

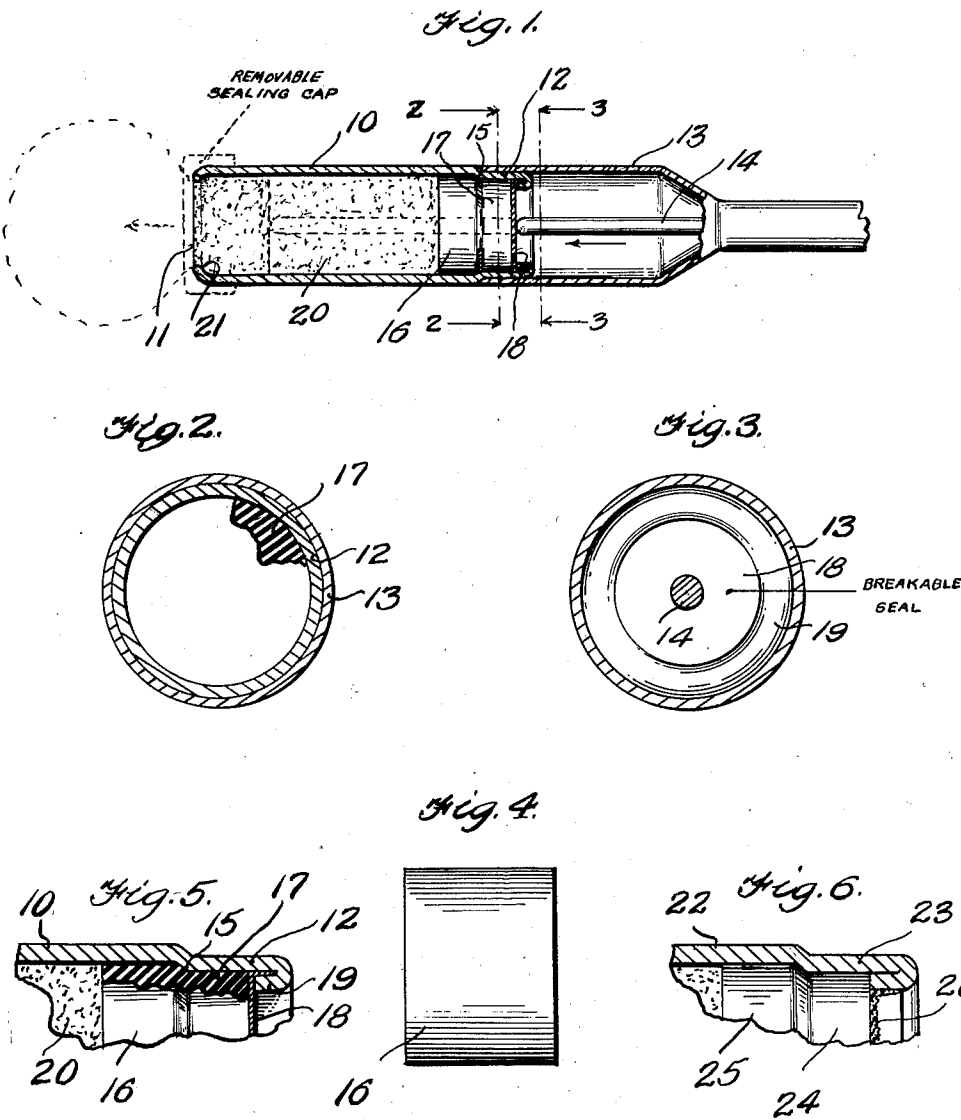
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PLUNGER TYPE DISPOSABLE MEDICAMENT CONTAINER

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CONTAINER

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5 Claims. (Cl. 128—261)

1

2

This invention relates to a plunger type disposable medicament container, and has for one of its objects the production of a simple and efficient container which is adapted to be attached to a conventional ejector for discharging a measured quantity of medicament from the container, after which the container may be thrown away.

A further object of this invention is the production of a simple and efficient means for sealing the plunger in one end of a container in which medicated jelly is placed, in a manner whereby the plunger is tightly fitted in one end of the container and is then tightly sealed around the junction of the container and plunger to prevent hardening of the medicated jelly around the plunger which would render the plunger inoperative.

Other objects and advantages of the present invention will appear throughout the following specification and claims.

In the drawing:

Figure 1 is a longitudinal sectional view of the container mounted upon an ejector member;

Figure 2 is a transverse sectional view taken on line 2—2 of Figure 1;

Figure 3 is a transverse sectional view taken on line 3—3 of Figure 1;

Figure 4 is an enlarged side elevational view of the compressible rubber plunger;

Figure 5 is an enlarged fragmentary sectional view of the inner end of the container illustrating one type of seal; and

Figure 6 is an enlarged fragmentary sectional view of the inner end of a container and illustrating a further type of seal.

By referring to the drawing in detail, it will be seen that 10 designates a tubular-like container having an outer open discharge end 11 and an open inner end 12. The container 10 is preferably formed of material such as plastic, waterproof card-board, or other rigid material of a suitable type, and which may be thrown away after having once been used. The inner end 12 is restricted in its diameter relative to the remaining portion of the container so as to fit within the outer end of a conventional ejector 13. The ejector 13 is provided with a reciprocating ejector plunger rod 14 of relatively small diameter and having a sealing disc penetrating end also of small diameter, as shown in Figure 1. An inclined annular abutment shoulder 15 is formed at the junction of the restricted inner end with the remaining portion of the container 10, as shown in detail in Figure 5.

A compressible plunger 16, preferably of rub-

ber, is fitted within the container 10 and is forced against the inclined abutment shoulder 15 until a suitable portion 17 thereof is forced, compressed or wedged into the restricted end 12 of the container and against the shoulder 15, to hold the plunger in a set releasable position. A breakable sealing disc 18 fits snugly against the end of the portion 17 of the plunger 16, as shown in Figures 1 and 5, and the periphery of the disc 18 may be anchored under the rolled or beaded end 19 of the container 10, as shown in Figure 5. The disc 18 constitutes a breakable seal which normally closes the body or container 10 outwardly of the plunger 16 and may be secured in any other conventional manner. The disc 18 is preferably formed of tin, aluminum foil or other type of sealing material to provide an adequate water and air-tight seal.

After the plunger 16 has been forced into a selected position within the container 10, a measured quantity of medicament, preferably of the jelly type having a water base, is placed within the container 10. A suitable sealing cap shown in dotted lines in Figure 1 is then placed over the outer end 11 of the container to retain the contents in sealed and sanitary condition.

When the container is to be used, the sealing cap is removed from the outer end 11, and the restricted end is fitted within the open end of the ejector 13 to firmly hold the container in place. The container is then inserted into the body orifice and the plunger 14 is forced against the sealing disc 18, which disc will break under slight pressure from the plunger, and the compressed portion 17 of the plunger 16 will be forced forwardly throughout the length of the container 10 to eject a measured quantity of medicament 20 out through the open outer end 11 of the container 10 in a globular mass at the desired location within the body orifice. The outer end of the container 10 is provided with an intumed flange 21 to retain the plunger 16 within the container 10.

In Figure 6 there is shown a modified form of the invention illustrating a container 22 having a restricted end portion 23 into which a compressed portion 24 of a compressible rubber plunger 25 is fitted. A cement coating or other similar type of seal in the nature of a coating 26 is placed upon the end of the compressed portion 24 of the plunger 25, and overlaps the junction of the plunger with the container to provide a moisture and air-proof seal for the plunger in the same manner as that described and shown in detail in Figure 5.

3

By means of the sealing and compressible features of the plunger, it will be noted that the jelly within the container 10 will not become hardened around the plunger 16 in a manner to anchor the plunger against movement. The jelly which preferably is of a type having a water base, will readily harden and deteriorate when subject to exposure to the atmosphere which would tend to anchor the plunger within the container and prevent the reciprocation of the plunger under normal pressure upon the ejecting plunger rod. It is important that the seal be broken and that the plunger be released under normal pressure and without excess pressure upon the plunger rod 14, or otherwise the device would be impractical for its intended use. It should be further understood that the device has been constructed with the intention of providing an inexpensive, sanitary and protected disposable container for administering a measured quantity of medicated jelly to a selected location within a body cavity, although powder or other types of medicament may be placed within the container within the spirit of the invention and within the scope of the invention.

Having described the invention, what I claim as new is:

1. A disposable medicament container comprising a tube-like body having an outer open discharge end, said body having an inner end of a restricted diameter, a medicament ejection plunger having a portion compressed and snugly fitted within said inner restricted end to normally close said inner end, and a breakable sealing means abutting the extremity of the compressed portion of said plunger for sealing the junction of said body and plunger for preventing the entrance of air between the plunger and the container and into the container.

2. A disposable medicament container comprising a tube-like body having an outer open discharge end, said body having an inner end of a restricted diameter, a medicament ejection plunger having a wedge portion wedged into and snugly fitted within said inner restricted end to normally close said inner end, a breakable sealing means abutting the wedged portion of the plunger for sealing the junction of said body and plunger for preventing the entrance of air between the plunger and the container and into the container, and said sealing means comprising a thin foil of air and water-proof material.

3. A disposable medicament container comprising a tube-like body having an outer open discharge end, said body having an inner end of a restricted diameter, a medicament ejection

4

plunger having a compressed portion snugly fitted within said inner restricted end to normally close said inner end, a breakable sealing means abutting the end of said compressed portion of said plunger and said body for sealing the junction of said body and plunger for preventing the entrance of air between the plunger and the container and into the container, and said sealing means comprising a cement-like coating.

4. A disposable medicament container comprising a body having an open inner end and an open outer end, the body containing a measured quantity of medicament, the outer end being adapted to receive a removable seal, a compressible plunger closing the inner end to retain the medicament within the container, said inner end being reduced in diameter with respect to the remaining portion of the body to define a restricted portion, said piston having a compressible portion adapted to be compressed to wedge into and to snugly fit within said restricted portion of said body, a breakable seal closing said inner end of said body outwardly of said plunger, the breakable seal being adapted to be broken when pressure is exerted thereon for moving the piston longitudinally of the container to extract the measured quantity of medicament from the container, and said body having an inclined abutment shoulder adjacent the restricted portion for abutting contact with said compressible plunger and to facilitate the entrance of the compressible portion into said restricted portion.

5. In combination with an ejector having a plunger rod, a disposable medicament container removably fitted upon said ejector, a compressible plunger tightly fitted in one end of said container, a breakable sealing means for said compressible plunger, and said plunger rod being of relatively small diameter with respect to said breakable sealing means and having a sealing means penetrating end to break said sealing means and to move said compressible plunger longitudinally of said container for ejecting medicament from said container.

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