July 18, 1950 E. H. ZUMDAHL 2,516,040

DISPENSING SPOUT AND SLIDABLE RESILIENT SLEEVE CLOSURE

Filed April 18, 1946

FIG_1_

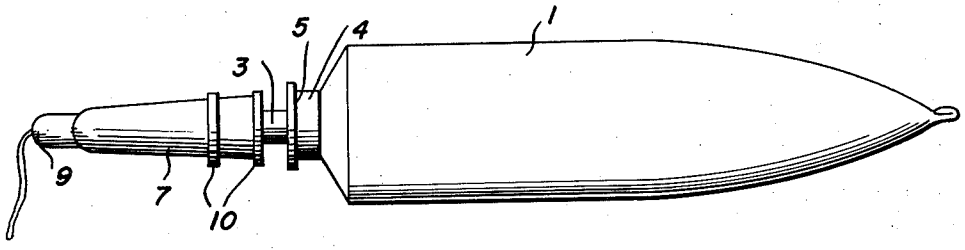


FIG_2_

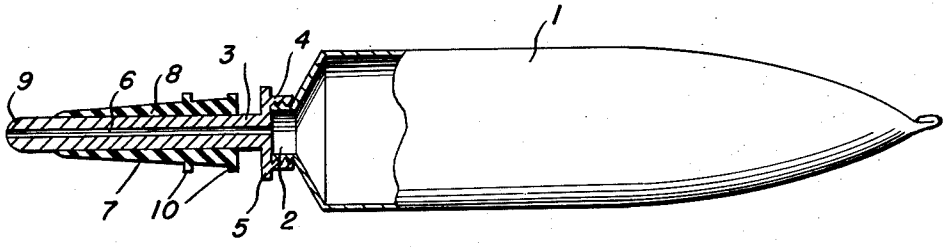
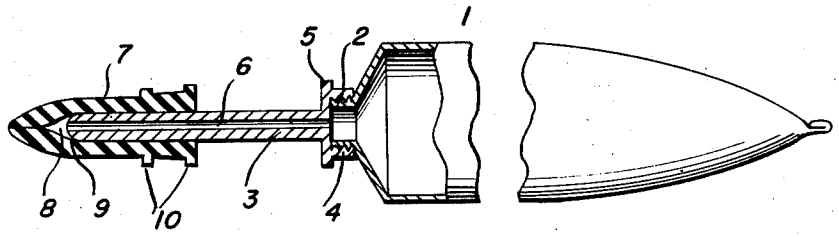


FIG_3_



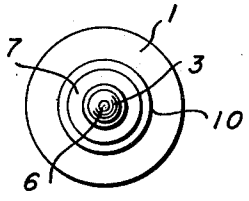


FIG_4_

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DISPENSING SPOUT AND SLIDABLE RESILIENT SLEEVE CLOSURE

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1 Claim. (Cl. 222—490)

1

This invention relates to a dispensing tube of the type used as a container for tooth paste and like products. At the present time such tubes have their discharge necks closed by a cap which is threaded to the neck and is liable to be dropped and lost when removed in order that the paste may be discharged by compressing the tube.

Therefore one object of the invention is to provide the tube with an attachment serving as a spout for the dispensing of paste and carrying a closure which is shifted along the spout into and out of position for sealing the outer or front end of the spout without being removed from the spout. It will therefore be seen that since the closure is not removed from the spout it can not be dropped and lost.

Another object of the invention is to provide a spout having a socket at its rear end which may be screwed onto a neck of a tube of conventional formation and thus allow the spout to be removed from an empty tube and transferred to a new tube.

Another object of the invention is to provide a closure in the form of a sleeve which fits snugly about the spout and may be slid longitudinally thereof to opened and closed positions, the sleeve being formed of rubber and having its front end formed with a normally closed perforation through which the front end of the spout is forced when the sleeve is slid rearwardly to an opened position.

Another object of the invention is to provide the sleeve with a rear end portion so formed that it may be readily grasped and the sleeve slid along the spout to opened and closed positions.

The invention is illustrated in the accompanying drawings wherein:

Figure 1 is a side elevation of the dispensing tube with the sleeve in an opened position;

Figure 2 is a sectional view taken longitudinally through the spout and the forward portion of the tube, the remainder of the tube being in elevation.

Figure 3 is a view similar to Figure 2 showing the sleeve in its closed position;

Figure 4 is a front view of the tube and spout.

The tube 1 is of conventional formation and has a threaded neck 2 at its front through which paste in the tube is forced when pressure is applied to the tube. This neck is usually closed by a cap which is unscrewed from the neck when paste is to be dispensed, but such a cap has been found objectionable as it is entirely removed when paste is to be dispensed and often is dropped and lost. The paste then dries in the tube.

2

In order to overcome this objection I have provided a spout 3 which may be formed of plastic, metal, or other suitable material, and has its rear end formed with an internally threaded socket 4 of a diameter adapting it to be screwed onto the externally threaded neck 2 of the tube after the cap has been removed. A flange 5 is formed about the socket in order that it may be readily grasped and screwed upon the neck. The spout is elongated in order that it may be easily applied to a tooth brush or thrust into a shaving brush if the tube is filled with shaving soap and the passage 6 which extends longitudinally through the spout is of such shape in cross section that the paste will be discharged therefrom as a ribbon.

In order to seal the outer end of the spout and cut off the paste after a sufficient quantity has been forced from the spout there has been provided a sleeve 7 formed of rubber. This sleeve is of less length than the spout and is formed with a bore 8 to receive the spout. The bore is very small in cross section but since the sleeve is formed of elastic material the rounded front end 9 of the spout may be forced into the rear end of the bore and the sleeve slid longitudinally into place about the spout. The sleeve contracts about the spout and frictionally grips the spout and when the sleeve is in the closing position in which it projects from the front end of the spout the forward portion of the bore will be closed, as shown in Figure 3, and very effectively seal the front end of the spout. This also causes the sleeve to cut off the ribbon of paste protruding from the spout. In order that the sleeve may be easily slid along the spout the rear portion of the sleeve is formed with outstanding circumferentially extending ribs 10 which are spaced from each other longitudinally of the sleeve such a distance that fingers may be engaged with the sleeve between the ribs and the sleeve shifted along the spout by pressure applied to one rib or the other. It will thus be seen that the sleeve may be easily moved along the spout to the retracted or opened position shown in Figures 1 and 2 where it will be out of blocking relation to the front end of the spout and the tube pressed to discharge paste through the passage 6. After sufficient paste has been squeezed from the tube the sleeve is returned to the extended position in which it projects forwardly from the spout and during this forward movement the paste will be cut off at the front end of the spout and the bore of the sleeve closed to seat the spout.

Having thus described the invention what is claimed is:

An attachment for a dispensing tube having a discharge neck at the front end, said attachment comprising a tubular spout formed with a longitudinally extending passage and having a socket about its rear end for engagement with the neck of the tube, the front end of said spout being open and rounded to provide a blunt end, a rubber sleeve formed with a longitudinally extending perforation constituting a bore into which the spout is forced from the rear end of the sleeve, the sleeve being of less length than the spout and when moved forwardly to an extended position having its forward portion protruding from the spout and contracted to close the forward portion of its bore, and outstanding annular ribs about the rear end portion of said sleeve spaced from each other longitudinally of

the sleeve whereby the sleeve may be gripped between the ribs and the sleeve shifted longitudinally to extended and retracted positions outwardly of or inwardly of the outer end of the spout and the elasticity of the sleeve adapted to close the forward portion of the bore to seal the front end of the spout.

ELMER H. ZUMDAHL.

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