

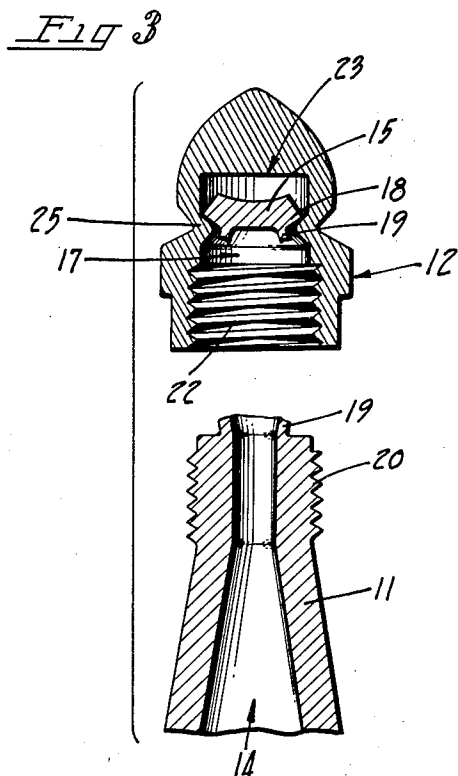
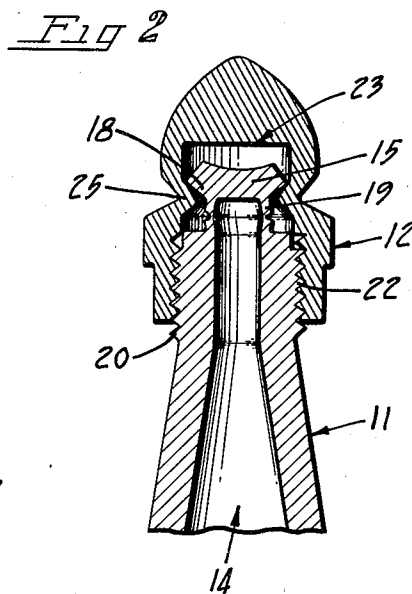
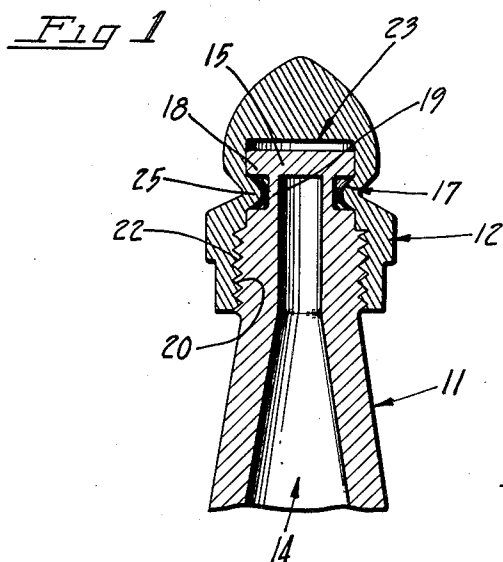
April 27, 1943.

W. E. TAYLOR

2,317,420

CONTAINER

Filed Dec. 20, 1940



INVENTOR.
William E. Taylor
 BY *Ivan L. Thornburgh*
Charles H. Orne
 ATTORNEYS

UNITED STATES PATENT OFFICE

2,317,420

CONTAINER

William E. Taylor, Riverside, Conn., assignor to
American Can Company, New York, N. Y., a
corporation of New Jersey

Application December 20, 1940, Serial No. 371,034

5 Claims. (Cl. 220—27)

The present invention relates to a container having a pouring or dispensing spout or nozzle fitted with a cap which is adapted to be used as a reclosure for the spout and has particular reference to a seal on the spout which is broken by the removal of the cap and which serves to indicate tampering with the container or its contents.

An object therefore of the invention is the provision of a sealed pouring spout and cap combination for containers wherein the removal of the cap breaks the seal and opens the spout for use while permitting use of the cap on the spout as a reclosure.

Another object is the provision of such a pouring spout and cap combination wherein the cap threadedly engages over the spout and is interlocked with a weakened integral seal portion thereof so that when the cap is unscrewed the seal portion of the spout is broken off to open it for use, the broken off portion of the spout remaining in the cap in a position which in no way interferes with screwing the cap back onto the spout for use as a reclosure cap.

Another object is the provision of a spout and cap combination of this character which serves as a tell-tale to indicate that the container has been tampered with, thus placing the purchaser of the container on guard against spurious goods.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawing, discloses a preferred embodiment thereof.

Referring to the drawing:

Figure 1 is a sectional view of a sealed pouring spout and cap combination embodying the instant invention, the view illustrating the cap threadedly engaged on the spout prior to its removal, only a part of the spout being shown;

Fig. 2 is a view similar to Fig. 1 and showing the cap partially removed, the view indicating how the seal portion of the spout is broken off; and

Fig. 3 is an exploded sectional view showing the cap fully removed and in a position above the opened spout, the view illustrating how the broken off seal portion of the spout remains in an out-of-the-way position in the cap.

As a preferred embodiment of the invention the drawing illustrates a pouring spout 11 having a cap 12 and constituting a spout and cap combination of the character used on sheet metal

containers or cans in which oil and other liquids are sometimes packed.

The spout 11 is preferably made of a relatively soft, easily severable material, such as lead, or an amalgamation of metals resulting in a soft metal. The spout is formed with a dispensing tube or passageway 14 by way of which the contents of the container to which the spout is attached, may be dispensed. The upper end of the spout is closed or sealed by a sealing portion 15 which is integral with the spout wall and is extended over the end of the passageway 14.

The sealing part 15 provides a hermetic seal for the spout and thus protects the contents of the container. This seal is important when the contents of the container on which the spout is used contains certain grades of oil, or highly volatile liquids. Such a seal is also an advantage when the spout is formed as a part of a collapsible tube in which semiliquids or pastes may be contained and which are particularly susceptible to evaporation.

Immediately adjacent the sealing part 15 the spout 11 is formed with an annular recess 17 which sets off an overhanging flange or ledge 18 on the sealing part. The recess is sufficiently deep to provide a thin imperforate annular wall section 19 at its base, constituting a weakened portion of the spout and it is this easily severable wall section that connects the sealing part 15 with the spout. It is also this wall section that is adapted to be broken to open the spout for use as will be hereinafter explained. Adjacent the wall section 19 the spout is formed with an external screw thread 20 for threaded connection with the cap 12.

The cap 12 is preferably made of a relatively hard material, such as a lead alloy having a harder combining metal mixed with the lead. The cap fits over the sealed end of the spout and is formed with an internal screw thread 22 which cooperates with the spout thread 20 in providing threaded engagement with the spout. Above the thread, the upper portion of the cap is provided with a pocket 23 in which the sealing part 15 of the spout is disposed when the cap is on the spout.

After the cap 12 is screwed into place on the spout 11, its side wall adjacent the recess 17, is reformed or beaded by being forced inwardly to provide either a plurality of spaced nodes, or as shown in the drawing, an annular projection or shoulder 25. This shoulder extends into the spout recess 17 and engages under the ledge 18 of the sealing part 15. The cap is thereby held

interlocked with or captive on the spout and can only be removed by forced turning. This retaining of the cap against displacement protects the sealing part 15 and prevents tampering with the container contents.

As long as the cap 12 is in its initial position on the spout 11, the spout remains sealed. However, when the cap is forcibly unscrewed, its internal shoulder 25 presses upwardly against the under side of the ledge 18 of the sealing part 15 and this pressure tends to elongate the relatively soft and weakened connecting wall section 19 as shown in Fig. 2. Continued turning of the cap ruptures the wall section 19 and thus breaks off the top end of the spout which includes the sealing part 15. This opens the spout and thus frees the cap so that it may be entirely removed as shown in Fig. 3.

Thus this rupturing of the weakened wall section 19 which may only be done by forcing the cap and which is readily detected by the person opening the spout, constitutes positive assurance that the seal has not been previously broken. If the cap unscrews easily without any resistance when opened, there is an immediate indication that the seal has been previously broken and the purchaser is thereby warned of probable tampering.

Upon the breaking of the seal, when the cap 12 is unscrewed, the broken off sealing part 15 remains in place in the pocket 23 of the cap as shown in Fig. 3. The sealing part is thus confined in out-of-the-way position so that the cap may be readily screwed back onto the spout without any interference, to reclose the spout when only a portion of the contents of the container is desired to be dispensed at one time.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A pouring spout and cap combination for dispensing containers, comprising a threaded spout, and a threaded cap therefor, said spout having a break-off weakened part adjacent its outer end terminating in an enlarged portion of increased thickness, said cap having an inwardly extending projection adapted to engage beneath said enlarged portion of the spout adjacent its weakened part, whereupon unscrewing of said cap when initially opening the spout breaks off the latter at its weakened part by a pulling action exerted thereon, to serve as a tell-tale for indicating that the spout has been opened.

2. A pouring spout and cap combination for

dispensing containers, comprising a threaded spout and a threaded cap therefor, said spout being recessed adjacent its outer end to provide a weakened section of reduced thickness terminating in a laterally extending break-off ledge, said cap having a projection extending into said recess beneath and inwardly of said ledge, whereby unscrewing of said cap when initially opening the spout engages said projection with the inner surface of said ledge to separate the latter from the remainder of said spout by an outwardly exerted pulling action in a direction axially of said spout.

3. A pouring spout and cap combination for containers adapted to be opened by severing a portion of the spout, which comprises a threaded spout and a threaded cap therefor, said spout being closed at its outer end with an integral sealing part having an overhanging ledge, said cap having a projection which extends beneath and inwardly of said ledge, whereby unscrewing of said cap when initially opening the spout engages said projection with said ledge with an axially directed pulling action thereon to break off the sealing part and open said spout while indicating tampering with the spout.

4. A pouring spout and cap combination for containers adapted to be opened by severing a portion of the spout, comprising a threaded spout, a threaded cap, said spout being closed at its outer end with an integral sealing part, said spout also having an annular recess providing an overhanging ledge for said sealing part, said cap upon application to said spout being reformed with an annular shoulder extending into said recess and under said ledge, whereby unscrewing of said cap when initially opening the spout engages said shoulder with said ledge to break off the sealing part to open said spout while indicating tampering with the spout.

5. A pouring spout and cap combination for containers adapted to be opened by severing a portion of the spout, comprising a threaded spout, a threaded closure cap, said spout being closed at its outer end with an integral sealing part and having an annular recess providing an overhanging ledge for said sealing part, said cap having a pocket in which said sealing part is disposed when the cap is applied to the spout, said cap upon application to said spout being reformed with an annular shoulder extending into said recess and under said ledge, whereby unscrewing of said cap when initially opening the spout engages said shoulder with said ledge to break off the sealing part to open said spout while indicating tampering with the spout, said broken off sealing part remaining in the pocket of the cap confined against displacement by said shoulder so that the cap may be screwed back on the spout and used as a reclosure cap.

WILLIAM E. TAYLOR.