing assistant or disc **16** closes the bottom of magazine **10** and is provided with a plurality of holes **17** arranged in a circle coinciding with curvature of the portion of magazine **10** adjacent toe **13**. A housing **18** is provided which is suitably cut away at **19** to surround the upstanding portion of magazine **10** and opening **19** is provided with a suitable cut away portion **20** to engage toe **13** and prevent clockwise rotation of spiral magazine **10** within opening **19**, and is provided with a cut away portion **33** to engage projection **32** and prevent counterclockwise rotation of magazine **10** within opening **19**. Housing **18** is folded along line **19′** and folds back upon itself and is cut away at **20′** to provide an opening for manual engagement of dispensing assistant **16**. Member **18** is also folded back upon itself along the line **21** to provide a flap **22** which extends to fold **19′**. The portion of member **18** which is folded back upon itself at **19′** forms a flap **23** which is scored at line **24** to provide a removable flap **25** which extends to fold line **21**. Flap **23** may be suitably secured to flap **22** as by gluing or riveting and is provided with cut away portion **26** corresponding to cut away portion **20′**.

A rivet **27** is mounted centrally of flap **22** and passes through the center of dispensing assistant **16** to provide a rotary axis therefor. Flap **22** is cut away at **28** adjacent to toe **13** to provide a dispensing opening and this opening is closed by a tab **29** which may be moved in and out of opening **28** by the user. Housing **18** may be cut away at **30** and flap **22** may be cut away at **31** to provide an opening for ready manual access to dispensing assistant **16**.

It is obvious that flap **25** may be used to support the dispenser in an upright position for display purposes; that it need not be removed by the user but can be left in position to hold tab **29** in opening **28** when the dispenser is not in use; and that tab **25** is a suitable location for the printing of advertising media, instructions for use of the medicinal tablet or pellet, and the like.

In the embodiment of Figs. 6–8 the spiral transparent magazine **10** is again provided with an outstanding flange **14** which has a downwardly extending annular extension **32** and an annular flange **33** extending therefrom parallel to flange **14** to provide a housing within which the discharge assistant **16** rotates. Flange **33** is suitably secured

to base **34** as by riveting, gluing, or, when appropriate, by heat and pressure. Discharge assistant **16** rotates upon rivet **27** which passes centrally through base **34** but may rotate freely within the space created by annular extension **32** without requiring rivet **27**. Base **34** is provided with a dispensing opening **28**, which is closed by a tab **29** which is rotatable about a score line **29'**.

In the embodiments of Figs. 6–8 base **34** is cut away at **35** to provide access to the discharge assistant **16** for rotation of the same to bring one of the openings **17** therein carrying a tablet or pellet to position over discharge opening **28**.

The use of the spiral one-at-a-time dispenser of the present invention should be apparent from the description of the illustrative embodiments above. It is clear that the user of the dispenser when desiring a tablet or pellet first lifts tab **29** to clear opening **28** and then manually rotates discharge assistant **16** to bring an opening **17** bearing a tablet or pellet to position where the tablet or pellet will drop through opening **28**. As the tablets or pellets are used a slight movement of the dispenser by the user will move the tablets or pellets in the spiral magazine defined by turns **12** to the outer periphery thereof where the tablets or pellets will drop into the openings **17** of discharge assistant **16**.

It should be now apparent that the present invention in every way satisfies the several objectives discussed above.

Changes in or modifications to the above described illustrative embodiments of this invention may now be suggested to those skilled in the art without departing from the present inventive concept. Reference should therefore be had to the appended claims to determine the scope of this invention.

What is claimed is:

1. In a dispenser, a transparent magazine, a spiral passage in said magazine containing the objects to be dispensed the turns of which lie in a single plane, a manually rotatable discharge assistant closing the bottom of said spiral passage and thinner than the thickness of the objects, pockets in said discharge assistant arranged in a circle corresponding to the curvature of a part of said spiral passage, a base beneath said discharge assistant and a dispensing aperture in said base cooperating with one position of said pockets.

2. A dispenser as described in claim 1 in which said spiral passage terminates adjacent said dispensing aperture.

3. A dispenser as described in claim 1 in which said magazine is secured to said base, said discharge assistant is rotatably mounted on said base.

4. A dispenser as described in claim 1 in which said base includes a flap folded over said magazine and said flap is cut away to permit said magazine to extend therethrough.

5. A dispenser as described in claim 4 in which said spiral passage terminates at its outer end in a toe and said magazine has an outwardly extending projection and said first flap surrounds and engages said magazine, said toe and said projection whereby rotation of said magazine with respect to said first flap is prevented.

6. In a dispenser, a unitary flat spiral open-bottomed magazine terminating in a toe on its outer periphery, a base secured beneath said magazine, a circular rotatable discharge assistant pivoted on said base and closing the bottom of said spiral, a plurality of openings arranged in a circle in said discharge assistant corresponding to the curvature of the outer end portion of said spiral magazine, and a dispensing aperture in said base adjacent said toe.

7. A dispenser as described in claim 6 in which said base includes a flap folded over and apertured to receive said magazine.

References Cited in the file of this patent

UNITED STATES PATENTS

1,764,352	Sacerdote	June 17, 1930
2,519,156	Sparks	Aug. 15, 1950