

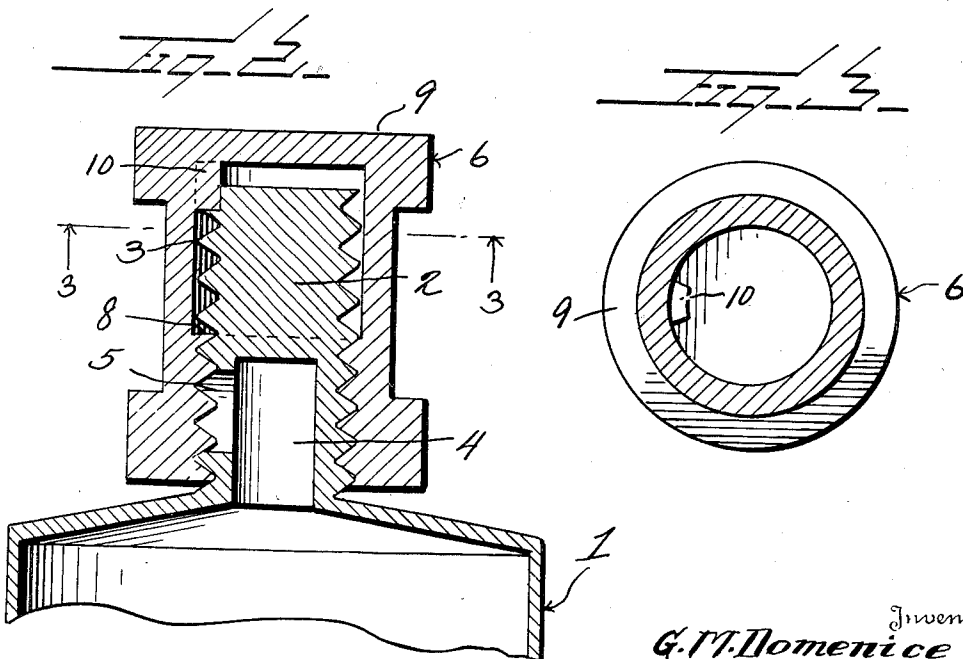
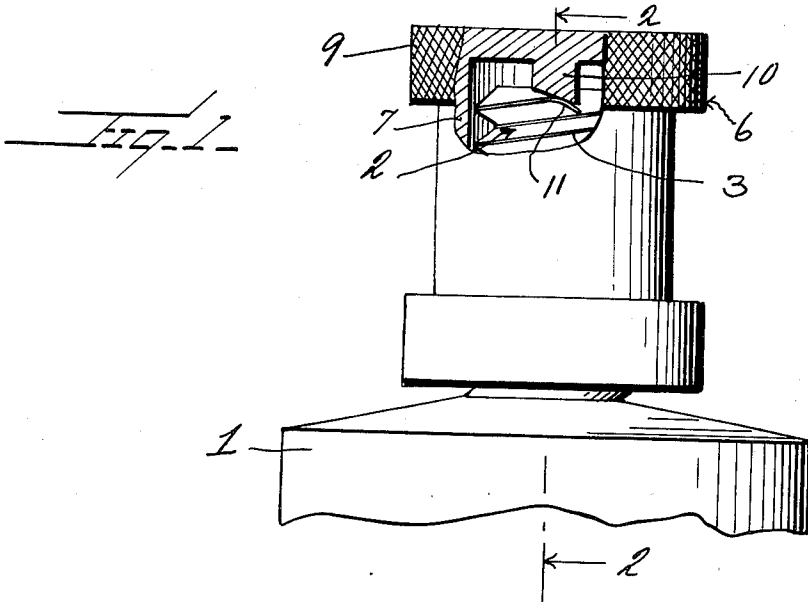
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LOSS PREVENTING MEANS FOR TUBE CAPS

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LOSS PREVENTING MEANS FOR TUBE CAPS

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4 Claims. (Cl. 221-60)

This invention relates to improvements in collapsible tube containers of the type known as paint tubes and pertains particularly to an improved form of dispensing nozzle therefor.

5 The present invention has for its primary object to provide an improved collapsible paste or paint tube in which novel means is provided for preventing the loss of a cap by means of which the dispensing opening of the tube is
10 closed.

Another object of the invention is to provide in a paste tube of the character described, a novel loss preventing means for a cap, which means is formed or established by the use of
15 the tube through the forcible movement of the cap in one direction upon the dispensing nozzle or neck of the tube whereby there is produced a deformation of the cap carrying threads which prevents the reverse movement of the cap be-
20 yond a predetermined position.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification,
25 with the understanding, however, that the invention is not to be confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed
30 in the appended claims.

In the drawing:

Fig. 1 is a view in side elevation of the cap end of a paste tube constructed in accordance with the present invention with a portion of the cap in section.

Fig. 2 is a vertical section on the line 2-2 of Fig. 1.

Fig. 3 is a section on the line 3-3 of Fig. 2 of the cap only.

Referring now more particularly to the drawing, the numeral 1 generally designates the upper portion of a collapsible tube of the type commonly employed for merchandizing tooth paste, shaving cream, artists' paints, and the like.

In accordance with the present invention, the head end of the paste tube 1 is provided with a relatively long neck 2 which is screw threaded throughout its length, as indicated at 3. This neck is hollow through a portion only of its length as indicated at 4, the hollow portion, of course, communicating with the interior of the tube and the body of the neck 2 is provided with
55 a discharge opening 5 which communicates with

the hollow portion 4 of the neck, for the discharge of the contents of the tube.

The numeral 6 generally designates the cap which is threaded on the neck 2. This cap consists of the cylindrical or barrel portion 7 which
5 is of a length slightly greater than the length of the neck 2 and which is interiorly screw threaded through a portion of its length and from the open end thereof, as indicated at 8. This screw threaded portion is of longitudinal extent
10 within the cylinder 7, less than half the length of the neck 2, but exceeds the length of the hollow portion 4 of the neck so that when the cap is screwed in on the neck as far as it will go, the threaded portion 8 of the cylinder will
15 cover the discharge opening 5.

The outer end of the cylinder 7 is closed, as indicated at 9, and formed integral with the wall of the cylinder and with the closed end portion 9 is an inwardly extending wedge 10,
20 the inner end of which is obliquely cut, as shown and adapted to come into engagement with the outer end portion of the thread 3 of the tube neck, when the cap is screwed onto the neck as far as it will go.

In the use of the present device, the cap
25 6 is screwed on in the usual manner until the inner end of the cap reaches nearly to the inner end of the neck portion 2, at which time the wedge-like body 10, which is carried by the
30 cap, will come into engagement with the outer end of the screw thread 3 which is on the stem 2 and then by forcibly turning the cap further, this wedge will operate to deform or burr the thread, as indicated at 11. It will thus be seen
35 that after this has been done, the cap cannot be fully unscrewed from the neck unless force is used and, therefore, in the ordinary course of using the device, the cap cannot come off and be lost as the user will have indicated to him when
40 the cap has been unscrewed as far as is necessary, through the engagement of the threads 3 with the turned portion 11 of the neck thread 3. It will also be apparent that when the cap has been unscrewed to the full extent permitted by the burred portion 11 of the screw, the
45 discharge opening 5 will be uncovered so that some or all of the contents may be discharged from the tube as may be required.

What is claimed is:

1. A loss preventing means for a paint tube cap, comprising a tube having an elongated neck portion, deformable screw threads extending throughout the length of said portion, said neck portion being chambered for communication with
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the interior of the tube and having a laterally directed discharge opening adjacent its inner end, a cap designed to be threaded onto the neck portion to cover said discharge opening, and means carried by the cap for deforming said threads when the cap is screwed onto the neck to a predetermined position whereby the unscrewing of the cap beyond a predetermined point is prevented.

2. In a paste tube, a collapsible tube body, a relatively long neck extending from one end of the body and having deformable screw threads throughout its length, the neck being chambered through a portion of its length for communication with the interior of the tube and having a laterally directed discharge opening adjacent its inner end, a cap having an overall length greater than the neck and threaded thereon for closing said opening, the threads of the cap extending through a portion only of its length adjacent the inner end of the cap, and means carried by the cap for deforming the threads upon the outer end of the neck when the cap is screwed inwardly to the fullest extent whereby the unscrewing movement of the cap for its complete removal from the neck is prevented.

3. In a paste tube, a tube body, an elongated neck portion integral with the body and having deformable threads throughout its length, said neck portion having a discharge opening adja-

cent its inner end which communicates through the neck with the interior of the body, a cap having an overall length greater than the neck, said cap being interiorly threaded through a portion of its length from the open end thereof, the extent of the threaded portion of the cap being less than the overall length of said neck and said cap threaded portion covering said discharge opening when the cap is fully threaded onto the neck, and a wedge-like lug integral with the interior of the cap adjacent the outer end of the same for engagement with the outer end of the thread of the neck when the cap is fully screwed onto the neck whereby to deform such thread and provide means for limiting the unscrewing movement of the cap on the neck.

4. In a paste tube, a tube body having a neck at one end, the said neck having a discharge opening leading therethrough from the tube, a screw thread on said neck, said thread being deformable at the end thereof remote from the tube, a cap formed to receive the neck to cover said opening, a screw thread within the cap for engagement with the first thread, and means carried in the cap for deforming the said remote end of the first thread when the cap is in opening closing position on the neck.

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