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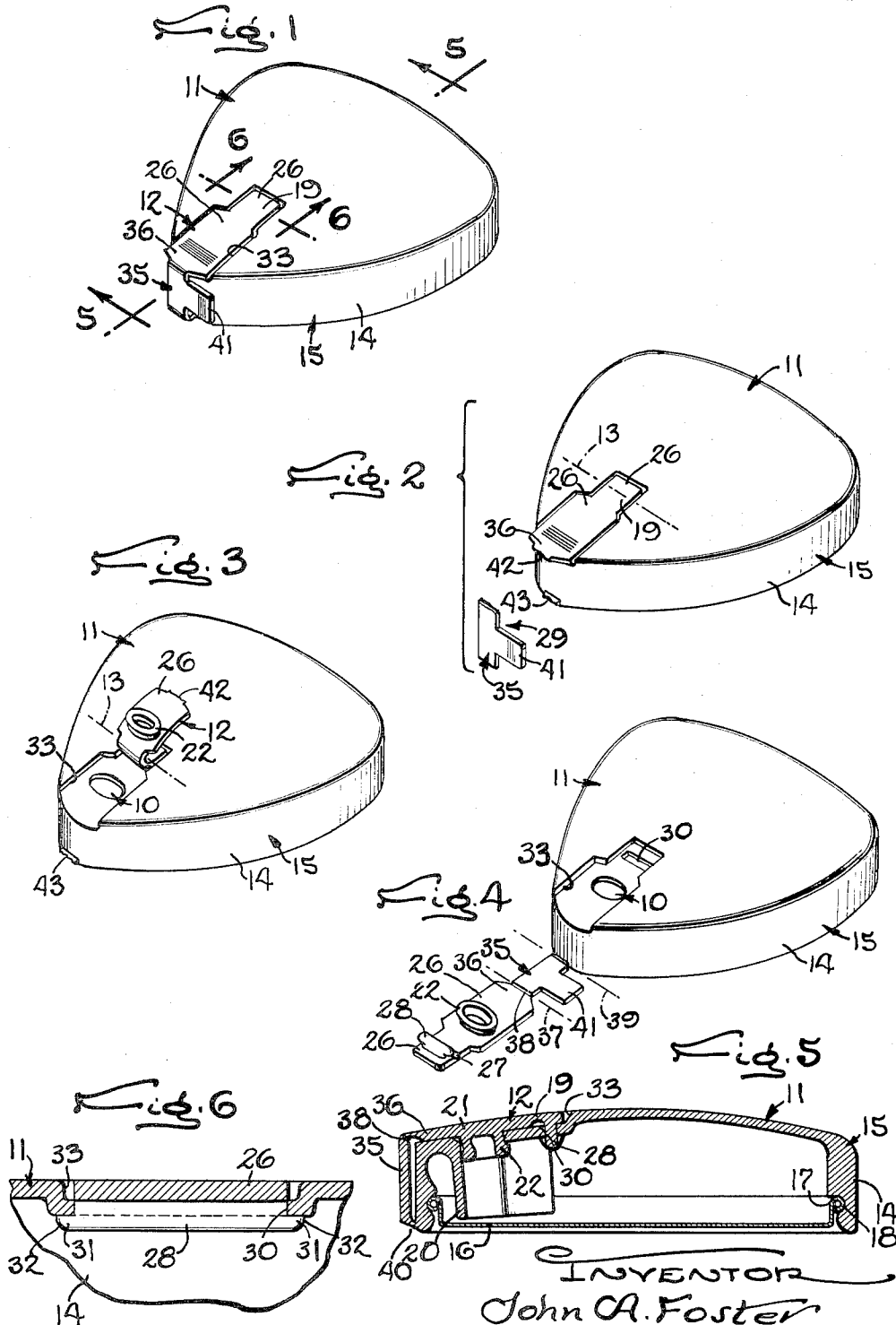
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TAMPERPROOF CLOSURE FOR DISPENSING CONTAINER

Filed May 20, 1963

3 Sheets-Sheet 1



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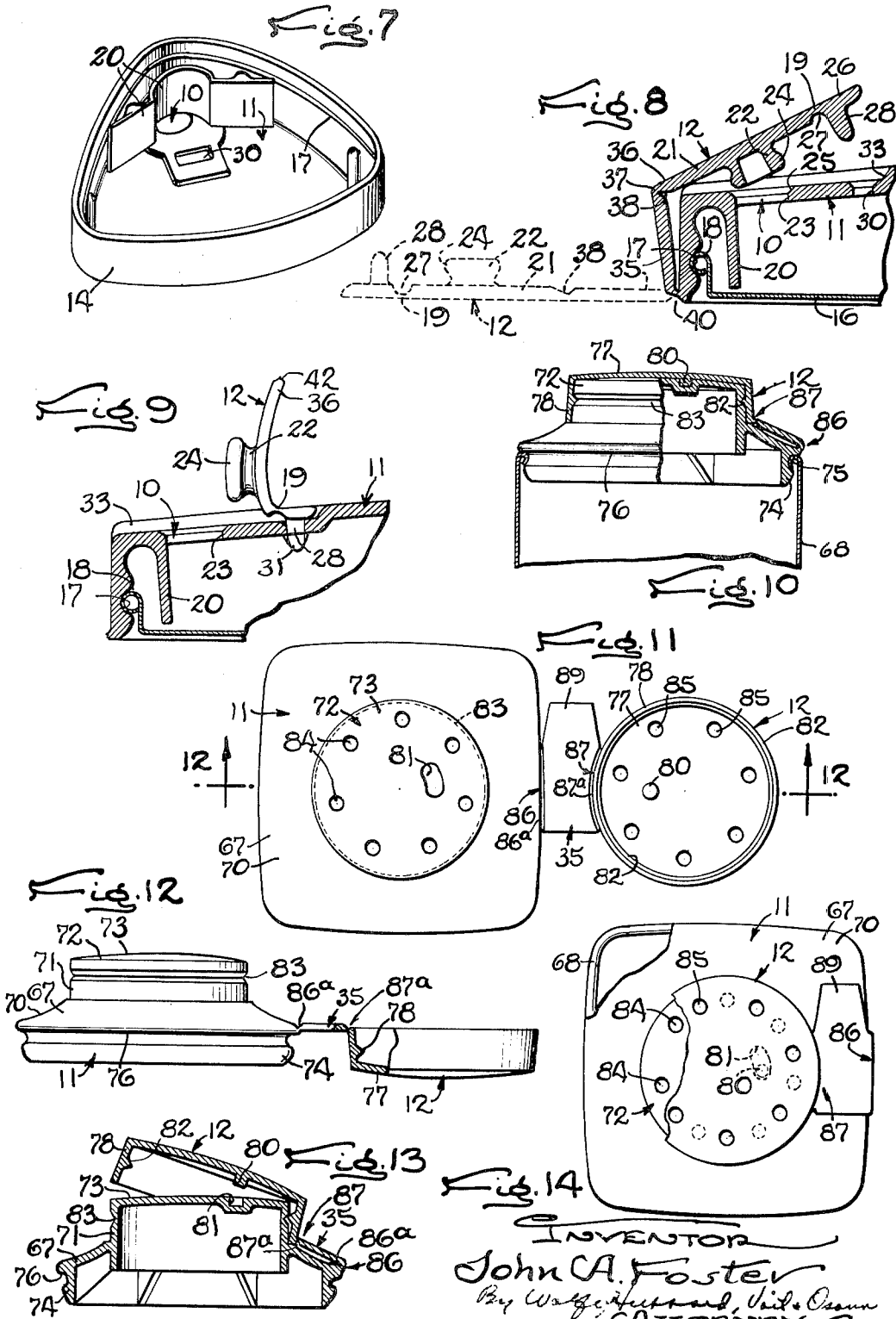
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TAMPERPROOF CLOSURE FOR DISPENSING CONTAINER

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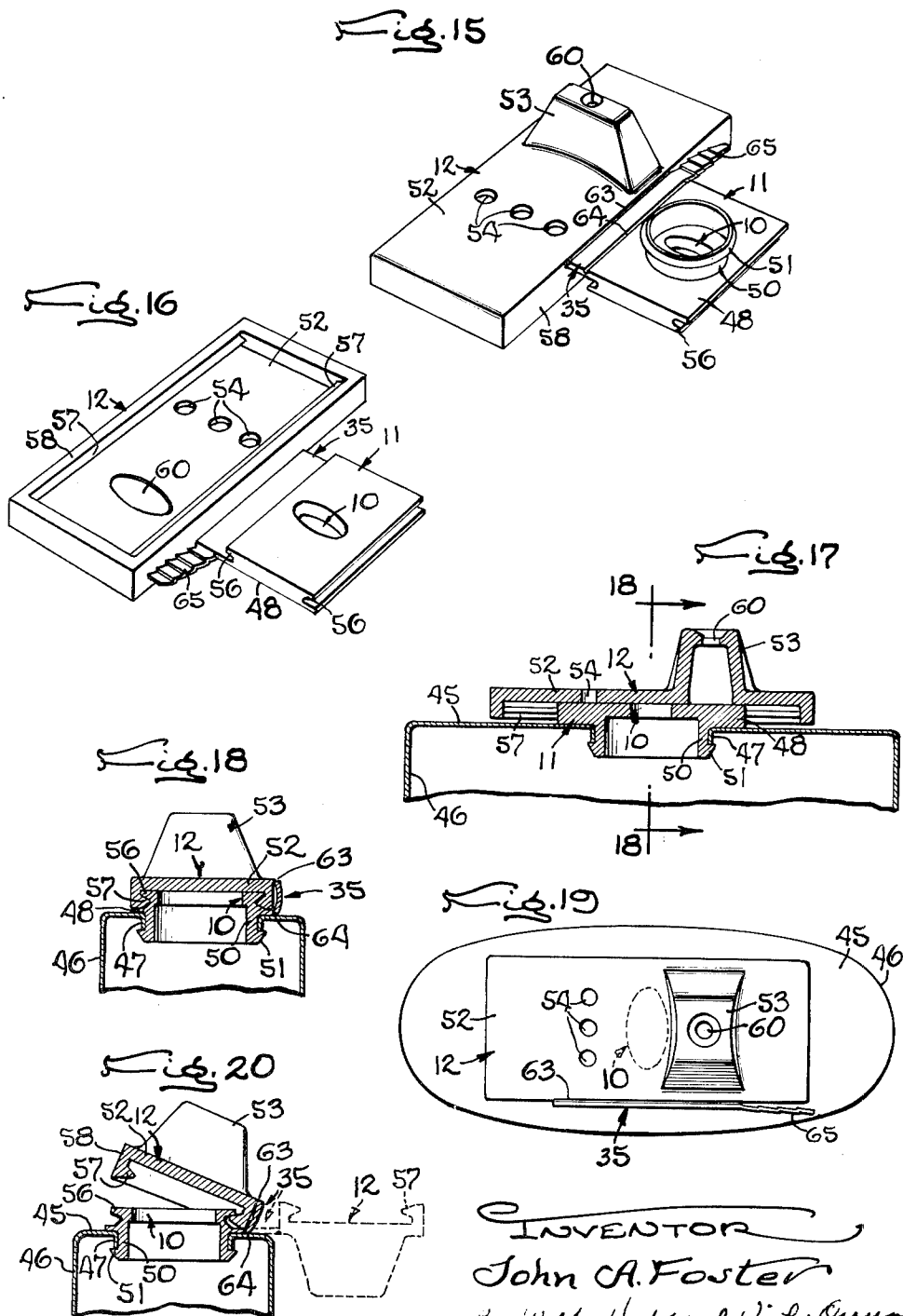
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TAMPERPROOF CLOSURE FOR DISPENSING CONTAINER

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3 Sheets-Sheet 3



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TAMPERPROOF CLOSURE FOR DISPENSING CONTAINER

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This invention relates to a so-called tamperproof container having a wall member with a dispensing opening therein and a closure member which, as initially assembled on the wall member, is held in a position closing the dispensing opening by an element which must be torn away to release the closure member for service use but, if the tearing is by an unauthorized person, leaves visible evidence of the tampering.

The primary object is to provide a closure of the above character which may be molded as a single piece of resiliently yieldable plastic and in which the closure member remains permanently attached to the wall member after removal of the tamperproofing element.

A more detailed object is to employ, as the tamperproofing element, a flexible strap or web joining the closure and wall members together in edge to edge relation in the initial molding but bendable to bring the two members together in face to face relation and couple the two permanently together for opening and closing movement after the element is torn away.

A further object is to provide a single piece plastic molding of the above character in which the closure member, after severance of the strap, remains hingedly coupled to the wall member for swinging toward and away from the dispensing opening to cover and uncover the latter.

Another object is to provide a container closure of the above character in which the hinge is formed by a strap-like extension of the single piece molding and becomes anchored automatically in the folding of the wall and closure members together.

Still another object is to provide a single piece molding of the above character in which the closure member, when released by severance of the strap, is guided on the wall member to slide back and forth to cover and uncover the dispensing opening, the coacting guide surfaces being coupled together in the folding and assembly of the wall and closure members.

A further object is to provide a single piece molding of the above character in which the closure member, after severance of the connecting strap, is permanently journaled on the wall member.

Another object is to provide a closure of the latter character in which the closure member is an inverted cup telescoped down over a dome on the wall member.

The invention also resides in the novel construction of the single piece plastic molding which permits assembly on the container by means of automatic machinery.

Other objects and advantages of the invention will become apparent from the following detailed description taken in connection with the accompanying drawings, in which

FIGURE 1 is a perspective view of a container equipped with a closure embodying the novel features of the present invention.

FIGS. 2, 3, and 4 are similar views showing the parts in different positions.

FIGS. 5 and 6 are sections taken along the lines 5-5 and 6-6 of FIG. 1.

FIG. 7 is a perspective bottom view of a part of the container.

FIGS. 8 and 9 are fragmentary sectional views showing

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different positions of the closure member of the container.

FIG. 10 is a fragmentary elevational view of a modified form of the closure.

FIGS. 11 and 12 are plan and elevational views of a plastic molding forming the closure in the modification shown in FIG. 10.

FIG. 13 is a diametrical cross-section of the closure with the parts thereof partially assembled.

FIG. 14 is a plan view of FIG. 10.

FIGS. 15 and 16 are top and bottom views of the plastic molding for another modification of the invention.

FIG. 17 is a fragmentary vertical sectional view of the modified form of the closure applied to a container.

FIG. 18 is a section taken along the line 18-18 of FIG. 17.

FIG. 19 is a plan view.

FIG. 20 is a fragmentary sectional view of the modified container with the parts partially assembled.

While the invention is shown in the drawings and will be described herein as applied to particular kinds of container closures, it is to be understood that I do not intend to limit the invention by such exemplary disclosures but aim to cover all modifications and alternative constructions falling within the spirit and scope thereof as expressed in the appended claims.

In FIGS. 1 to 9, the invention is shown embodied in a box adapted to contain articles such as pills to be dispensed one by one through an opening 10 in a wall 11 and normally covered as shown in FIG. 2 by a closure member 12 but adapted to be exposed as shown in FIGS. 3 and 9 by upward swinging of the member about the axis 13 of a hinge 19. Herein, the wall 11 and a narrow peripheral skirt 14 integral therewith form a shallow cup 15 for receiving the articles to be dispensed. After being filled, the cup is closed and the box completed by a plate 16 (FIG. 5) pressed into the skirt with its beaded peripheral edge 18 seated with a snap action in a groove 17 formed around the interior of the skirt. The plate is preferably a relatively rigid sheet metal stamping while the cup, the closure member, and all of the connected parts of the single piece molding are composed of resiliently yieldable plastic such, for example, as polyethylene sold by Du Pont under the trade name of Alathon-17.

To facilitate the dispensing of articles one by one, the cup is made generally triangular in shape with the opening 10 near the apex. Extending around the interior of the apex and spaced from the skirt is an upstanding rib 20 (FIGS. 5 and 7) shaped and positioned to hold one of the articles opposite the opening 10 when the box is held in an upright plane with the opening at the lower end of the triangle.

In the present instance, the closure member 12 comprises a relatively flat and rectangular plate 21 and a tubular plug or skirt 22 of oval cross-section herein, integral therewith and depending from the plate intermediate the ends thereof and adapted to telescope tightly within the wall 23 defining the dispensing opening 10. A snap fit is achieved by molding around the end of the plug a narrow and externally rounded flange 24 (FIGS. 5 and 8) of slightly larger diameter than the hole 10. As the closure plate is pressed against the wall 14 with the plug aligned with the hole, the flange is guided into the hole by a bevel 25 (FIG. 8) at the end of the wall 23, is collapsed in passing through the hole, and finally expands beneath the wall 14 as the closure plate comes against the outer face of the wall. As the plate is swung upwardly, the flange 24 is collapsed allowing the plug to be withdrawn from the hole to expose the dispensing opening as shown in FIGS. 3 and 9.

The hinge 19 comprises a relatively thin and flexible cross-section of a strap 26 constituting an extension of and integrally joined at one end to the inner end of the closure plate 21 and having a shallow groove 27 extending transversely thereof to define the line of bending or hinge axis 13. The innermost end of the hinge strap 26 is anchored to the wall 11 by a relatively flat lug 28 (FIGS. 4, 5, 6 and 8) integral with and perpendicular to the hinge strap just short of the inner end thereof and shaped to be received with a tight press and interlocking fit in a rectangular hole 30 molded in the wall 11 and spaced inwardly from the dispensing hole 10 but adjacent and beyond the hinge 19. To provide for such interlocking, the free edge portion of the lug is made somewhat longer than the length of the hole 30 and the ends 31 are beveled as indicated at 32. As the lug is pressed into the hole, it is compressed endwise and is passing through the hole after which the ends expand beneath the wall as shown in FIG. 6, thus anchoring the strap end securely to the wall 11. This occurs automatically in the initial assembly as the hinge strap and the closure plate 21 are pressed downwardly from the partially folded position shown in FIG. 8 to the fully assembled position shown in FIGS. 2, 5 and 6 in which these parts become seated in a depression 33 whose peripheral contour conforms to but is slightly larger than the connected strap and closure whose exposed faces are substantially flush with the surface of the wall 11 in the closed position (see FIGS. 1 and 5).

In accordance with the primary feature of the present invention and as shown in FIG. 4 and in phantom in FIG. 5, the closure plate 21 is, in the initial molding, disposed horizontally in edge to edge but inverted relation with respect to the wall member 11 and integrally joined to the latter by a flexible strap or web 35 which is bendable to allow the closure member to be swung upwardly from its initially molded and inverted position and then laterally over the top of the wall member 11 to guide the closure member and the anchor lug 28 into approximate alinement with the holes 10 and 30 as shown in full in FIG. 8. With the parts thus oriented and held by the strap, proper entry of the plug and lug and interengagement with the walls of the holes may be effected simply by pressing the closure and hinge plates 21 and 26 down against the wall 11.

In the present instance, one end of the strap 35 is made integral with the outer end 36 of the closure plate along a tear line 37 which is defined by weakening of the strap as by notching the edge thereof or preferably as shown by forming a shallow groove 38 (FIGS. 4 and 5) along the junction with the closure plate so as to control the line of cross-tearing to sever the strap. At its other end, the strap is similarly weakened and joined, in this instance at the bottom of the groove 40, to an adjacent edge of the wall member 11 to provide a well defined line 39 of tearing. While the joint may be along any part of the skirt 14, it is preferred, in order to facilitate molding and minimize the angle of bending at any point along the strap, to locate the joint at or near the free edge of the skirt 14. Thus, in the original molding, the hinge and closure plates 26 and 21 and the strap 35 are disposed end to end and in longitudinal alinement as shown in FIG. 4 and in phantom in FIG. 8 with the closure plug and hinge lug inverted relative to their positions of final assembly on the wall 14. In this relation, it will be apparent that all of the surfaces of the closure, hinge, and wall members as well as the various formations thereon as above described are disposed vertically or sufficiently close thereto to permit formation in a single plastic molding operation in the cavities of coacting dies while permitting separation of the dies and stripping of the molding therefrom without deforming any of the contours to an objectionable degree.

After cooling of the plastic and removal of the molding in the form shown in FIGS. 4 and 7 from the forming

dies, the closure and wall members 12 and 11 may be brought into proper assembled relation (FIGS. 1 and 5) for service use and the hinge 19 formed and anchored simply by bending the strap 35 to swing the members relative to each other through a half revolution and press them together. Herein such bending takes place along the two lines 37, 39 at the bottoms of the grooves 38 and 40 which are spaced apart a distance about equal to the height of the skirt 14. Thus, the strap is bent through a right angle from its initial position (FIG. 4) so as to be disposed parallel to and adjacent the apex of the skirt 14. The closure and hinge plates are similarly bent in the same way through a quarter revolution about the bottom of the groove 38 as a fulcrum and thus swung over the top of the wall to guide and position the plug 22 and the lug 28 first into approximate alinement with the opening 10 and the hole 30 as shown in FIG. 8 so as to enter and interengage with the wall 11 as shown in FIG. 5 under the application of further downward pressure.

After such bending of the molding and permanent coupling of the wall and closure members 11 and 12 by anchoring of the hinge on the wall member, that portion of the strap 35 between the tear lines 38 and 40 will be disposed vertically and adjacent the apex of the skirt. To facilitate severance of the strap 35 and freeing of the closure member for opening and closing of the dispensing opening, means is provided for facilitating the gripping of the strap and the application of an outwardly directed tearing force to one side edge thereof. For this purpose, a pull tab 41 is molded integral with one side edge of the strap in the plane thereof so as to project tangentially from the apex of the skirt 14 and present a free end portion spaced from the skirt and adapted for easy grasping between the thumb and forefinger of an authorized person. After such gripping, the tab is pulled outwardly, thus tearing the strap crosswise along the lines 37 and 39 and removing the intervening portion of the strap as a separate piece 29 shown in FIG. 2 while leaving the torn edges 42 and 43 which do not detract materially from the artistic appearance of the container.

Preferably the tear line 37 is located at a point spaced outwardly a short distance beyond the apex of the cup so that, after the strap is torn away, the free end 36 of the closure plate 21 overhangs the cup apex (FIG. 2) and provides a tab which facilitates finger gripping of the closure member when it is desired to lift the plug 22 and swing the closure member out of the way as shown in FIG. 9 to permit the dispensing of articles through the opening 10.

If such tearing is effected by an authorized person, the closure is conditioned for ordinary service use, that is, lifting the plug 22 out of the hole 10 and bending the closure plate backwardly to the position shown in FIG. 9 when it is desired to remove a pill from the container. Thereafter, the closure is swung reversely and pressed into the depression 33 to reclose the hole and bring the plates 21 and 26 back to carrying positions with their exposed surfaces flush with the surface of the wall 11. On the other hand, if the tearing away of the strap 35 is effected by an unauthorized person, such tampering will be indicated visually by the absence or deformation of the tab strap 35.

The primary feature of the present invention as described above may be utilized to advantage in other types of dispensing containers in which the opening and closing of the dispensing opening 10 in normal service use is effected by turning or rectilinear sliding of the closure member 12 relative to the wall member 11 after permanent coupling of the two following assembly by bending of the connecting strap 35 and tearing the same to remove a part thereof and free the closure member for opening and closing movement. In each of the two modifications shown respectively in FIGS. 10 to 14 and FIGS. 15 to 20, the members 11 and 12 of the closure with the necessary formations thereon and the strap 35

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connecting these members comprise a single piece molding of the plastic above referred to and coupling of the wall and closure members is effected as before by bending the connecting strap 35 to bring the two members into face to face relation and then pressing the two into the desired coupled relation.

In the modification shown in FIGS. 15 to 20, the member 11 forms only part of a wall 45 covering the top of a sheet metal container having a body 46 and a top opening defined by an inturned flange 47. The dispensing opening 10 is at the center of a plate 48 resting on the top 45 in the final assembly (FIGS. 17 and 19). Depending from the plate is a skirt 50 having an outturned flange 51 which expands or snaps outwardly beneath the edge of the flange 47 when the skirt is pressed down through the top opening defined by the flange.

The closure member 12, which is slidable back and forth to cover and uncover the dispensing opening 10, also comprises a generally rectangular plate 52 having an upstanding tubular spout 53 through which the container contents may be poured when the member is slid to the left from the closed position shown in FIGS. 17 and 18 to align the spout opening 60 with the opening 10. By sliding the closure member to the right, a plurality of sifting holes 54 may be brought into registry with the hole 10. The spout 53 is at the center of a block upstanding from the closure plate 52 and adapted to be grasped manually to facilitate sliding of the member 12 back and forth.

Slidable coupling of the members 11 and 12 is effected by the interengagement of outturned parallel ribs 56 formed integral with and spaced somewhat below the underside of the plate 48 and mating as shown in FIG. 18 with parallel ribs 57 inturned at the lower edges of flanges 58 depending from the plate 52. The ribs 56 and 57 are sized, shaped, and spaced to flex vertically and interlock with each other under downward pressure applied to the closure plate 52 when the latter is disposed above the plate 48 with the parts oriented and approximately centered relative to each other as shown in FIG. 20.

As before, connection of the closure and wall members 11 and 12 to permit molding in a single piece and guiding of the two into opposed relation preparatory to interlocking of the guide ribs 56, 57 is effected by the strap 35 which, in this instance, is a narrow web disposed between and extending along a substantial length of the edge of the closure plate 48 and the opposed upper edge part of the adjacent flange 58. Along the edges of the strap 35 and the junctions with the flange 58 and the closure plate 52, the strap is weakened to facilitate tearing of the same and complete separation from the members to free the closure member for back and forth sliding to open and close the container. While the tear lines may be defined by notches at one end of the strap, it is preferred to achieve the weakening for tearing by molding the grooves 63, 64 in the plastic on one side of the strap. The bending of the strap to bring the closure and wall members into coupled relation occurs along the bottoms of the grooves so that in the final assembly (FIGS. 18 and 19), the strap is disposed in a vertical plane and lies alongside one flange 58 of the closure. Tearing away the strap to release the closure member 12 for back and forth sliding is facilitated by the provision of a pull tab 65 molded integral with and projecting from one end of the strap 35. If desired, the tab may be ribbed to facilitate finger gripping.

When constructed as above described, all of the parts may be molded as a single piece in the form shown in FIGS. 15 and 16, the strap 35 being disposed horizontally and the wall and closure members 11 and 12 being inverted relative to each other as contrasted to their final positions of assembly on the container body. Assuming that the molding is to be attached to the container top 45 before folding of the members into their final relation,

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the wall member is first disposed above the container top and the skirt 50 pressed into the opening defined by the flange 45, the closure member and strap then projecting outwardly and horizontally as shown in phantom in FIG. 20.

As the closure member 12 is swung upwardly from this position, the bending of the web 35 takes place along the tear groove 64. As the bending is continued to nearly a half revolution, the closure member will be disposed above the dispensing opening 10 as shown in FIG. 20 with the ribs 57 positioned for flexing past the ribs 56 as the member is pressed on downwardly. The ribs 57 then snap in beneath the wall ribs 56 thus locking the closure and wall members together permanently but adapted for sliding of the member 12 to cover and uncover the dispensing opening 10 by either the spout 53 or the sifter holes 54 after severance of the web 35. But, before such severance, the member 12 is held securely against sliding and in a position closing the opening 10, such position being determined by the web 35 and its action in guiding the members 11 and 12 into interengaging relation (FIG. 20) by swinging of the member 12 of the original molding (FIG. 16) upwardly and then laterally over the top of the wall member 11 through a half revolution about the tear line defined by the groove 64.

In the final assembly of the closure molding on the container body as shown in FIGS. 17, 18 and 19, the strap or web 35 will be disposed alongside the outer surface of one of the flanges 58 and acts, so long as it remains joined to both of the members 11 and 12, to prevent opening of the container and removal of its contents. By grasping the tab 65 and pulling the same outwardly and reversely, the web will be torn along the grooves 63 and 64 and removed if the tearing is continued along the full length of the web. If such tearing, either partially or fully, is by an unauthorized person, the tampering will be visually apparent and evidenced by the condition of the web and pull tab.

Instead of coupling the closure member 12 to a wall member 11 for hinging to open and close the dispensing opening 10 (FIGS. 1 to 9) or for sliding (FIGS. 15 to 20), the tamperproofing web 35 may be used in a closure in which the closure member is rotatable about an upright axis. Such a modification is shown in FIGS. 10 to 14 in which the wall member 11 forms the entire top for a sheet metal container body 68 of generally square cross-section. This top comprises a base 67 of the same horizontal shape pressed into the upper end of the body 68 and having a surface 70 converging upwardly and merging with the lower edge of a cylindrical skirt 71 of an inverted cup shaped dome 72 having a generally flat top 73. Holes 84 uniformly spaced around the latter constitute the opening 10 through which the container contents is dispensed. The base 67 is fastened securely to the body by a peripheral bead 74 which, during insertion of the plug is collapsed enough to pass beneath an inturned flange 75 forming the lip of the body. Then, as a shoulder 76 comes into abutment with this lip, the bead expands beneath the flange edge as shown in FIG. 10 thus locking the base and the top member 14 securely in the body. The member 12 of this closure comprises a cap in the form of an inverted cup having a top 77 and a cylindrical skirt 78 depending therefrom and adapted to telescope closely down over the dome 72 when a lug 80 depending from the top 77 is in alignment with an arcuate slot 81 in the top of the dome. As the cap is pressed downwardly to its final position (FIG. 10), an inturned bead 82 around the interior of the skirt 78 is expanded in passing over the top part of the dome and snaps into an outwardly opening groove 83 of the dome skirt 71 as the top of the cap comes into face to face abutment with the top 73 of the dome. The cap 75 is thus connected permanently to the dome but is jour-

naled thereon for turning about the axis of the container after removal of the connecting web 35 later described.

In the final assembly (FIGS. 10 and 14) the lug 80 on the cap is disposed in the slot 81 which determines the range of turning of the cap. This range is correlated with the positions of the sifter holes 84 and the similar spacing of sifter holes 85 in the top wall 77 of the cup. When the cap is turned clockwise from the closed position shown in FIG. 14 to move the pin 80 against the other end of the slot 81, each of the holes 85 will be brought into register with the corresponding hole 84 thus permitting sifting of material out of the container. In all other angular positions of the cap within the range determined by the slot 81, the holes 84 and 85 are out of register and the container is closed.

To carry out the present invention as applied to this type of closure, the wall and closure members 11 and 12 are, as in the forms described above, separated during the molding, arranged in edge to edge relation, and integrally connected as shown in FIGS. 11 and 12 by a strap-like web 35 of the character above described. As before, the web is relatively thin with one straight edge integral with one side of the square portion of the base 67 immediately above the shoulder 76 along a joint 86 which is the largest dimension of the top member and disposed above the top of the container body 68 after assembly of the closure therein. In a similar way, the opposite side edge of the web is joined along an arcuate joint line 87 to the periphery of the cap 12 at the free edge of the skirt 78. To facilitate tearing away the web to release the cap for service use after the initial assembly on the container, the ends of the joints 86 and 87 may be notched but preferably are weakened by forming shallow grooves 86^a, 87^a therein as shown in FIG. 11. Beyond one end of the grooves, an extension 89 of the web 35 forms a pull tab which is grasped manually to bend the web reversely upon itself and tear away the strap along the joints 86, 87.

As in the forms previously described, the web is located relative to the wall and closure members 11 and 12 so that it may be formed simultaneously with these members in a single plastic molding operation. It is flexible along one or more lines extending transversely between the two members and thus forms a hinge by which the closure member or cap may be swung upwardly and over the top of the dome 72 and thus inverted while being guided into approximate alinement with the dome as shown in FIG. 13. In such swinging, the web 35 is flexed somewhat more than a quarter revolution about the joint 86 as an axis while the cap 12 is swung slightly away from the plane of the web which then and in the final assembly lies against the top of the base 67. In this position (FIG. 13), one side of the bead 82 has entered the near side of the dome groove 83 and the lug 80 is disposed above and in alinement with the slot 81. From this position into which the cap is guided in the flexing of the web, final assembly and coupling of the two members permanently together is effected simply by pressing the cap down over the dome to interlock the full circumference of the bead 84 and the wall of the dome groove (FIG. 10). The cap and dome walls 77 and 73 are thus brought into face to face contact with the sifter holes 85 and 84 therein out of register as shown in FIG. 14, the lug being disposed in the slot 81 at one end thereof.

In the final assembly shown in FIGS. 10 and 14, the web 35 is disposed above and lies against the top of the base 67 and below the cap. The cap is thus rotatably coupled to but held securely on the dome by the seating of the bead 82 in the groove 83 and against turning by the web which may be torn away simply by pulling the tab 89 upwardly and then reversely along the lines defined by the grooves 86^a and 87^a. After removal of the web, the cap is free to turn on the dome in opposite directions to uncover and cover the sifter holes 84. It

will be apparent if the web is torn, either partially or completely, by an unauthorized person, the abnormal condition or absence of the web will give a visual indication of the tampering.

It will be apparent from the foregoing that the web 35 connecting the wall and closure members 11 and 12 in the several relations described above not only permits the members and all parts connected thereto to be formed as a single piece plastic molding but also enables the final assembly on or as a part of the container to be effected easily in simple bending and pressing operations after which the web serves to lock the closure member against opening movement while visually indicating any tampering with the container by an unauthorized person. The cost of the parts and the assembly of closures of different types for different kinds of containers is substantially less than in prior constructions.

I claim as my invention:

1. For use as a tamperproof closure for a container, a single piece molding of resiliently yieldable plastic comprising a member adapted to form at least part of a wall of the container and having a dispensing opening therein, a closure member for covering said opening disposed in inverted position and edge to edge relative to said wall member but laterally spaced therefrom, a flexible web integrally joined at opposite sides to the outer edges of the members and bendable transversely to permit bodily swinging of said closure member upwardly and laterally through a half revolution to an upright position over the top of the wall member and into operative association with said dispensing opening, formations on adjacent portions of said members when in face to face relation adapted during final pressing of the members together to interengage with each other and couple said members permanently together with the closure member covering said opening but adapted, after severance of said web, for movement relative to the wall member to uncover and recover the opening, indentations spaced apart along said web and defining lines for cross-tearing of the web and removal of the intervening portion thereof, and a pull tab projecting from said web between said indentations and adapted to be gripped manually to facilitate tearing said web, said web, before severance thereof, holding said closure member in a position closing said dispensing opening.

2. A closure as defined in claim 1 in which said wall member includes a depending peripheral wall and said web, after swinging of said closure and wall members into interengaging relation, is disposed adjacent and substantially parallel to such peripheral wall.

3. A closure as defined in claim 2 in which said web is integral with the free edge of said depending peripheral wall.

4. A closure as defined in claim 2 in which said lines for cross tearing said web are disposed adjacent the upper and lower edges of said depending peripheral wall whereby, after removal of said web, the free end of said closure member constitutes an exposed tab for facilitating hinging of the closure member to open and close said dispensing opening.

5. A tamperproof closure for a dispensing container having, in combination, a member forming at least part of a wall of the container and having a dispensing opening therein, a closure member covering said opening, a flexible web integral at opposite edges with the edges of said wall and closure members respectively, said members and said web being composed of resiliently yieldable plastic and comprising a single piece molding, indentations spaced across said web and defining lines along which the web may be torn crosswise and the intervening part thereof removed to separate the previously connected parts of said members, a tab integral with and projecting from said web and adapted when bent and pulled crosswise of said web to tear the same along said lines and remove said

intervening part, and interengaged formations integral with said members and coacting with each other to permanently couple said closure member to said wall member while permitting movement of the closure member relative to said wall member in one direction after severance of said web to uncover said opening for dispensing the container contents therethrough and in the opposite direction to close said opening, said web before severance holding said members against such relative movement with said dispensing opening covered by said closure member, said coupling formations including oppositely projecting parallel ribs on said wall member and parallel ribs depending from said closure member and mating with said first ribs to guide the closure member along the wall member between positions covering and uncovering said dispensing opening.

6. A tamperproof closure as defined in claim 5 in which the formations on said wall and closure members provide for endwise sliding of the closure member relative to the wall member to provide for uncovering of said dispensing opening after severance of said web.

7. A single piece plastic molding for a tamperproof closure as defined in claim 5 in which said formations comprise parallel ribs on one of the members underlying parallel ribs on the other member after pressing of the members together whereby to adapt the closure member for sliding back and forth along the wall member to cover and uncover said dispensing opening, said ribs being sized and spaced to yield and pass by and into interlocking engagement in the final pressing of said closure member downwardly against said wall member.

8. A tamperproof dispensing container as defined in claim 5 in which the formations on said wall and closure members provide for turning of said closure member about the axis of said dispensing opening.

9. A tamperproof container as defined in claim 5 including a dome upstanding from said member and having a cylindrical side and a top with said dispensing opening therein, and a cap in the form of an inverted cup telescoped down over said dome and having an aperture movable into and out of registry with said opening upon turning of the cap about the dome axis, said formations comprising a peripheral groove and a bead seated therein with a snap fit, both concentric with said dome axis and formed on opposed surfaces of the dome and cap

10. A tamperproof container as defined in claim 5 including a dome upstanding from said wall member and having said dispensing opening therein, and a cap telescoped with and journaled on said dome and having a wall with a hole therein movable into and out of registry with said opening by turning the cap relative to said dome, said formations being formed on opposed side surfaces of said dome and cap and interengaging with a snap fit in the telescoping of the dome and cap together.

11. A tamperproof container as defined in claim 10 in which the radius of said dome is smaller than that of said wall member and said web is disposed adjacent the top of the wall member and is integral at opposite ends with the lip of said cup and the outer edge of said wall member.

12. In a dispensing container, the combination of, an elongated single piece molding of resilient plastic having at one end an enlarged member forming part of a wall of the container and having a dispensing opening there-

through, a closure member at the other end and a reversely bent tear away web joining the adjacent but outermost edges of said wall and closure members, spaced tear lines extending across said web a tab projecting from one edge of said web and adapted by outward pulling to sever the web, and means permanently coupling said closure and wall members together for relative movement in opposite directions to cover and uncover said opening after severance of said web.

13. For use as a combined dispensing opening and tamperproof closure for a container, an elongated and integral single piece molding of resilient plastic comprising a wall constituting a container cover and having two areas laterally spaced apart, one constituting a closure hinge area and the other including a dispensing hole through which material may be removed from the container, a strap integral with and extending, in the initial molding, outwardly from the edge of said wall on the side thereof adjacent said dispensing hole and opposite said hinge area and bendable upwardly and reversely over the top of said wall and extending across both of said areas, said strap comprising an anchoring section at the free end of the strap to overlie said hinge area, an intermediate closure section opposite said dispensing area, a hinge section between said anchoring and closure sections, and a tear away section between the closure section and said wall edge at the bend of the strap, formations on said anchoring section and said hinge area adapted upon said reverse bending for telescopic interengagement to secure said free strap end to said wall, weakened tear lines laterally spaced along and extending across said tear away section adjacent said bend, a tab projecting from one edge of said tear section and adapted, when pulled outwardly and away from said wall, to break the bend of said strap along said tear lines and separate the tear section from said wall and closure section whereby to permit swinging of the remaining free end portion of said strap away from and toward said wall about an axis extending transversely of said hinge section, and formations on said closure section and said dispensing area adapted during such swinging to alternately telescope with each other with a tight fit and close said hole and separate from each other and expose said hole for dispensing of the container contents therethrough.

References Cited by the Examiner

UNITED STATES PATENTS

83,140	10/1868	Devoe	222-541
2,942,752	6/1960	Brunel	220-27
2,954,148	9/1960	Corrinet et al.	222-541
2,982,448	5/1961	Leonard et al.	222-153
3,031,111	4/1962	Stull	222-541
3,065,337	11/1962	Torgerson	220-27
3,081,011	3/1963	Stull	222-541
3,101,870	8/1963	Betner	222-541 X
3,106,311	10/1963	Fairchild	220-27 X
3,127,063	3/1964	Fairchild	222-153
3,127,064	3/1964	Fairchild	222-153
3,155,285	11/1964	Van Baarn	222-153

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