

Dec. 27, 1949

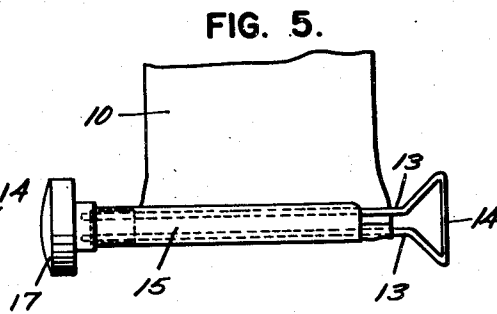
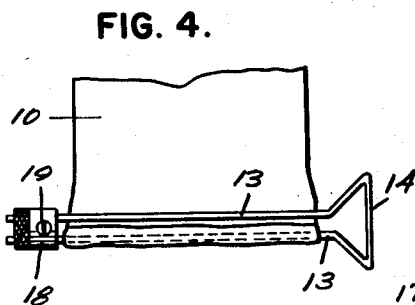
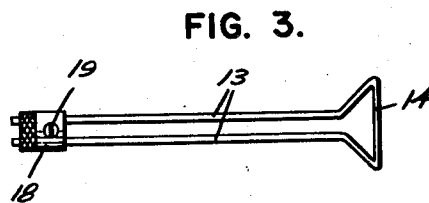
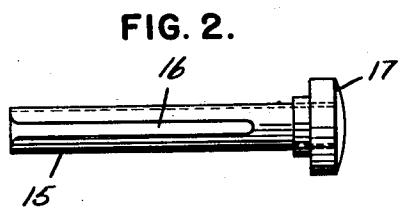
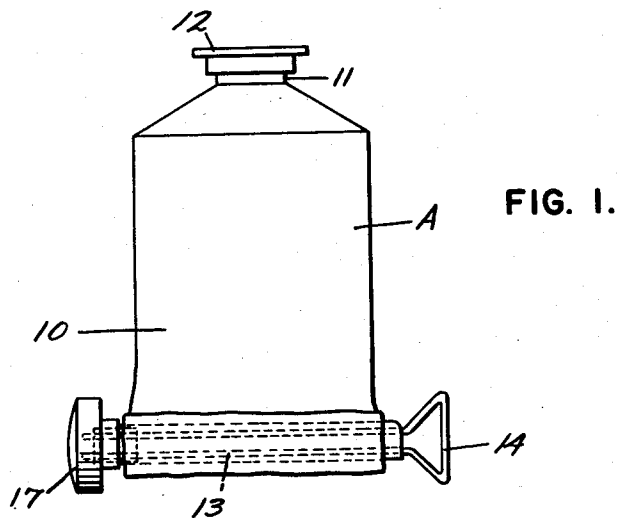
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2,492,594

WINDING KEY FOR COLLAPSIBLE TUBES

Filed June 18, 1946

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

FIG. 6.

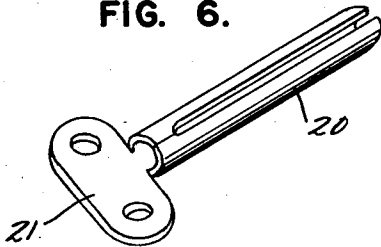


FIG. 7.

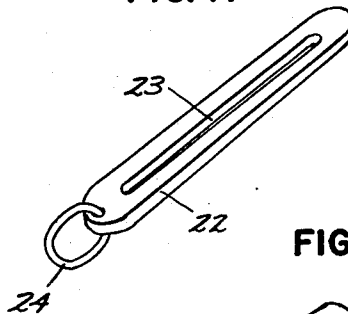


FIG. 8.

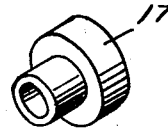


FIG. 9.

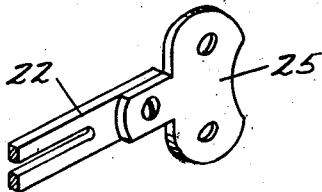


FIG. 10.

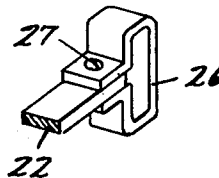


FIG. 11.

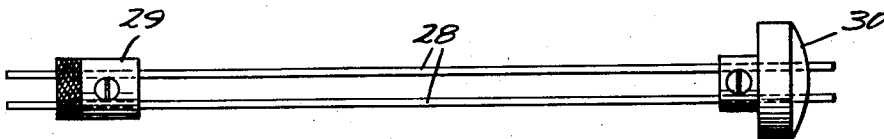
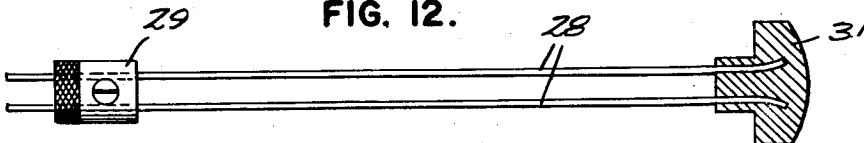


FIG. 12.



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2,492,594

WINDING KEY FOR COLLAPSIBLE TUBES

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Application June 18, 1946, Serial No. 677,440

2 Claims. (Cl. 222—99)

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The invention relates to a tube like dispensing device, and more especially to a collapsible paste dispensing container.

The primary object of the invention is the provision of a container of this character, wherein paste held therein can be readily and easily dispensed therefrom by the use of a key which through the turning thereof under engagement with the body of the container causes the latter to be collapsed and thereby compressing the paste within for the dispensing of the same in determined quantities for consumption.

Another object of the invention is the provision of a container of this character, wherein the key is of a kind to have a collapsed portion of the body of such container threaded therethrough, so that by turning the key the body will be rolled on itself causing collapsing of opposite side walls, which compresses the content to have it ejected through a mouth opening therefrom, the container being designed more especially for containing tooth paste, creams, lotions, or other semi-solid content, which can be delivered in quantity for use and thus eliminating waste of the same.

A further object of the invention is the provision of a container of this character wherein the key is detachably fitted thereto, for the re-use of the latter and on containers of varying sizes, the key being of novel construction, and is unique in the assembly thereof, and is devoid of a complicated set-up for service.

A still further object of the invention is the provision of a container of this character, which in association with the key, is simple in construction, thoroughly reliable and effective in operation, strong, durable, readily and easily handled for the dispensing of the content of the container, and inexpensive to manufacture and assemble.

With these and other objects in view the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings, which disclose the preferred and modified forms of construction of the invention, and pointed out in the claims hereunto appended.

In the accompanying drawings:

Figure 1 is an elevation of a container with its key attached, constructed in accordance with the invention.

Figure 2 is a perspective view of one part of the operating key for the container detached therefrom.

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Figure 3 is a side view of the other part of the key.

Figure 4 is a fragmentary elevation similar to Figure 1 of the container showing part of the key illustrated in Figure 3 applied.

Figure 5 is a view similar to Figure 4 showing the parts of the key in partially assembled condition on the container.

Figure 6 is a perspective view of a modified form of key part.

Figure 7 is a view similar to Figure 6 showing another modification of key part.

Figure 8 is a perspective view of a turning knob for the key.

Figure 9 is a fragmentary perspective view of a modified form of key head.

Figure 10 is a view similar to Figure 9 showing another modification of key head.

Figure 11 is a plan view of a still further modification of key.

Figure 12 is a view similar to Figure 11 with the head in section of the key.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings, particularly Figures 1 to 5 inclusive, A designates generally a tube-like collapsible container involving a depressible body 10, which is permanently closed at one end in the usual well known manner, while formed with the body is a contracted opposite end, providing a cap receiving neck 11, for the detachable fitting thereon of a closure cap 12, which normally seals the throat and discharge or dispensing opening in such neck not shown.

The permanently closed end of the body 10 is adapted to have detachably coupled therewith a key arrangement for collapsing such body, and this key arrangement in one instance involves one or two parts, one being in the form of a bifurcated straight shank having a pair of spaced runs or arms 13 and a looped head 14, which is unitary with the arm runs of the shank and two in number, arranged in close spaced parallel relation to each other, so that the closed end of the body 10 can be inserted therebetween them to have the shank straddle the same. The arms or runs 13 when engaged with the body 10 at the extreme closed end thereof can be accommodated within a tubular or cylindrical roller sleeve 15 which is provided with a longitudinal slot 16 forming a way for the body 10 and opens through vacant end of such sleeve, and terminates removed from the other end of the latter.

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The arms 13 have a turning knob 18, which is detachably secured thereto by a set screw 19. In other words the sleeve 15 is telescoped onto the shank when engaged on the body 10, with the head 14 and the knob 17 extended laterally from such body, so that the key with the two parts can be turned for the rolling of the body onto the sleeve 15, and thus collapsing such body which compresses the content and causing the dispensing of the content through the neck 11.

It is possible to use either part of the key just described for the rolling of the body 10 in the collapsing thereof, thereby for dispensing the content of the said body. In the use of the part of the key having only the part involving the shank including the arms or runs 13 and the head 14, there is employed the knob 18, which is formed with clearances for the arms or runs 13 and held fast by a binding screw 19, which permits regulating this part to fit different widths of containers and fastens it in place thereon. The use of the parts of the key together is shown best in Figures 1 and 5, of the drawings, while in Figures 3 and 4 the part of the key with the arms or runs 13 has illustration of the application alone to the body 10 in Figure 4.

In Figure 6 of the drawings there is shown a slight modification, wherein the key sleeve part 20 is provided with a wing head 21 in substitute for the knob 17 hereinbefore described, so that this part can be manually turned for the twisting of the body 10 of the container thereon to effect collapsing of the latter for the dispensing of the content thereof.

In Figure 7 of the drawings there is shown a modification, wherein a key part involves an elongated bar like blade 22, having centrally therein of its longitudinal axis a slot 23, into which is threaded the closed end of the body 10, for the rolling of the latter thereon in collapsing of the said body for dispensing content. The blade 22 at one end is provided with a ring 24 which is loosely connected thereto.

In Figure 8 of the drawings there is shown in detail a turning knob for the key, which is identical to the knob 17 heretofore described.

In Figure 9 of the drawings there is shown a modification of a key head 25 which is riveted or otherwise fastened to the key blade 22 heretofore set forth, for the convenient turning thereof when applied to the body 10 for the collapsing thereof by rolling action.

In Figure 10 of the drawings there is shown a modification of a turning head, which is in the form of a hand engaging loop 26, adapted to be riveted or otherwise fastened at 27 to the blade 22.

In Figures 11 and 12 there are shown further

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modifications of turning keys, wherein both includes a pair of a spaced strip like arms 28, having adjustably connected thereto at one end of each key a plug like element 29, while adjustably connected to the key shown in Figure 11 at the other end is a turning knob 30 and in Figure 12 the knob 31 has the arms permanently embedded therein terminally, so that this knob 31 has a fixed position.

What is claimed is:

1. A key arrangement for a flexible paste dispensing tube comprising a member having parallel arms between which the closed flat end of tube may be received, means connecting the arms together at the opposite ends of the same, and a slotted sleeve adapted to be telescoped over said arms and to encompass the same when the closed flat end of the tube is disposed between said arms whereby to provide a smooth round surface on which the tube may be rolled, the tube being extended into the slot of the sleeve, and handle means on said sleeve to effect the turning operation.

2. A key arrangement for a flexible paste dispensing tube comprising a member having parallel arms between which the closed flat end of the tube may be received, and a slotted sleeve adapted to be telescoped over said arms and to encompass the same when the closed flat end of the tube is disposed between said arms whereby to provide a smooth round surface on which the tube may be rolled, the tube being extended into the slot of the sleeve, and handle means on said sleeve to effect the turning operation, said arms having an integral end portion at one end and enlarged to form a handle, means on the opposite end of the arms releasably secured thereto for connecting the arms together after the arms have been extended about the portion of the tube, said means for connecting the arms together at their free ends being of a diameter adapted to receive the sleeve when extended over the arms and the portion of the tube.

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