

TABLET CONTAINER

THE INVENTION

The present invention relates to plastic tablet boxes and more particularly to plastic tablet boxes which are integrally formed as a single piece container.

The container art is replete with diverse types of containers, or receptacles, for tablets such as, for example, pills, capsules, and other like medicinal tablets. Exemplary of such patents are U.S. Pat. Nos. 1,369,819, 2,257,682, 2,271,630, 3,294,222, 3,894,655, 3,954,179, and 3,968,880. Notwithstanding the existence of numerous types of tablet containers there is still a need in the art for providing a tablet container which can be expediently and cheaply manufactured and which tablet container has child resistant opening features and which container provides for a seal between the tablets and the environment which will preclude any deterioration in the quality of the tablet. There is especially a need in the art, in view of recent regulations, to provide a container for tablets which will satisfy requirements for a minimum amount of water vapor permeation into the tablets so as to preclude undesirable hydrolysis, hydration, and the like.

In accordance with the present invention applicant has satisfied this need in the art by providing for a tablet container which has superior sealing characteristics and which has features which allow adults to easily open the container but which features are sufficiently difficult to activate that young children encounter difficulty in opening such containers. The containers can be expediently and economically manufactured from suitable plastics such as, for example, polyolefins, like polyethylene and, preferably, polypropylene as a single-piece article. The container comprises: a lid with a top panel having a peripheral skirt depending downwardly from said top panel; a base having a bottom panel and a skirt extending upwardly from said bottom panel, said base skirt having at least one downwardly extending surface which merges with an upper surface thereof to define a fulcrum surface; hinge means joining said lid and base and allowing for said lid and base to be brought into telescopic relation; motion limiting means for limiting, when said lid and base are in close telescopic relation, relative closer approaching movement of said top panel and said bottom panel to a non-opening position; first wall means integral with top panel and second wall means integral with said bottom panel, said first and second wall means being inter-engageable to define a sealed, internally disposed tablet chamber upon relative telescopic positioning of said lid and base; displaced surface means generally disposed along the periphery of said container, at a location intermediate said motion limiting means and said fulcrum, so arranged and constructed that upon compression of adjacent portions of said top panel and bottom panel said surface means are brought into closer proximity to each other so as to produce, along with contact of an internal surface portion of said top panel with said fulcrum, a lever-like action which disengages said first and second wall means to pivotally open said container and tablet chamber; and cam means, generally disposed along the periphery of said container intermediate said fulcrum and said displaced surface means, so arranged and constructed that upon compression of said top and bottom panels a portion of said peripheral skirt of said lid is forced outwardly.

The foregoing and other advantageous features of the present invention will be more apparent by reference to the drawings wherein:

FIG. 1 is a perspective view, with a portion cut away, showing the lid in an open position relative to the base portion of the container and exemplifies various features of the container;

FIG. 2 is a perspective view showing the container in a closed position;

FIG. 3 is a fragmentary sectional view generally taken along line 3—3 of FIG. 2;

FIG. 4 is a fragmentary sectional view generally taken along line 4—4 of FIG. 2;

FIG. 5 is generally taken along the line 5—5 of FIG. 4 and is a partial fragmentary view more clearly showing the cam features of the container;

FIG. 6 is a fragmentary view generally illustrating the lever-like opening of the container.

FIG. 7 represents an alternate embodiment for providing a sealed internal chamber.

In the drawings there is exemplified a selectively openable, telescopically closeable tablet container 10 generally in the form of a quadrilateral which container includes a top, or lid 12, and a bottom, or base, 14. As will be apparent the lid and base are adapted to be brought into telescopic closed relationship. Lid 12 includes a panel 16 and, generally proceeding downwardly therefrom, a peripheral skirt which as illustrated includes opposed sidewalls 18, front wall 20, and a rear wall 22. Depending downwardly from the internal surface of panel 16 is an annular wall 52. Bottom, or base, 14 includes a panel 30, opposed sidewalls 24 a front wall 26 and a rear wall 28 which walls proceed upwardly from panel 30. Front wall 26 is joined with opposed sidewalls 24 but in the outward, or rearward, direction of container 10, each sidewall 24 is interrupted and includes generally vertically disposed wall-edges 44 which edges, along with the upper surface margin of sidewalls 24, define opposed fulcrum surfaces 46. Also proceeding upwardly, and disposed internally of the quadrilateral container 10, is an annular wall 54 integrally formed on panel 30. Wall 52 and wall 54 are so proportioned that when lid 12 is brought into telescopic relation about base 14 they inter-engage to define a sealed, internally disposed tablet chamber 53. Preferably panel 30 includes a ledge portion 32 disposed outwardly of opposed sidewalls 24 and front wall 26 which is so proportioned that when lid 12 is telescopically positioned about bottom 14 no easily accessible liftable edges are provided; i.e., the extent by which ledge 32 extends outwardly of the respective walls will generally be equivalent to the thickness of the sidewalls 18 and front wall 20 of lid 12 as best seen in FIGS. 3 and 4. Container 10 is formed as a single piece by providing a generally U-shaped hinge 34 which connects rear wall 22 of lid 12 and rear wall 28 of base 14.

In order to provide for child-resistant opening features, interacting means, respectively on the rearward portion of lid 12 and base 14, are provided such that when container 10 is in a closed position compressive forces exerted between panel 16 and panel 10 will not effect an opening of container 10 unless exerted in a selective area which, in the preferred embodiment, will be the rearward corners of container 10. Generally these features are provided by having displaced surfaces on lid 12 and base 14 adapted and constructed so that as a compressive force is applied these surfaces are brought into closer proximity to each other and result in