Feb. 24, 1942. V. F. PALMER 2,274,562

CLOSURE DEVICE

Filed Feb. 5, 1940

Fig. 1.

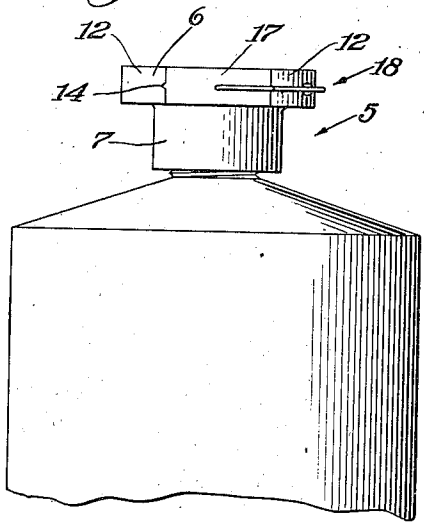


Fig. 2.

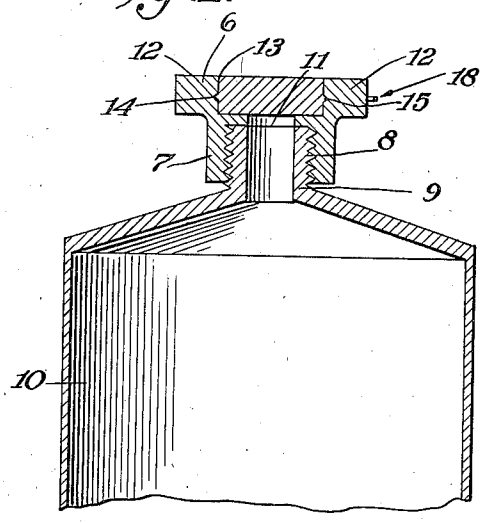


Fig. 3.

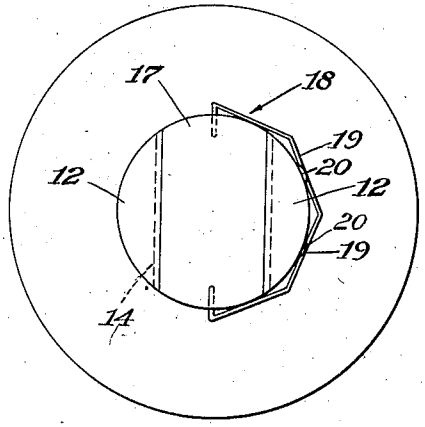


Fig. 4.

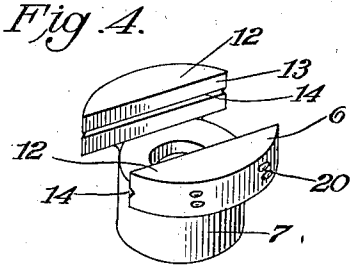
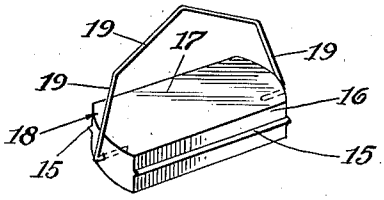


Fig. 5.



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UNITED STATES PATENT OFFICE

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CLOSURE DEVICE

Vincent F. Palmer, Newark, N. J.

Application February 5, 1940, Serial No. 317,433

3 Claims. (Cl. 215—73)

My invention relates to closure devices for containers and has as one of the principal objects thereof the provision of a closure device which is simple in construction, durable in use, efficient in operation and economical in manufacture.

Another object of my invention is to provide a closure device of the above described character so constructed and arranged whereby the same may be readily attached to containers and equipped with means for effecting efficient and convenient delivery or discharge of the contents of a container, such for example as the exuding paste from collapsible tubes and the discharge of pills from bottles or the like.

Other objects and advantages will be apparent from the following description, appended claims and annexed drawing.

Referring to the drawing wherein like reference characters designate like parts throughout the several views:

Figure 1 is a side elevation of my invention illustrating the same as applied to the discharge end of a collapsible tube.

Figure 2 is a vertical sectional view of my invention as applied to the tube.

Figure 3 is a top plan view thereof.

Figure 4 is a perspective view of the closure device with the slide removed.

Figure 5 is a perspective view of the slide.

In practicing my invention I provide a closure device 5 having a head 6 fashioned with a subjacent shank 7, the latter having an interiorly threaded bore 8 threadedly connected to the threaded discharge end 9 of a collapsible tube 10. The bore 8 has communicating therewith a discharge opening 11 through which the contents of the tube 10 are discharged as hereinafter set forth and with the discharge opening of a like diameter as the bore of the discharge end 9 of said tube.

The head 6 of the device comprises a pair of spaced side sections 12 having oppositely disposed faces 13 formed with longitudinally extending grooves 14 slidably receiving therein V-shaped ribs 15 fashioned on the side faces 16 of a slide 17 interposed between the sections 12. The bottom face of the slide 17 normally closes the upper end of the opening 11 and precludes discharge of any of the contents of the tube therethrough. The grooves 14 are fully open at their ends to permit removal of the slide from the head.

The end faces of the slide have extending therein angled ends of a bail or spring lock 18, the latter being of a substantially U-shaped configuration and preferably constructed of spring wire. The sides of the bail 18 adjacent the ends thereof are provided with angled sections 19 which seat between spaced pairs of projections 20 formed on the outer faces of each of the sections 12 whereby to secure the slide 17 in locked condition with respect to the sections 12 to preclude accidental opening of the discharge opening 11 when the tube is not in use. Obviously, by disposing the bail 18 upwardly over the slide 17, the latter may be actuated to open position or entirely detached from the head 6.

Without further elaboration, the foregoing will so fully explain the invention that others may, by applying current knowledge, readily adapt the same for use under various conditions of service. Moreover, it is not indispensable that all the features of the invention be used conjointly since they may be employed advantageously in various combinations and sub-combinations.

It is obvious that the invention is not confined to the herein described use therefor as it may be utilized for any purpose to which it is adaptable. It is therefore to be understood that the invention is not limited to the specific construction as illustrated and described, as the same is only illustrative of the principles of operation, which are capable of extended application in various forms, and that the invention comprehends all construction within the scope of the appended claims.

What I claim is:

1. In a closure device having a slotted head and a slide member slidably fitted in the said slot, a bail pivotally connected with the ends of the slide operable to embrace part of the head to releasably lock the slide in the slot.

2. In a closure device having a slotted head and a slide member slidably fitted in the said slot, a member pivotally connected to the slide movable, when the slide is in closed position, to embrace a side section of the head.

3. In a closure device, a head having a pair of spaced apart complementary sections, a slide member mounted to slide between the said head sections, and a locking member of approximate arcuate contour having its ends pivotally connected to the slide member operable to embrace one of the head sections to releasedly lock the slide in closure position.

VINCENT F. PALMER.