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A. F. AMELIO ET AL
PILL OR TABLET DISPENSER

2,705,576

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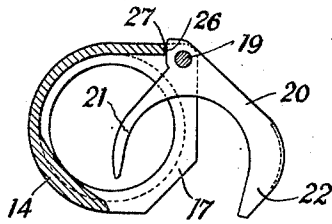


FIG. 3

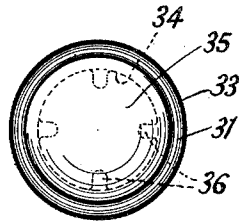


FIG. 5

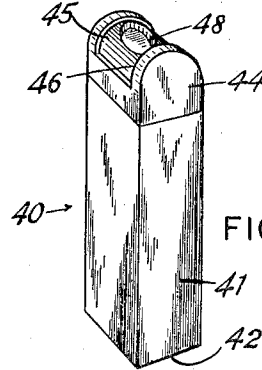


FIG. 7

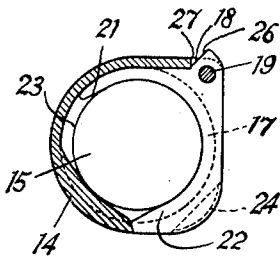


FIG. 2

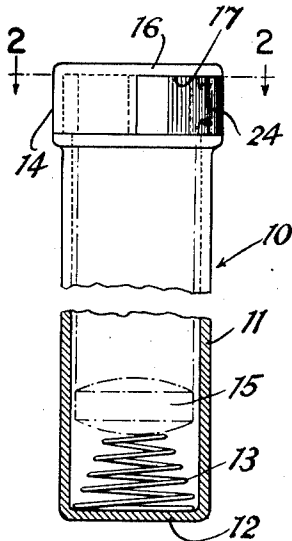


FIG. 1

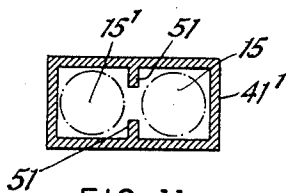


FIG. 11

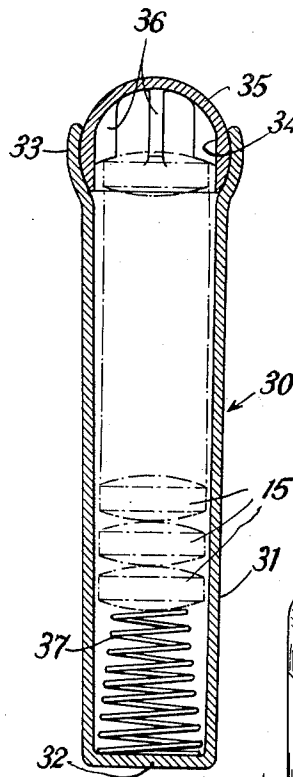


FIG. 4



FIG. 9

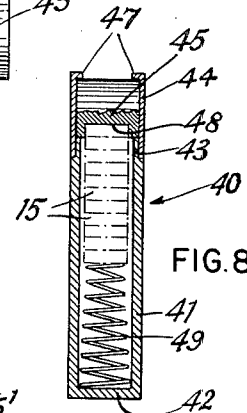


FIG. 8

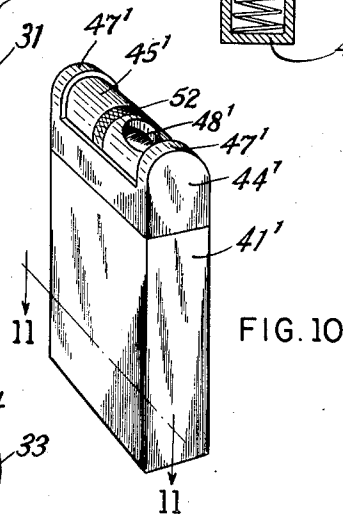


FIG. 10

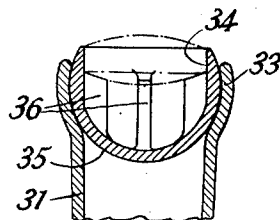


FIG. 6

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PILL OR TABLET DISPENSER

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2 Claims. (Cl. 221—232)

This invention relates to dispensers and more particularly, to a compact, sanitary tablet holder for containing an ample supply of tablets and including means for selectively removing tablets therefrom one at a time.

It is presently common practice for individuals to keep supplies of well-known sedatives, stomach remedies, and the like on hand. These are usually in tablet form and contained in suitable glass bottles or snap cover metal boxes. To remove a tablet, it is generally necessary to unscrew the cap from the bottle and shake one or more tablets out. Generally, it is difficult to remove only one tablet at a time, with the result that the extra tablets are unnecessarily exposed to the atmosphere and frequently are contaminated.

To obviate these difficulties and inconveniences, the present invention comprises a relatively elongated container arranged to contain a stack of tablets. One end of the container comprises a fixed wall seating a spring which biases the stack of tablets toward the opposite end of the container. Such opposite end is closed by a cap which is pivotally mounted on the container and has a recess.

In the closed position of the cap, this recess receives the top tablet of the stack, forced into the recess by the spring pressure on the stack. The cap is turnable to a position in which the recess is exposed, allowing removal of the tablet therefrom. In such position, a portion of the cap engages the next tablet of the stack to maintain clearance for the cap recess to be returned to the tablet receiving position.

The container may have any desired cross-sectional shape dependent on the tablet contour and the number of stacks of tablets in the container. In one form of dispenser, the cap is pivoted to swing at right angles to the axis of the dispenser and comprises a pair of open jaws receiving the top tablet therebetween. When the cap is swung out, a portion of one jaw maintains engagement with the next tablet.

In another form of dispenser, the cap is substantially spherical and the container is formed or swaged partly therearound to form a spherically surfaced universal pivot for the cap. The latter has its surface recessed at one portion to receive the top tablet, and the remaining spherical portion of the cap serves to engage the next tablet when the cap is swung to expose the recess for tablet removal.

In still another form, the cap is cylindrical with its axis perpendicular to the stack axis, and has a tablet recess therein. This recess is exposed by rotating the cylindrical cap. If used with a double stack dispenser, two axially spaced recesses are provided at 180° to each other.

For an understanding of the invention principles, reference is made to the following description of typical embodiments thereof as illustrated in the accompanying drawing. In the drawing:

Fig. 1 is an elevation view of one form of dispenser embodying the invention.

Fig. 2 is a transverse sectional view on the line 2—2 of Fig. 1, showing the cap closed with a tablet therein.

Fig. 3 is a view similar to Fig. 2 showing the cap open.

Fig. 4 is a longitudinal sectional view of another form of the invention dispenser, with the cap closed.

Fig. 5 is a top plan view of the dispenser of Fig. 4.

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Fig. 6 is a partial sectional view of the dispenser of Fig. 4 with the cap open.

Fig. 7 is a perspective view of a further form of the invention dispenser.

Fig. 8 is a longitudinal sectional view of the dispenser of Fig. 7.

Fig. 9 is an elevation view of the cap of the dispenser of Figs. 7 and 8.

Fig. 10 is a perspective view of a two stack dispenser of the type of Fig. 7.

Fig. 11 is a transverse sectional view on the line 11—11 of Fig. 10.

Referring to Figs. 1, 2 and 3, the dispenser 10 includes a cylindrical casing 11 having a fixed lower end 12. End 12 seats a spring 13 biasing a stack of tablets 15 toward the opposite end of the casing which, in this instance is enlarged outwardly, as at 14, and has an end wall 16.

Enlargement 14 has an arcuate opening 17 of a height substantially equal to the thickness of a tablet 15, and spaced ears 18 support a pivot 19 for a cap 20. The latter is shaped to conform to the periphery of enlargement 14 and includes spaced jaws 21, 22. Enlargement 14 provides a shoulder 23 for jaw 21, and the jaws embrace an opening conforming to the periphery of the tablets 15 and equal in diameter to that of the main part of casing 11.

In the position of Fig. 2, spring 13 biases the tablet stack so that the top tablet 15 enters the recess between jaws 21, 22, cap 20 having a thickness equal to that of the tablet. The cap is serrated, or notched, as at 24, so that finger pressure will swing the cap outwardly carrying the top tablet between jaws 21, 22. The tablet can be then easily extracted from the jaws. At the same time, the arm 21 is maintained in overlying relation to the next tablet by virtue of shoulder 26 on cap 20 engaging portion 27 of enlargement 14. When the cap is swung to closing position, the next tablet 15 is pushed thereinto by the bias of spring 13.

In Figs. 4, 5 and 6, the dispenser 30 again includes a substantially cylindrical casing 31 having a closed end 32. A substantially spherical cap 35 is universally mounted in the open end of the casing by virtue of deforming this end, as at 33, to form a substantially spherical bearing and retaining portion for the cap. The spherical cap is truncated to provide a substantially cylindrical recess 34 having its inner end delineated by ribs 36.

Spring 37 biases a column or stack of tablets 15 toward cap 35 so that the top tablet enters recess 34 when the cap is closed (Fig. 4). When the cap is rotated in any direction, recess 34 is exposed (Fig. 6) so that the top tablet may be dropped into the hand or otherwise removed from the recess. At this time, the outer spherical surface of the cap maintains contact with the next tablet which is forced into recess 34 when the cap is pivoted back to the position of Fig. 4.

In the embodiment of Figs. 7, 8 and 9, the dispenser 40 includes a substantially rectangular or square cross-section casing 41 having a closed end 42. Adjacent its open end, casing 41 is uniformly reduced in thickness, as at 43, to receive an end structure 44 which is slipped over this reduced thickness portion. The outer end wall of structure 44 is cylindrical and is partially cut away, as at 46, to provide curved lips 47 serving as bearings for a cylindrical cap 45. Cap 45 has a cylindrical recess 48 extending thereinto.

Spring 49 biases a stack of tablets 15 toward structure 44 so that, in the closed position of cap 45 (Fig. 8), the top tablet enters recess 48. When the cap is rotated about its axis, recess 48 is exposed for removal of the top tablet. The uninterrupted cylindrical surface portion of the cap meanwhile maintains engagement with the next tablet. When the cap is rotated to the closed position, this next tablet enters recess 48.

Figs. 10 and 11 illustrate a modified form of the cylindrical cap dispenser, arranged to contain two stacks of tablets 15 and 15'. In this case, casing 41' is rectangular and cap 45' is substantially twice the length of cap 45. Ribs 51, 51 divide the casing into two compartments. Cap 45' has two cylindrical recesses 48', axially spaced from each other and each aligned longitudinally with

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one stack of tablets. Furthermore, the recesses are substantially at 180° to each other in the surface of cap 45.

A knurled surface 52 is provided on the cap for easy actuation thereof. It will be apparent that tablets are alternately dispensed from each stack, and that one recess 48' is always exposed. Otherwise the construction and operation is the same as that of dispenser 40 of Figs. 7, 8 and 9.

While specific embodiments of the invention have been shown and described in detail to illustrate the application of the invention principles thereof, it should be understood that the invention may be otherwise embodied without departing from such principles.

What is claimed is:

1. A tablet dispenser comprising a cylindrical casing closed at its lower end and having an enlarged open upper end, said casing adapted to receive a stack of tablets therein, spring means arranged in the closed end of the casing for urging the stack of tablets toward the open upper end of the casing, a substantially spherical shaped cap mounted for universal movement in the enlarged open upper end of the casing, the top of said cap being closed, the bottom of the cap being open, said cap being hollow, and ribs arranged in said hollow cap, said ribs forming a seat located inwardly of the open bottom portion of the cap to receive the uppermost tablet of

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the stack when the cap is in its closed position, the closed top portion of the cap adapted to engage the table underlying the uppermost one in the stack when the cap is moved to the position where the open bottom of the cap is disposed outwardly of the open upper end of the casing to permit the tablet resting on said seat to be removed therefrom.

2. A tablet dispenser of the character defined in claim 1, wherein the tablet supporting ribs extend axially from the closed top portion of the cap and their free ends terminate inwardly of the open bottom portion of the cap.

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