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DISPENSING CONTAINER
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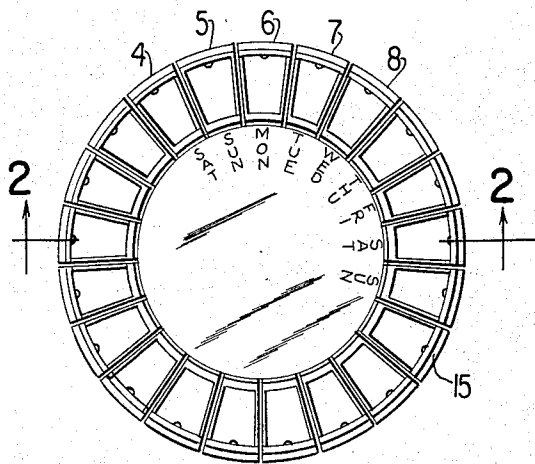


FIG. 1

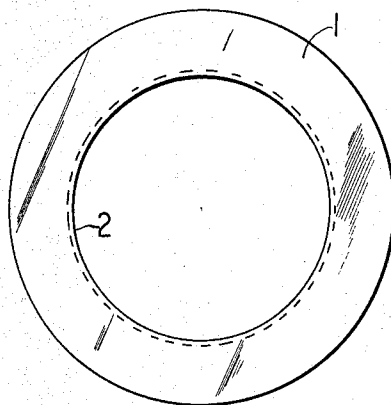


FIG. 3

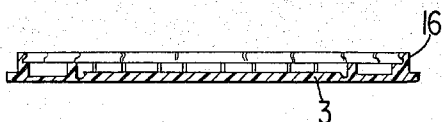


FIG. 2

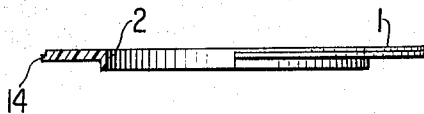


FIG. 4

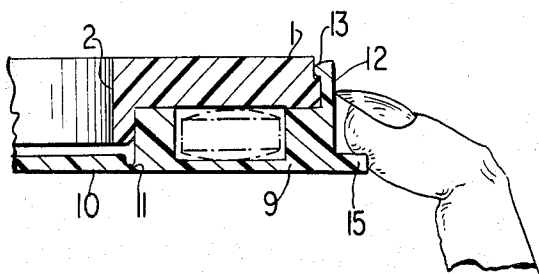


FIG. 5

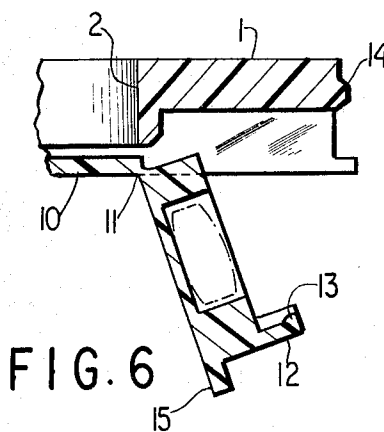


FIG. 6

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DISPENSING CONTAINER

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5 Claims. (Cl. 206-42)

This invention relates to a new pill box. More specifically the invention relates to a container for pills, tablets, capsules, or other small objects which can be dispensed individually therefrom in such a manner that it can be determined at a glance the number that have been removed from the container and on what particular days or other scheduled time periods.

Recently, there has been an increased demand for dispensers which can be used to keep a record of the number of items that have been removed and on what particular day or sequence of days they were taken from the container. Both control pills, for example, are usually administered for a definite number of days in relationship to the menstrual cycle, and it is important for the user to know when the treatment was started and when it is to be discontinued. There are numerous other cases in which it is desired to dispense pills or other items from a container in regular or irregular periods of time. The new pill dispenser of the present invention also can serve as a warning to a patient if he missed taking his medicine on a certain day or it may serve to remind the patient that he has already taken a pill on that day.

The new pill container and dispensing means of the present invention is characterized by its extreme simplicity in consisting of only two parts which may be cheaply made of plastic materials by injection molding. It has no movable parts. It can be manufactured so inexpensively that it can be thrown away after a single use.

In order that the invention may be more clearly understood, reference is made to the accompanying drawings in which:

FIGURE 1 is a plan view of the lower half of the container looking downwardly from the top;

FIGURE 2 is a cross sectional view in elevation of the lower half of the container shown in FIGURE 1 taken along the line 2-2 of FIGURE 1;

FIGURE 3 is a plan view of the top section of the pill box looking downwardly;

FIGURE 4 is an elevational view, partly in section, of the top member of the pill box shown in FIGURE 3;

FIGURE 5 is an enlarged section of one of the individual pill-containing units of the pill box of the present invention; and

FIGURE 6 is a cross sectional view, in elevation, of the same unit in dispensing position.

Referring again to the drawings, it may be seen that the improved dispensing container of the present invention includes a top member 1 which may be a flat ring-like section with an open center formed by the walls 2. The base portion 3 of the pill box is, in a preferred embodiment, circular in shape. It is characterized by having a plurality of individual container elements such as, for instance, 4, 5, 6, 7, 8 and so on around the circumference of the unit as is shown in FIGURE 1. These individual and independent pill-holding units depends outwardly from the disc-like bottom portion 10 and have a cavity for holding objects as shown in cross section in FIGURE 5. The individual pill-containing units may have cavities of approximately the same size and shape as the object to be contained therein, thus holding the object firmly in place so that it cannot move about in the container as it is carried

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by the user. This tends to eliminate damage to fragile tablets that may be contained therein.

The individual object-holding units have a weakened or scored section 11 at the place where they are joined to the disc-like bottom portion of the lower half of the container 10 which act as hinges so that the individual pill-containing unit can be easily bent downwardly with the finger or fingernail as shown in FIGURE 6. Extending upwardly from each of these small independent units is a tab 12 which has means 13 for engaging the upper half of the dispenser. This lower half of the latching means may be a protrusion 13 which fits over a protruding annular ring 14 on the top element as is shown in FIGURE 4. If desired, there may be an annular groove (not shown) in the top element into which the protrusion 13 fits. Preferably, but not necessarily, the protruding element is hemispherical in shape as illustrated at 15 in FIGURE 1. If desired, the upper half of the container may have an annular bead extending outwardly around its outer circumference, or a series of protruding hemispheres matching each of the individual tabs. In such a case, the tab would have a groove corresponding therewith to provide means to engage the outwardly extending bead or hemispheres of the cover. Other means of providing adequate latching means and means to hold the top of the container to the bottom portion can be easily devised.

The flexible nature of the plastic material of which the dispenser is molded allows the upper section of the container to be forced into place by pressing the upper and lower sections together. The top of the container is then held securely by friction or snap fit of the upper container with the lower container and by the series of protrusions 13, one for each individual tablet-holding unit, which are in the groove above the protruding annular ring.

Markings which may be molded or printed onto the container as indicated in FIGURE 1 may indicate the day of the week or some other time that needs to be considered in using the container and may be placed preferably in a clockwise rotation on the container at appropriate places, as for example, on each individual dispensing unit 9, on the space above the individual unit or in the central part of the lower disc-like bottom section of the container as shown in FIGURE 1. These markings may be of any unit nature which will indicate the time when an object has been or should be removed from the container.

Preferably, but not necessarily, some means 16 may be provided to make it easy for the user of the container to engage each individual unit to open it by pressing it downwardly. The means to press each individual unit may be a protrusion 15 or a recessed ring (not illustrated). This protrusion or recess may be anything that will provide an easy means of gripping the individual unit with a finger or fingernail. After the tablet has been removed from the cavity, the unit may be closed by simply pressing it back in place.

As indicated above, the container of the present invention is injection molded with a plastic material. The lower section of the container should be of a material having a reasonable degree of flexibility in order that the individual pill-holder container element may be bent downwardly at the hinged section without breaking or tearing as shown in FIGURE 6. Suitable materials include polyethylene, polypropylene, nylon, rubber, and various other well known flexible plastic materials. The upper section of the container can be made of more of the same plastic material as the cover sections but it may be a rigid plastic, if desired, such as the polystyrenes, polymethylmethacrylates, cellulose acetate, cellulose butyrate, and others. It is preferred that the

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upper section at least be of a transparent material so that the user of the container can see whether the individual units contain an object ready for dispensing.

As will be obvious, numerous variations may be made in the basic structure described above. The upper section may be a flat disc without having an open center as is shown in FIGURES 3 and 4. This construction requires a little more plastic material but may have advantages such as providing a place for additional information for using the packaged product or forming an independent central container for extra pills or other materials.

As will also be apparent, the dispensing container of the present invention need not be circular in shape. If desired, it may consist of two rows of individual pill-holding containers such as is illustrated by numeral 9 in FIGURE 5 depending from a central longitudinally extending center piece 10. These containers would be rectangular in shape and may have two oppositely disposed rows of individual pill-holding elements. The elevational cross section of such a container and the individual pill-holding units would be essentially the same as shown in FIGURES 2, 5, and 6. This embodiment of the invention is not illustrated as its construction would seem to be obvious from the foregoing.

What is claimed is:

1. A container for small objects to be dispensed individually which consists essentially of two parts, one comprising an essentially flat cover member having latching means on its outer periphery and the other a lower object holding member which comprises a central body member of flexible plastic material having a plurality of small object holding members depending outwardly from said central body member each having a cavity therein of sufficient size to hold an object to be dispensed, tab members extending upwardly from each of said individual object holding members with latch means adapted to engage the latching means on the said cover member, said object holding members being attached to said center member by a weakened section which can bend when downward pressure is applied to the member and act as a hinge permitting the object holding member to be bent downwardly, thus separating the object holding member from the cover member and thereby permitting release of an object from the cavity.

2. A container for small objects in accordance with claim 1 in which the latching means on the cover comprises a bead on the outer periphery and the latching means of the lower member is a hemispherical protrusion on the tab member which extends upwardly from the individual object holding members.

3. A container for small objects to be dispensed individually which consists essentially of two parts, one comprising an essentially flat round cover member having latching means on its outer periphery and the other a lower object holding member of flexible plastic which

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comprises a central body member having a plurality of small object holding members attached to and depending outwardly from said central body member each having a cavity therein of sufficient size to hold an object to be dispensed, tab members extending upwardly from each of said individual object holding members with latch means adapted to engage latching means on the said cover member, said object holding members being attached to said center member by a thin section which can bend when downward pressure is applied to the cavity member and act as a hinge permitting the cavity member to be bent downwardly, thus displacing the object holding member away from the cover member at its outer end and thereby permit release of an object from the cavity.

4. A container in accordance with claim 3 in which the cover member has an open center and the latching means thereon is a band extending outwardly around the outer periphery of the said cover member, the latching means of the upwardly extending tab member of the lower section being protruding hemispheres.

5. A container for pills to be dispensed individually at predetermined periods which consists essentially of two parts, the upper part comprising an essentially flat round transparent cover member having an annular bead on its outer periphery forming part of a latching means and the lower part being essentially the same diameter as the cover member and being of flexible plastic which comprises a central section having attached thereto a plurality of independent pill holding units axially disposed and essentially parallel with each other each having a cavity of sufficient size to hold a pill, tab members extending upwardly from the outer edge of said individual pill holding units with latch means adapted to engage the latching means on the said cover member, said pill holding members being attached to the central member by a thin section which can be bent when downward pressure is applied to the member and thereby act as a hinge permitting the pill holding member to separate from the cover member and permit release of a pill from the cavity in which it is contained and indices on said container identifying each of said pill holding cavities.

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