

[54] **TWO-PART COMBINATION CONTAINER
AND TABLET DISPENSER**

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248/224, 312/245

[51] Int. Cl. **B65h 3/00**

[58] Field of Search 222/370; 221/265; 211/88;
220/18, 31 S, 60; 248/224; 312/245

[56] **References Cited**
UNITED STATES PATENTS

2,742,200	4/1956	Marx.....	222/370
3,190,483	6/1965	Robie et al.	220/18
3,522,902	8/1970	Katz.....	222/370

Primary Examiner—Robert B. Reeves

Assistant Examiner—Joseph J. Rolla

[57] **ABSTRACT**

A two-part combination container and tablet dispenser wherein the container portion is integrally molded, having a base, top, and front and side walls. The top is hingedly formed in the open position on the upper edge of the front wall and is adapted to move freely toward the rear wall to a closed position secured by closure means formed in the top with mating closure means on the upper edge of the rear wall. A flange is integrally formed on the upper edge of the top and depends therefrom for mounting the container to any suitable support when the top is in the closed position. The container is molded with the base having

an upstanding tapered stud formed thereon, with a tablet discharge slot formed at the front edge of the base, with recess defined by the lowermost portion of the front wall and the front edge of the base, and with a projecting shield spaced over said recess. The tablet dispenser portion comprises a molded rotatable disc having a plurality of spaced tablet receiving openings and a central tapered hub therethrough which mates and locks onto the upstanding stud in the base. In this position, a portion of the periphery of the disc extends through the recess for easy manual rotation whereby a tablet-receiving opening is brought into registry with the tablet discharge slot to discharge a tablet therethrough. The projecting shield prevents tablets from clogging or accumulating at a tablet-receiving opening as the disc is rotated so that a single tablet is discharged at each rotation of the dispenser disc.

Efficient and economical tablet dispensers assume an increasing importance as improved technology provides a great variety of substances in tablet form. Some substances which are provided in this form are candy, medicinals, vitamins, salt, disinfectants, and plant nutrients, to mention a few. Diverse tablet dispensers have been provided by the prior art with the objective of dispensing tablets conveniently and efficiently with a minimum of handling, breakage and/or contamination. Combined tablet containers and dispensers have been devised to minimize handling expense and to reduce chances for contamination. One such dispensing container is described by U.S. Pat. No. 2,742,200 which provides a cardboard blank which can be folded into the shape of a box with the walls being secured in their assembled relation by suitable adhesive. Inserted into the formed box is a dispenser unit comprising a base plate, a dispenser wheel and means for mounting said wheel onto the base-plate.

2 Claims, 5 Drawing Figures

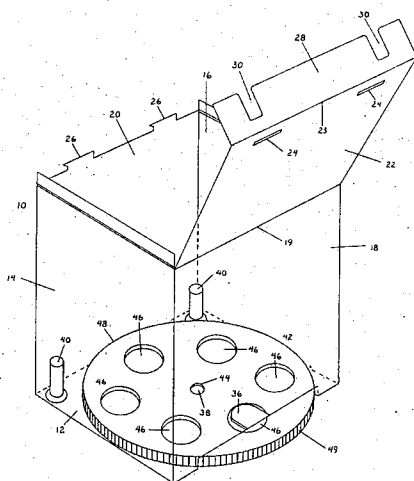


Fig. 1

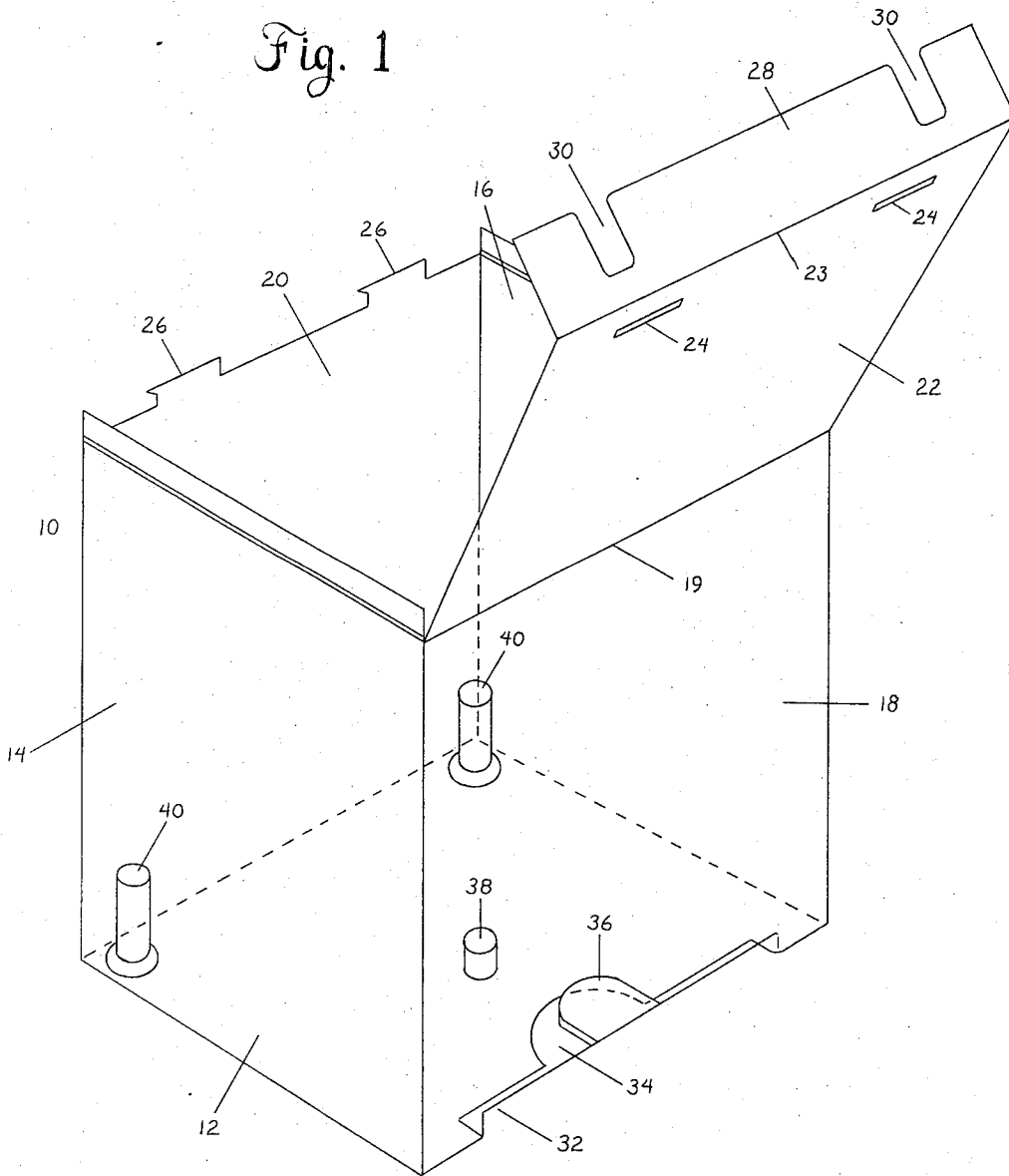


Fig. 2

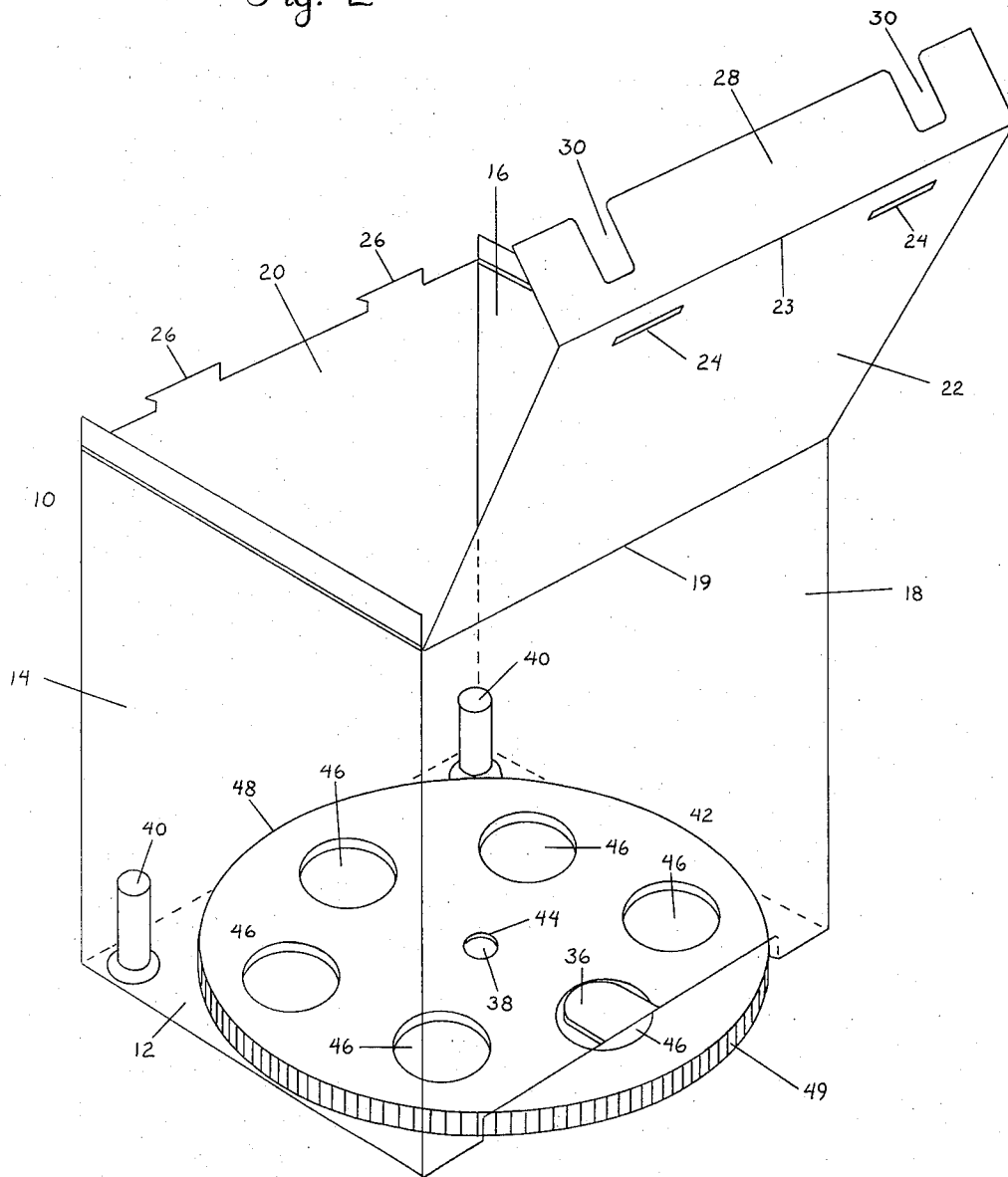


Fig. 3

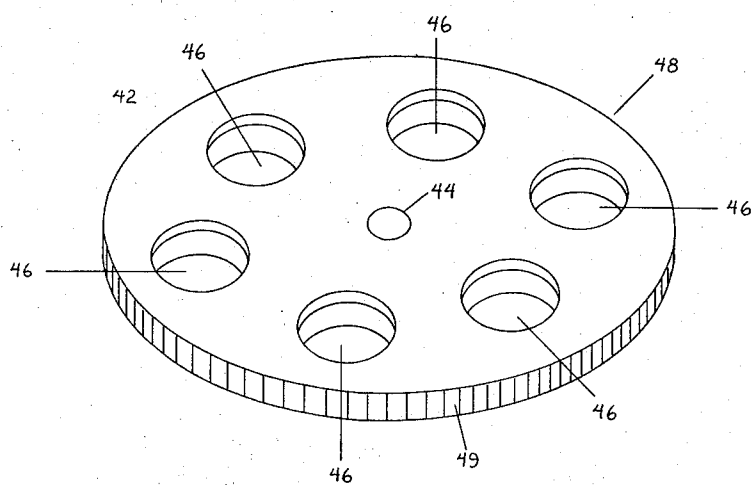


Fig. 4

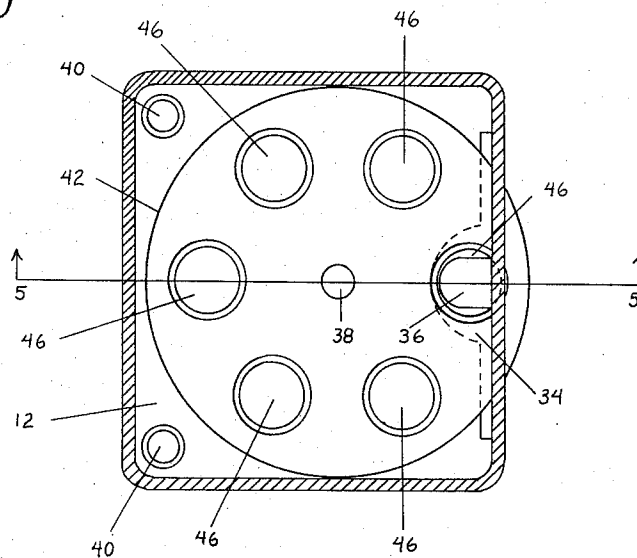
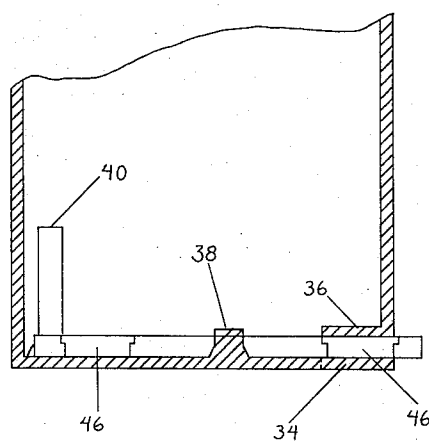


Fig. 5



TWO-PART COMBINATION CONTAINER AND TABLET DISPENSER

The present invention is an improvement on combination container-dispensers in general, and on that taught by U.S. Pat. No. 2,742,200 in particular. U.S. Pat. No. 2,742,200 discloses a container formed from a cardboard blank which requires manual assembly of the walls and the use of an adhesive to secure the walls in an upstanding, relatively rigid structure. A base plate is separately formed and accommodates a dispenser wheel thereon. A wall member is mounted over the dispenser wheel to secure it in place so that the dispenser wheel is disposed between two wall members, i.e., between the base plate and the wall member. It would be desirable to provide a combination container-dispenser which is easily constructed and assembled without the necessity of forming the container portion from a blank and thereafter bonding the walls together.

It is therefore an object of the present invention to provide a combination container and tablet dispenser which is characterized by simplicity of construction, ease of assembly, and efficiency of operation.

It is another object of this invention to obviate the necessity of forming the container portion of the combined container-tablet dispenser from a cardboard blank requiring manual assembly to form a container and then the use of an adhesive to provide physical integrity and strength to the container walls.

It is a further object of this invention to provide a combination container and tablet dispenser in which the container and dispenser portions may be molded separately and thereafter assembled by a single simple operation to form the finished device which is capable of storing tablets and reliably delivering a single tablet for each manipulation of the dispenser.

It is another object of this invention to provide a combination container-tablet dispenser in which the container and dispenser portions are separately molded and in which the dispenser portion may be inserted into the container portion in locking engagement therewith by a single simple operation to provide the assembled device.

The advantages and special features of the preferred embodiment of this invention will be readily apparent from the following detailed description in conjunction with the accompanying drawings wherein:

FIG. 1 is a perspective view of the integrally molded container portion of the present container-tablet dispenser device.

FIG. 2 is a perspective view of the present assembled two-part container-tablet dispenser.

FIG. 3 is a perspective view of the dispenser disc portion of the present container-dispenser.

FIG. 4 is a top plan view of the dispenser disc in the assembled position in the base of the container.

FIG. 5 is a cross-sectional view taken substantially along the line 5-5 of FIG. 4.

Referring to FIG. 1 depicting the container portion of the container tablet dispenser of this invention, the container is indicated at 10, having a base 12, side walls 14 and 16, front wall 18, rear wall 20, and top 22. Top 22 has a pair of spaced-apart slits 24 and is flexibly and integrally molded in the open position along upper edge 19 of front wall 18. Edge 19 therefore provides a hinge to top 22 whereby it is adapted to move freely toward rear wall 20 and to a closed position by the mat-

ing engagement of slits 24 with a pair of correspondingly spaced projecting tabs 26 formed at the top of rear wall 20. Flange 28 is flexibly and integrally formed along top edge 23 of top 22. A pair of spaced apertures 30 are formed in flange 28. When top 22 is in the closed position, securing means such as screws, bolts, nails or the like (conveniently stored in bosses 40) may be inserted through apertures 30 of flange 28 and affixed to any convenient support for mounting the container-dispenser.

Recess 32 is defined by the bottom portion of base 12 taken together with the bottom portion of front wall 18. A tablet discharge slot 34 is formed in base 12 as a further indentation therein of recess 32. Projecting shield 36 is mounted over tablet discharge slot 34 and in spaced relation thereto. Upstanding tapered stud 38 is integrally molded on base 12 in spaced relation to tablet discharge slot 34. Bosses 40 are disposed on base 12 adjacent the rear corners thereof and serve a dual function. They provide storage for screws, bolts, or nails which are furnished with the container-dispenser for mounting it to a support and they also aid in preventing tablets from lodging or accumulating in the corners of the container.

Referring to FIG. 2, it is seen that dispenser disc 42 has a plurality of spaced tablet receiving openings 46 disposed adjacent periphery 48. Hub 44 is in mating and rotatable engagement with stud 38. The mutually complementary tapering of stud 38 and of hub 44 provides for a locking engagement of these members so that when engaged they can be separated only with great difficulty. In the engaged position, portion 49 of periphery 48 extends through recess 32 (see FIG. 1) thereby permitting easy manual access thereto and facile manual rotation of dispenser disc 42. As depicted, portion 49 is knurled for ease in manipulation.

FIG. 3 depicts the dispenser disc 42 of the present invention having a centrally disposed tapered hub 44 therethrough and a plurality of spaced tablet-receiving openings 46 disposed adjacent the periphery 48.

Referring to FIG. 4 it is apparent that upon rotation of disc 42, a tablet receiving opening 46 (carrying a tablet) is brought into position under projecting shield 36 and in registry with tablet discharge slot 34 thereby discharging a single tablet through said slot. Shield 36 is positioned in close spaced relation to tablet receiving openings 46 and serves to block the space thereabove to prevent the discharge of more than one tablet at each rotation of the dispenser disc.

FIG. 5 depicts the tapering of stud 38. Tablet-receiving opening 46 is shown in registry with tablet discharge slot 34 and underneath projecting shield 36.

From the foregoing, it will be appreciated that the present invention provides a two-part combination container dispenser in which the two components may each be conveniently molded separately from readily available synthetic resins, e.g., polyethylene, polypropylene, or other suitable thermoplastics, and the like. The container portion is molded in the form of a carton having all the components necessary to provide for (1) enclosed storage of tablets, (2) means for mounting the container to a suitable support, and (3) means for receiving a rotatable dispenser disc in mating and locking engagement.

A flexible or hinged top is in the open position when the container is molded. The top is adapted

to move into a container-closing position by engagement with the rear wall. The top has securing means therein which are adapted to mate with correspondingly disposed securing means on the rear wall when the top is moved to the container-closing position. As is readily apparent, there can be a large variety of any of the known mating securing means formed in the top and rear wall, although the particular embodiment illustrated in the drawings depicts a slit and projecting tab type of arrangement. The integrally formed flexible flange on the top of the container overhangs the rear wall of the container when the top is in the closed position so that the flange may be used as a means for mounting the container to any suitable rigid support. The base and front walls of the container are formed to define a centrally disposed recess. A semi-circular tablet discharge slot is formed in the base and is disposed in spaced relation to and directly under a projecting shield. A tapered stud is integrally molded in the base and is adapted to receive the matingly tapered hub of a dispenser disc.

The dispenser portion is molded in the form of a disc having a tapered central hub therethrough and a plurality of spaced tablet-receiving apertures disposed adjacent the periphery thereof. The dispenser disc is easily inserted into the container by simple mating engagement of the disc hub with the stud in the base of the container. The hub is tapered to provide mating and locking engagement with the stud whereby the dispenser disc is rotatably mounted. In the engaged position, a portion of the periphery of the dispenser disc protrudes through the recess formed in the lowermost portion of the container so that the disc can be rotated manually. Upon rotation, a tablet receiving aperture containing a tablet is brought into registry with the tablet discharge slot to discharge a tablet therethrough.

As is obvious, the tablet receiving apertures or openings in the dispenser disc may be varied as to number, shape, size and spacing depending upon the shape and size of the tablets to be dispensed.

The two-part tablet container and dispenser of this invention is characterized by its simplicity of construction and assembly, its relatively locked assembly, and its convenient mounting to a fixed support.

While the present invention has been described in detail with reference to a specific and preferred embodiment thereof, those modifications and equivalents which fall within the spirit of the invention and the scope of the appended claims are to be considered part of the invention.

What is claimed is:

1. A two part combination container and tablet dispenser, one part comprising an integrally molded container for storing tablets and the second part comprising a dispensing means,

said container having a base, a top, front, rear and side walls, an upstanding tapered stud integrally formed on the base, said base at its front portion being provided with a tablet discharge slot, the front portion of said base in combination with the bottom portion of said front wall together defining a recess, a projecting shield integrally formed as a projection on the bottom portion of said front wall and mounted over said tablet discharge slot in

spaced relation thereto, said top being hingedly formed on the uppermost edge of the front wall and adapted to move freely to a closed position by engagement with the upper edge of the rear wall, said top on the upper edge thereof having a flange flexibly and integrally formed thereon and depending therefrom for mounting said container when the top is in the closed position; and

said dispensing means comprising a rotatable disc having spaced around and adjacent the periphery thereof a plurality of spaced-apart tablet receiving openings therethrough, said disc having a tapered hub therethrough adapted for mating and locking engagement with said stud to provide free rotation of the disc while preventing its easy removal from engagement, a portion of the periphery of said disc extending through said recess for easy manual rotation thereof whereby a tablet receiving opening is brought into registry with said tablet discharge slot to discharge a single tablet therethrough, said projecting shield obstructing entry by tablets to said tablet receiving opening when said opening is in registry with said tablet discharge slot.

2. A two-part combination container and tablet dispenser, one part comprising an integrally molded container for storing tablets and the second part comprising a dispensing means,

said container comprising a base, a top, front, rear and side walls, the base having an upstanding stud integrally formed on the interior surface thereof and a tablet discharge slot spaced-apart from said stud, the front portion of the base and the bottom portion of the front wall together defining a recess in spaced relation to said tablet discharge slot, a projecting shield integrally formed as a projection on the bottom portion of said front wall and disposed over said tablet discharge slot in spaced relation thereto, said top being integrally and flexibly formed on the upper edge of the front wall and adapted to move freely toward the rear wall to closed position, closure means formed in said top and disposed to mate with closure means on the upper edge of the rear wall securing said top to said rear wall, said top having a flange flexibly and integrally formed thereon and depending therefrom for mounting the container when said top is in the closed position; and said dispensing means comprising a rotatable disc having spaced around and adjacent the periphery thereof a plurality of spaced-apart tablet receiving openings therethrough, said disc having a tapered hub therethrough adapted for mating and locking engagement with said stud to provide free rotation of the disc while preventing its easy removal from engagement, a portion of the periphery of said disc extending through said recess for easy manual rotation thereof whereby a tablet receiving opening is brought into registry with said tablet discharge slot to discharge a single tablet therethrough, said projecting shield obstructing entry by tablets to said tablet receiving opening when said opening is in registry with said tablet discharge slot.

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