

[54] **MEDICAMENT-DISPENSING CONTAINER**

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[22] Filed: **Jan. 24, 1974**

[21] Appl. No.: **436,093**

[30] **Foreign Application Priority Data**

Aug. 7, 1973 Mexico 145383

[52] U.S. Cl..... **221/251, 221/263, 206/42**

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

[58] Field of Search 221/69, 76, 82, 86, 89, 221/91, 251, 263, 264, 265, 277; 222/367, 370, 410; 206/42

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[57] **ABSTRACT**

A container for dispensing one capsule at a time which includes a rotary member carrying spaced radial walls fitting within a cylindrical body with complementary parts engaging and a cap for the cylindrical body rotatable with respect to the cylindrical body and engaging complementary parts of the rotary member so that upon rotation of the cap and rotary member a capsule positioned between the walls is caused to align itself with an opening in the cylindrical body and thereby be emitted. The cylindrical body carries a closure gate for the opening.

6 Claims, 7 Drawing Figures

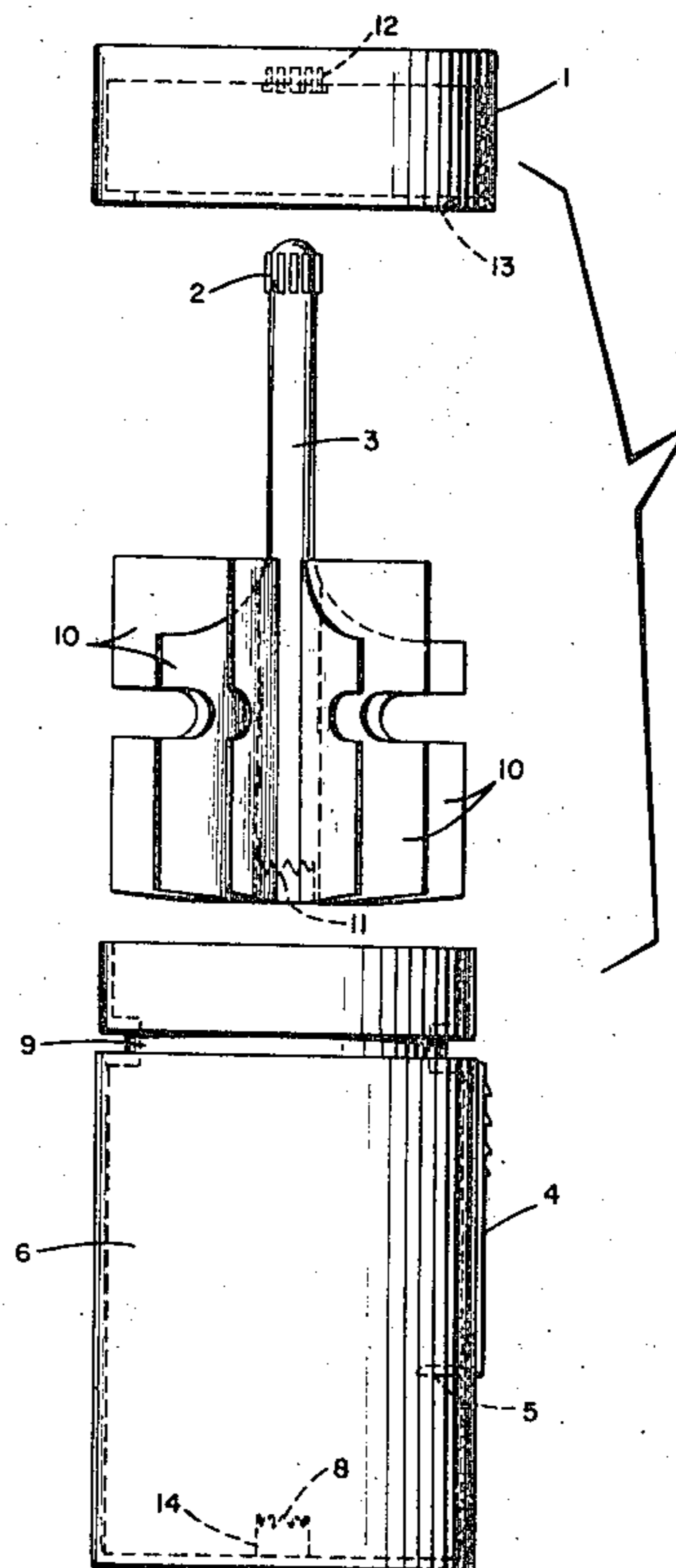


FIG. 1

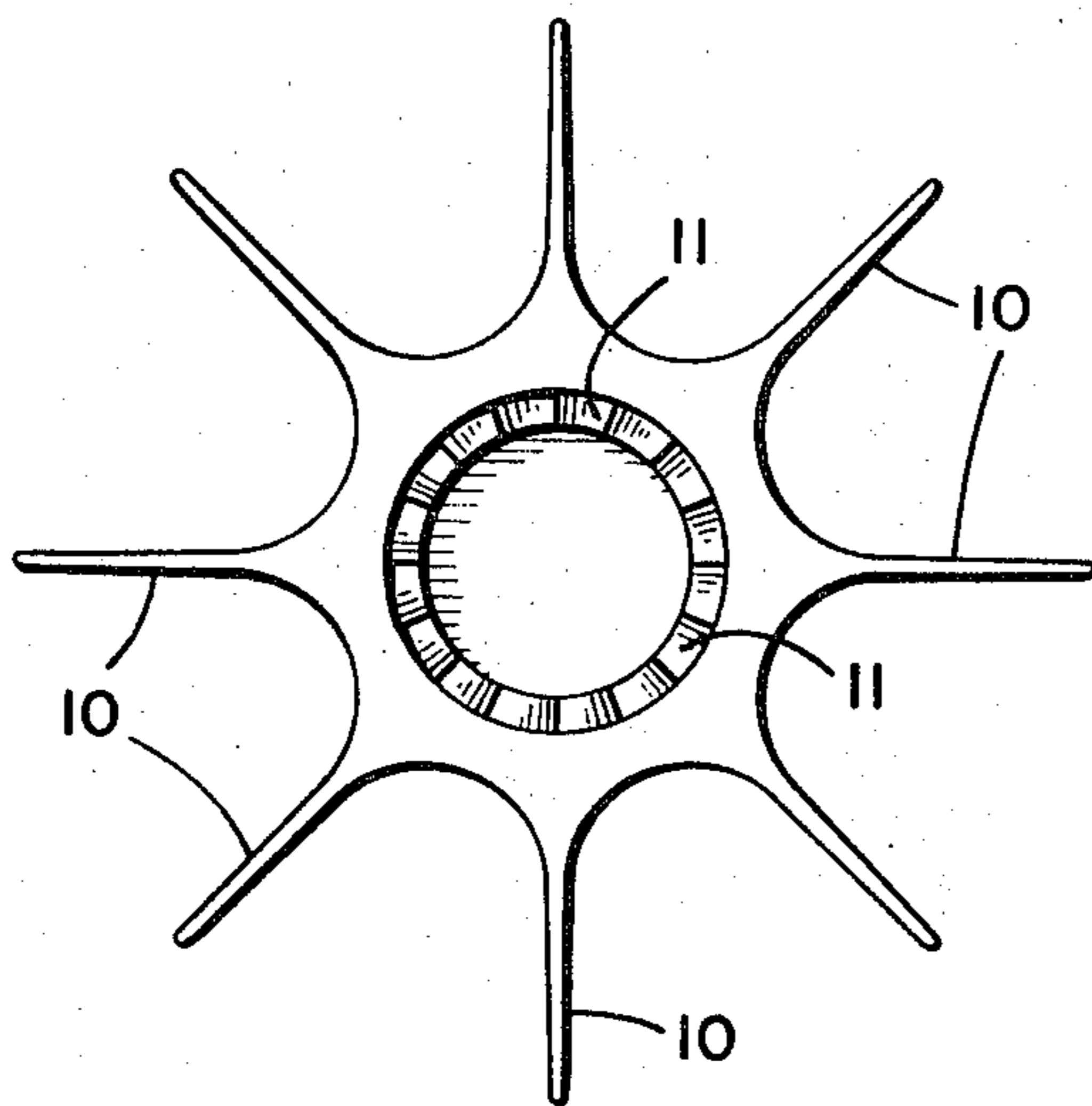
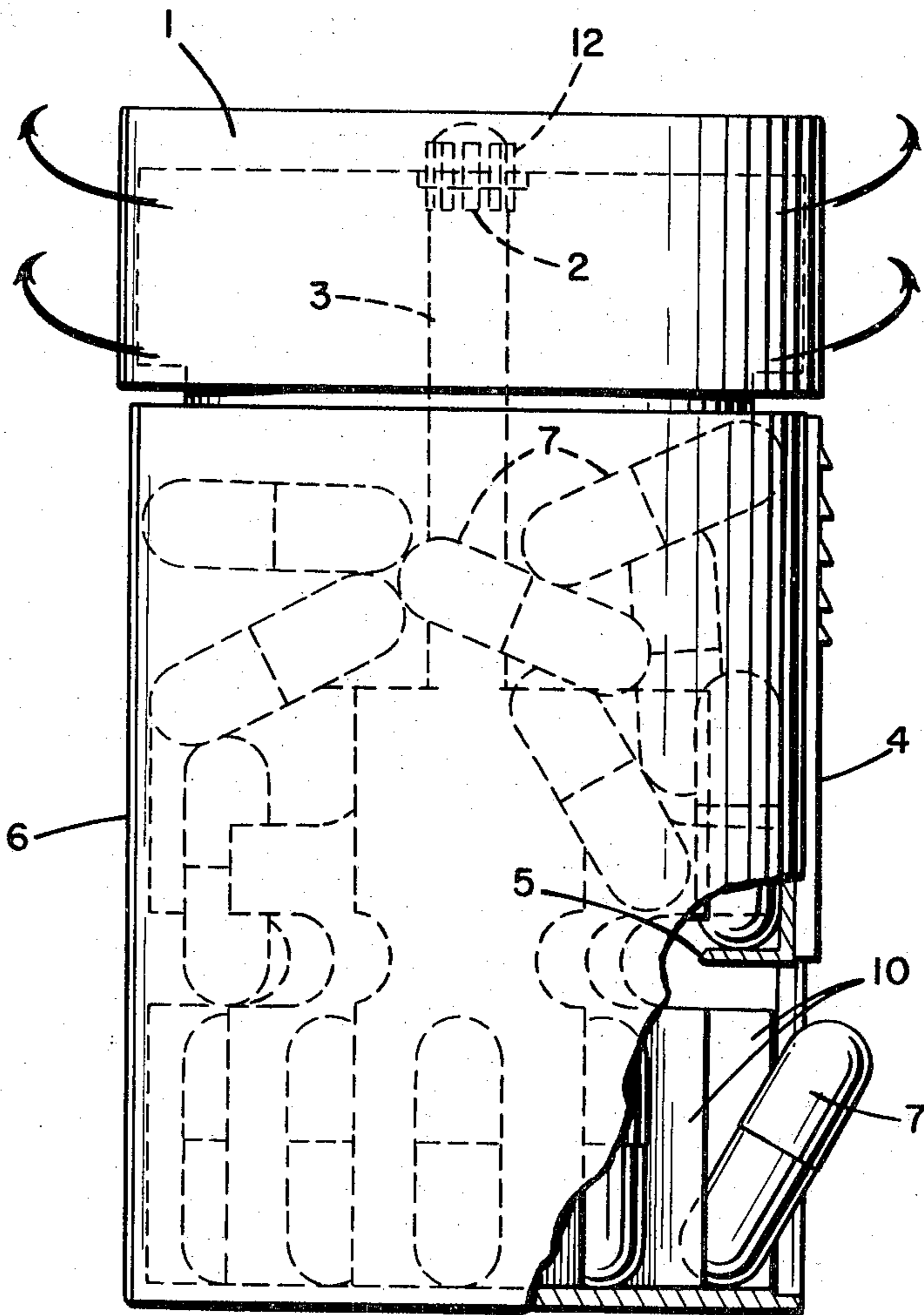


FIG. 3

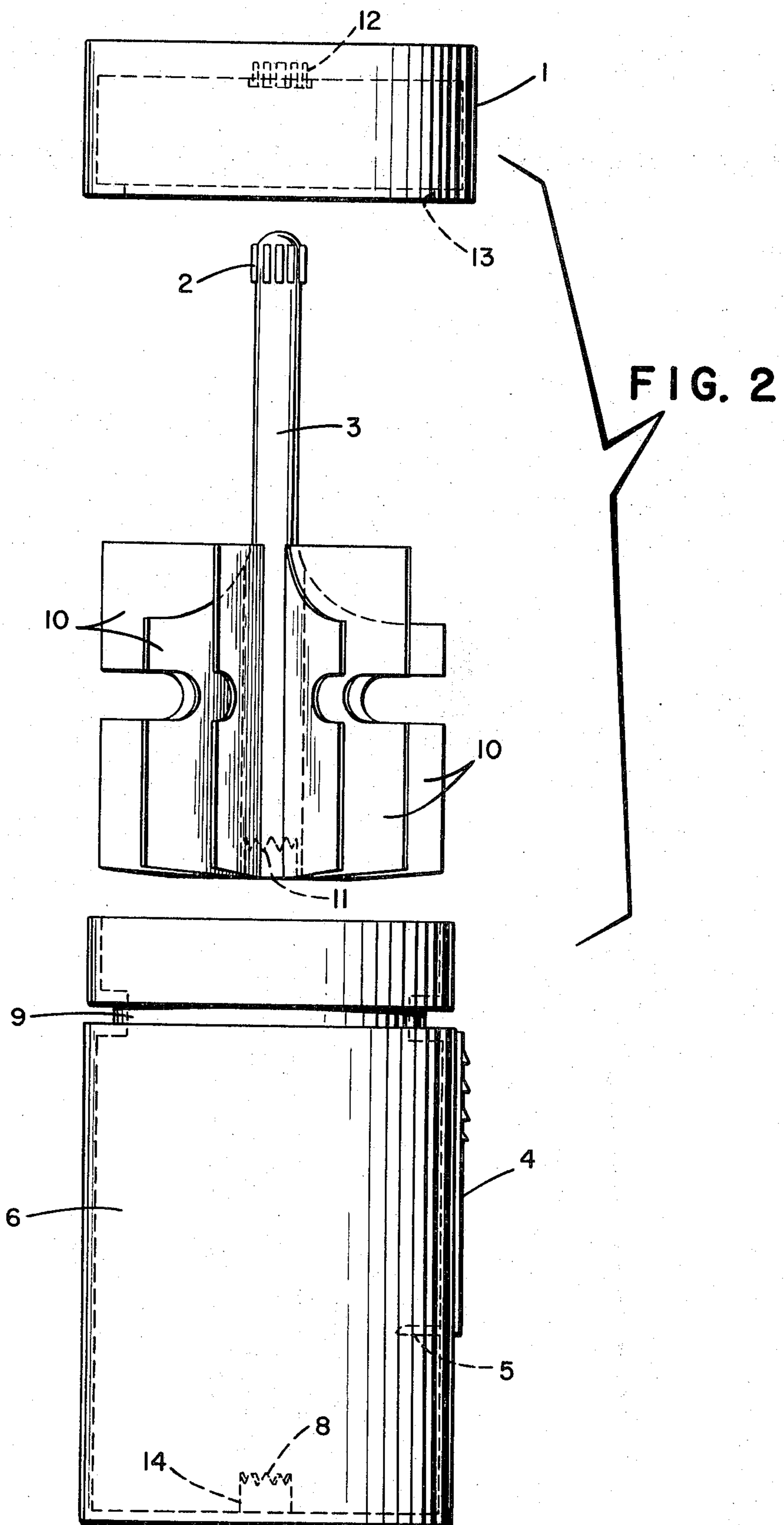


FIG. 4

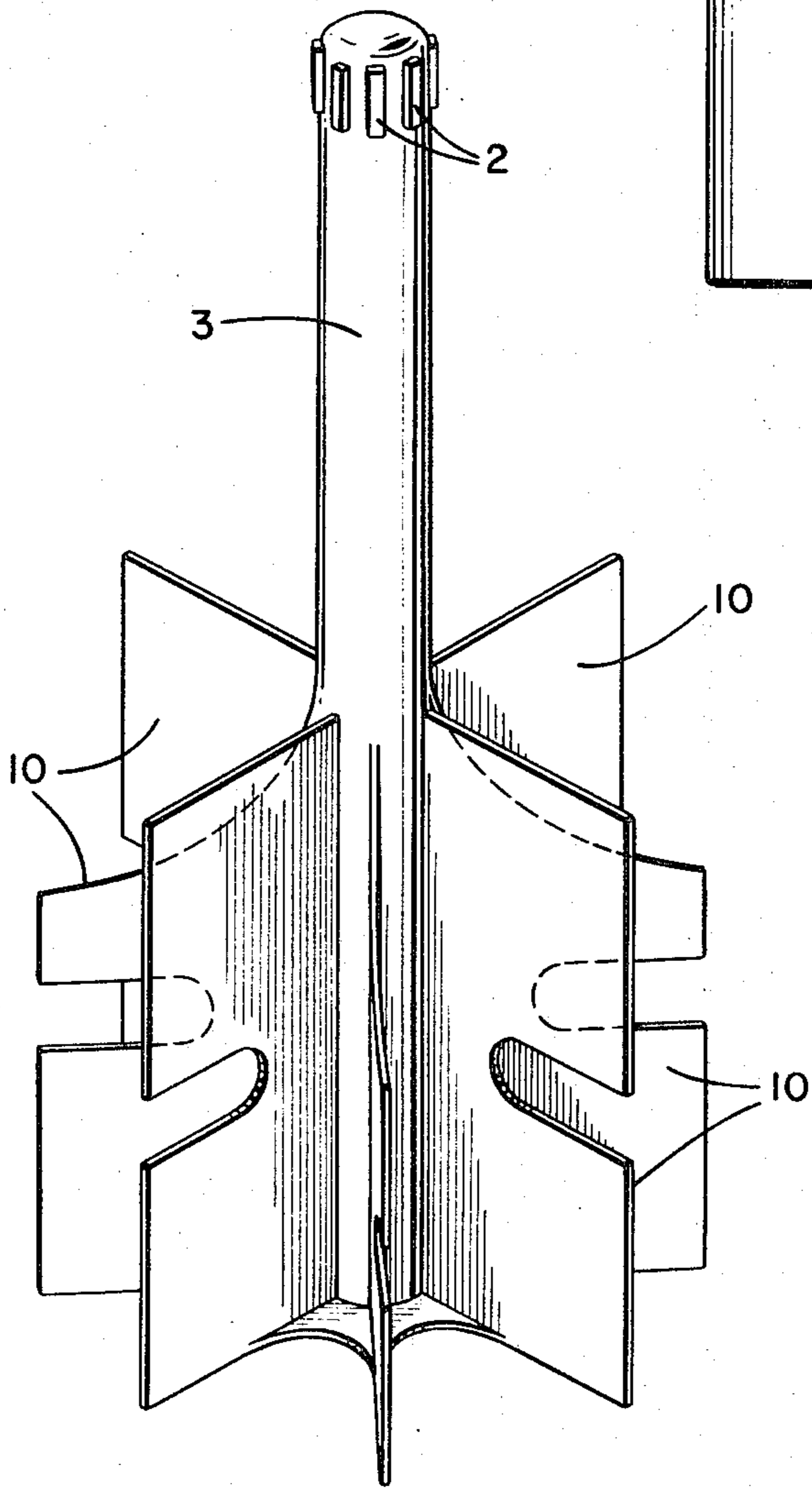
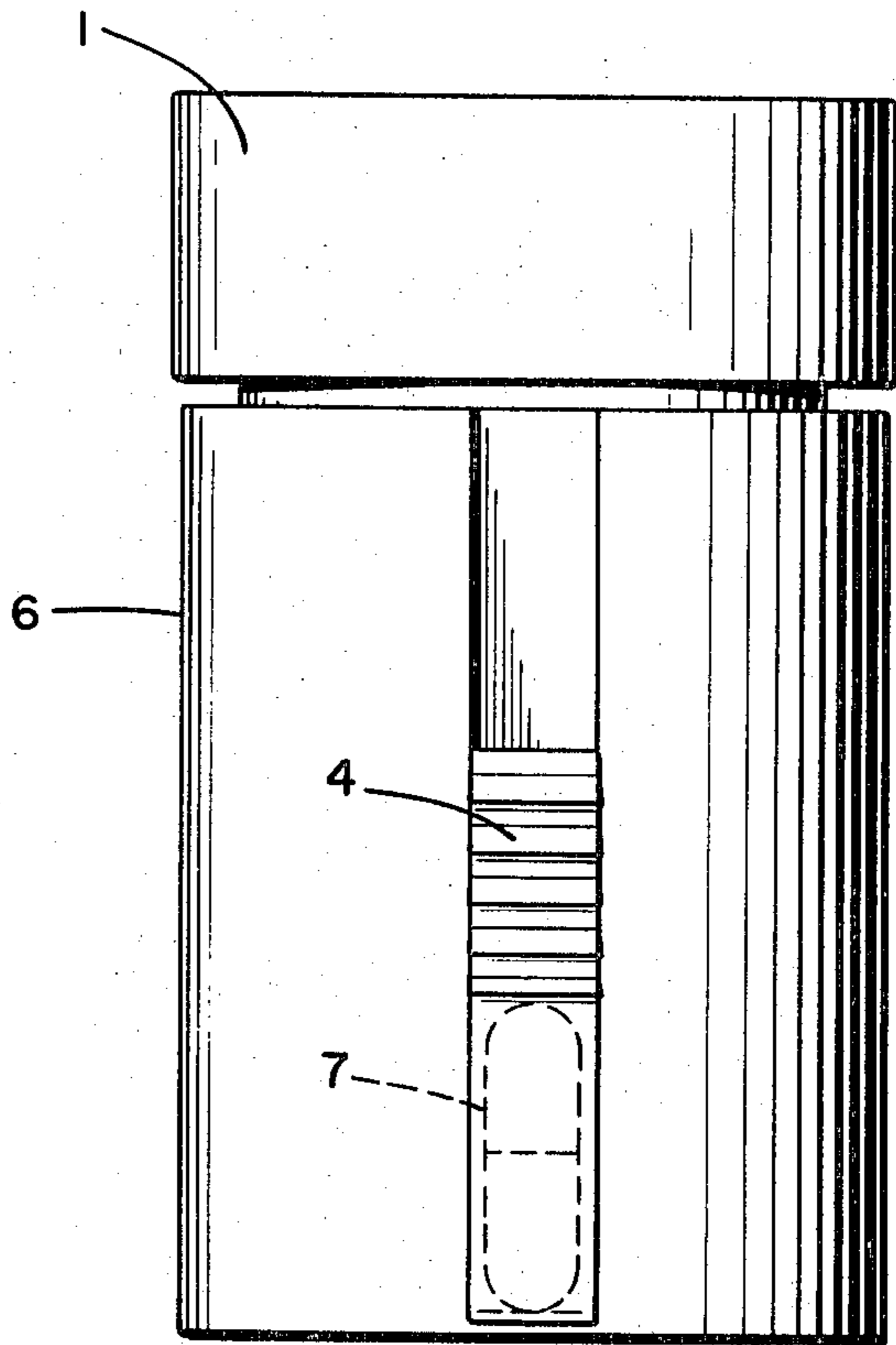


FIG. 7

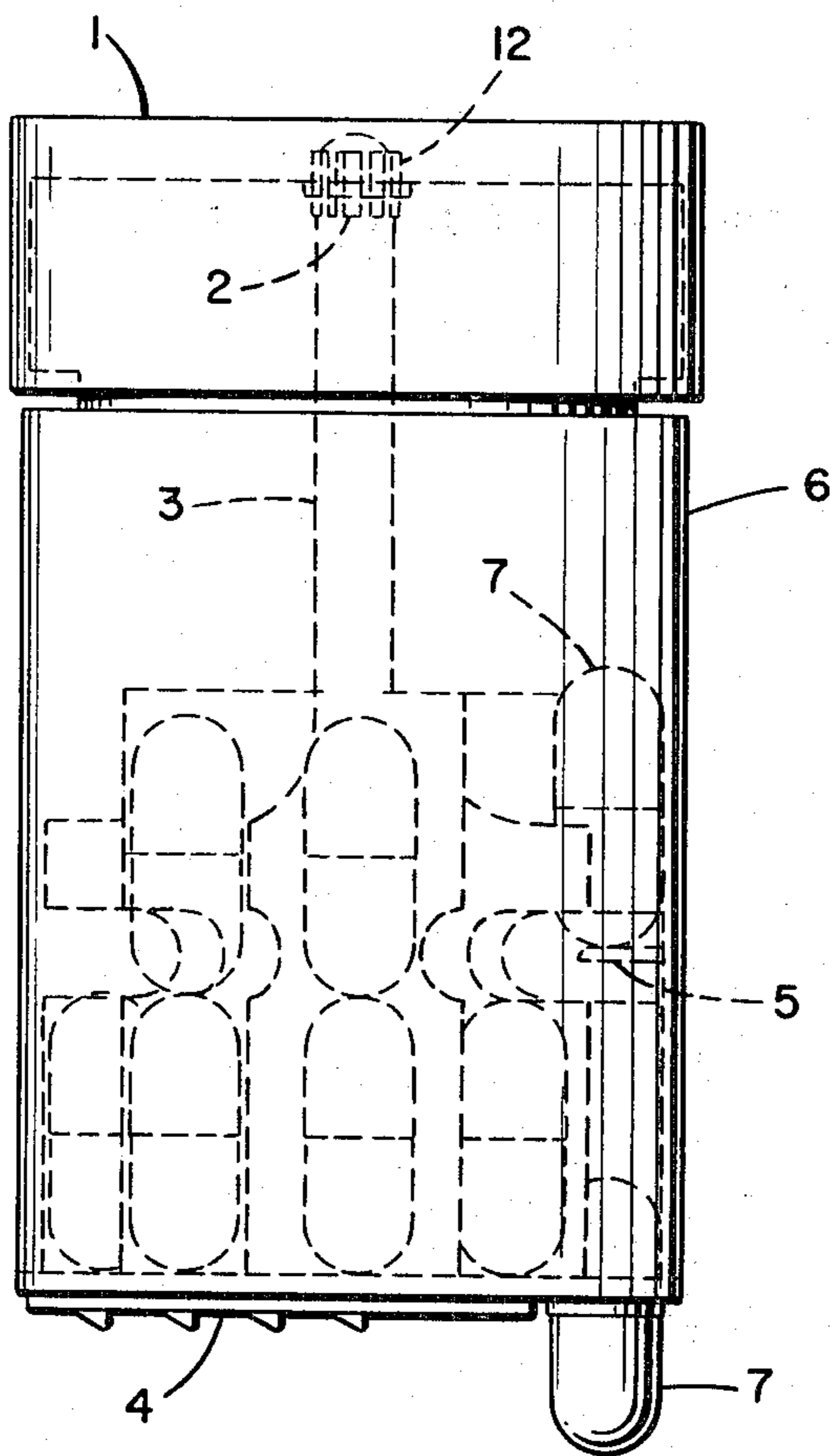
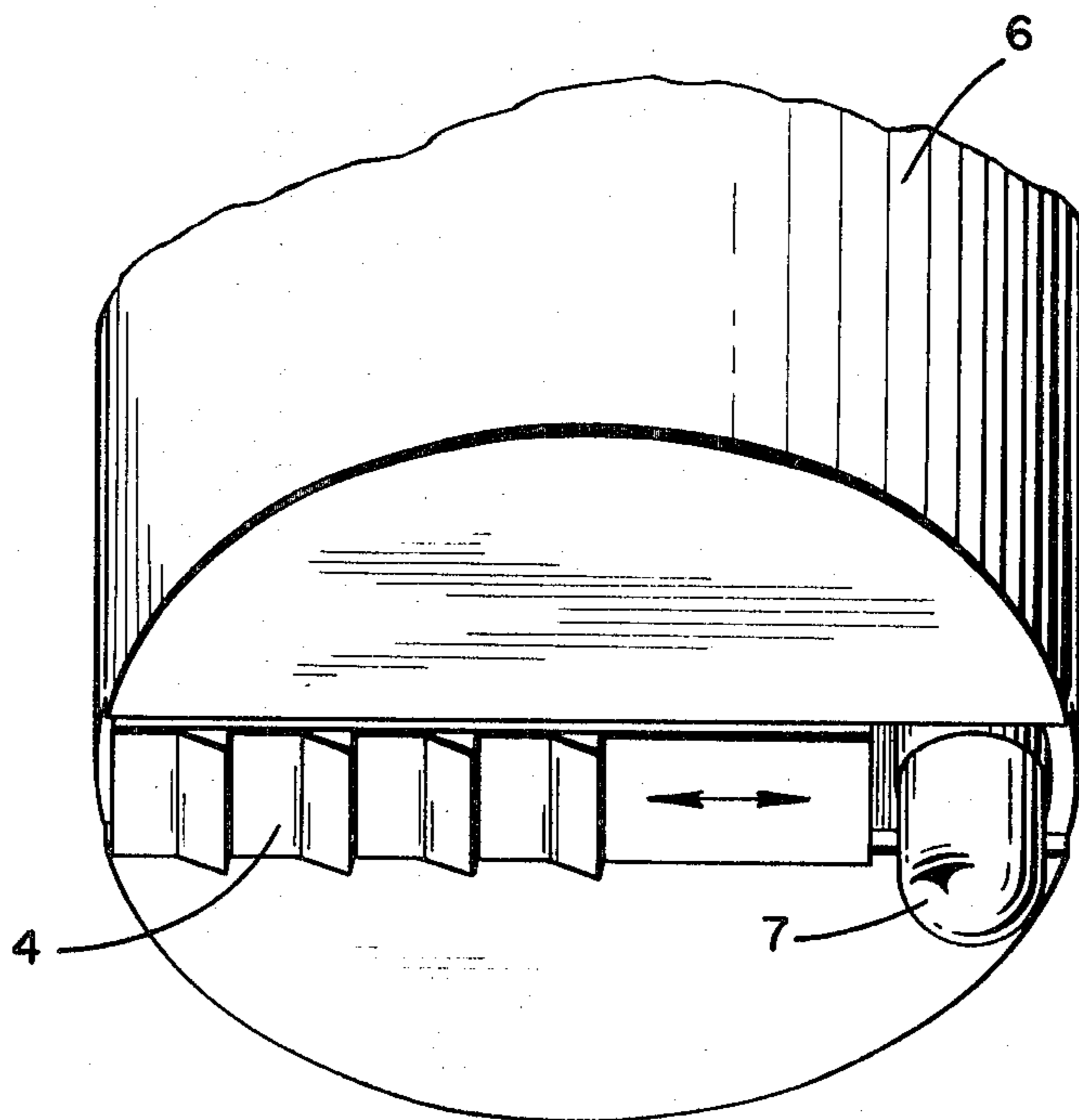


FIG. 5

FIG. 6



MEDICAMENT-DISPENSING CONTAINER

This invention relates generally to containers for products that are sold as pills, tablets, capsules, troches, granules, and the like. More particularly the invention relates to a container for dispensing medicaments, preferably medicaments administered in capsule form.

DESCRIPTION OF THE PRIOR ART

At present various types of containers are known in the market for selling medicaments, the most common among them being vials. All these containers have a common characteristic, namely that the medicaments contained therein irrespective of their form, can not be drawn from the container easily, in an individual manner. This is due to the fact that the capsule inlet is shaped in such a way that multiple medicaments are introduced into the container according to an automatic filling operation which renders it difficult not to draw the capsules out in a like manner, even by hand. The main consequence is that the user of this type of container must first uncover the container, then remove therefrom a small quantity of cotton, plastic foam or any other material used for keeping the pills, capsules or troches from being damaged or broken while handled or stored. The user then must try to take out a single medicament unit which may be done by turning the container upside down on the palm of his hand. This usually results in obtaining 2 or 3 pills from the container which then requires that the units in excess be returned to the container after being unduly manipulated and even contaminated. If, on the other hand, the user attempts to draw out one unit with his fingers which procedure is rather difficult and extremely cumbersome there still exists the risk of contamination of the tablets or capsules. Finally, when an individual medicament unit has been drawn from the container, the cotton or plastic foam used for keeping the tablets from being damaged, must be reinserted into the container, and the container cap replaced.

The above-described disadvantages are but a few of the many drawbacks inherent to containers now in use for bottling medicaments.

It is, therefore, an object of the present invention to provide a novel dispensing container particularly adapted for dispensing one individual capsule each time use is made thereof.

Another object of the invention is to provide a novel hygienic dispensing container capable of avoiding and overcoming all of the problems encountered with containers presently used for packaging medicaments.

A further object of the present invention is to provide a novel dispensing container that is easy to manufacture, highly practical, readily usable and hygienic.

Still another object of the invention is to provide a novel dispensing container that permits the material that is to be dispensed by means thereof to pass directly from the container to the mouth of the person to whom such material is being administered.

The above and other additional objects of the invention will become more apparent by reference to the accompanying drawings in which:

FIG. 1 is an elevation view partially broken away of the present invention;

FIG. 2 is an exploded view of the different elements constituting the present invention;

FIG. 3 is a bottom plan view of the rotary member shown in FIGS. 1 and 2;

FIG. 4 is an elevational view of the container showing the position held by a capsule before emitting;

FIG. 5 is an elevational view of a further embodiment of the present invention;

FIG. 6 is a partial perspective view showing the lower face of the dispensing container of FIG. 5 with a capsule partially emitted; and

FIG. 7 is a perspective view of the rotary member of FIG. 3.

In FIG. 1 the novel dispensing container is constituted by a cap 1, a rotary member and a main body 6. Cap 1 preferably has a cylindrical shape and is rotatable. It can be rotated in either direction. The body 6 has a small gate 4 located on the surface thereof, preferably vertically on the circular surface, and slidably running from a lower to an upper position and vice versa for the purpose of exposing an opening through which the medicament, preferably a capsule 7, leaves the container. The third constituting element of the container, i.e., the rotary body, may be seen within the latter and consists of a stem 3 the upper end of which carries a number of teeth, while the lower portion presents a series of separating walls 10 which together with the main body 6 form cavities to hold an individual capsule. These separating walls have a short horizontal notch for preventing their obstruction on turning with a small lug or projection 5 at the inner wall of the main body 6.

Referring now to FIG. 2, there are shown the three elements constituting the novel dispensing container of the present invention. Cap 1 is generally cylindrically shaped and has in its upper inner face centrally positioned a small cavity provided with a series of peripherally positioned preferably rectangular grooves 12. The cap also presents on its lower periphery a small annular lip 13. Lip 13 when cap 1 is assembled with the rotary member and body 6 fits within a peripheral groove of body 6. FIG. 2 shows as the second element a revolving member formed by a stem 3 the upper end of which carries a series of rectangular teeth 2, while the lower portion has a plurality of separating walls 10 converging to the axis (FIGS. 3 and 7), said walls being of two different heights, the lower walls alternating with the higher walls. This element, in its central lower portion or base, has a small cavity 11 that carries therein a series of preferably triangular teeth. The third element of the dispensing container, as shown in FIG. 2, is the container's main body and is preferably cylindrical. It presents a mouth or open upper end under which a small peripheral channel 9 is disposed. This body has on its inner lower face, in the center thereof a small circular projection 14 ending in a series of preferably triangular teeth 8, which resemble a small-sized crown. On the outer circular face of this body is a small gate 4 that can slide vertically up and down. In the inner face of the body, behind the said small gate, is a substantially flat projection or lug 5 which prevents capsules from dropping into the space vacated by the emitting capsule.

When the dispensing container is viewed from the front as in FIG. 4, a small vertical channel is shown running the entire height of the container's main body 6, in which the small gate 4 slides up and down.

According to the alternative embodiment of the invention, as shown in FIGS. 5 and 6, the small gate 4 is disposed on the lower face or base of the dispensing

container and runs diametrically in a channel from peripheral edge to peripheral edge. Capsule 7 is individually expelled from the lower portion of the container.

To operate the dispenser cap 1 of the container is rotated in either direction. Cap 1, being interiorly engaged with the revolving element, causes it to rotate which upon rotation arranges the capsules so that only one capsule comes to lie in each of the cavities formed by the separating walls and the cylindrical body of the container. Through the action of the triangular teeth inside the lower face of the cylindrical body and the corresponding triangular teeth in the lower portion of the revolving element, a cavity containing one capsule is caused to coincide in front of the rectangular opening in the cylindrical body. Thus, by opening the gate an individual capsule may be emitted.

As it will be readily apparent, the dispensing container of the present invention can be made of any proper size and dimensions, and it may be constructed from any material as will be adequate to attain the purpose for which it is meant.

Although in the above description certain embodiments of the invention have been set forth in detail, it is of course to be understood that the invention is not to be limited thereto. Numerous modifications can be made in the present invention and accordingly it is deemed that all such modifications fall within the spirit and the scope of the invention, the latter being solely limited by the following claims.

What is claimed is:

1. A container for dispensing capsules in an individual manner comprising a generally cylindrical cap having an annular lip on the lower edge thereof and a small cylindrical cavity centrally positioned on the upper inner face thereof which presents in its periphery a series of grooves; a rotary member having a stem on which upper portion thereof is provided a series of grooves on which lower portion thereof is provided a plurality of radially spaced walls and on which lower end thereof is defined a cylindrical cavity that terminates interiorly in a plurality of teeth; and a gener-

ally cylindrical body having an open end, a peripheral groove near said open end, a small cylindrical projection centered on its inner lower face with the projection terminating in a plurality of teeth, a channel on its vertical outer face in which is inserted a small gate that runs to and from an opening in the vertical wall to cover and uncover said opening, a substantially flat projection horizontally disposed and positioned intermediate the ends of the cylindrical body on its vertical interior face, said grooved upper portion of the stem engaging the cylindrical cavity of the cap, said cylindrical cavity of the rotary member being engaged by the cylindrical projection of the cylindrical body, said annular lip of said cap being inserted within the peripheral groove of the cylindrical body, said walls defining a horizontal cut in the outer edge of each to avoid being hindered by the projection of the inside face of the cylindrical body during rotation of the rotary body.

2. The dispensing container according to claim 1, in which the said teeth of the cylindrical body and the cylindrical cavity in the lower portion of the rotary member are preferably triangular.

3. The dispensing container according to claim 1, in which the grooves in the cylindrical cavity on the upper inner face of the cap are substantially rectangular and so too are the teeth disposed on the upper end of the rotary member stem.

4. The dispensing container according to claim 1, in which the vertical groove in the outer face of the cylindrical body runs the whole length of the body height, between the lower edge thereof and the lower edge of said peripheral groove.

5. The dispensing container according to claim 1, in which the exit opening for the units to be dispensed is in the base of the cylindrical body.

6. The dispensing container according to claim 1, in which the separating walls of the rotary member are of two heights, the higher walls alternating with the lower walls.

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