

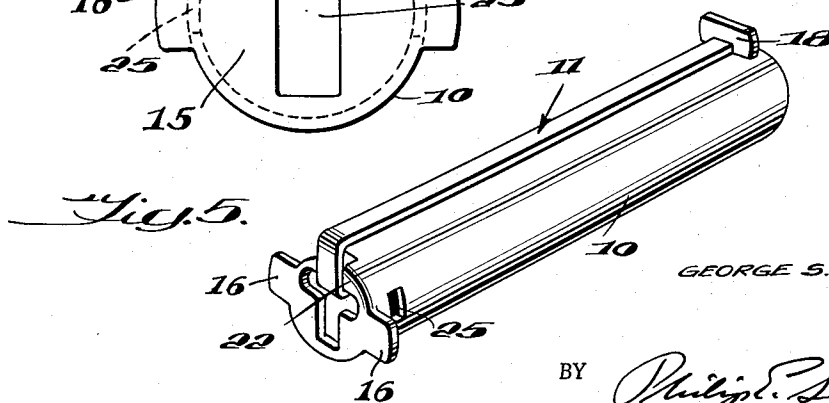
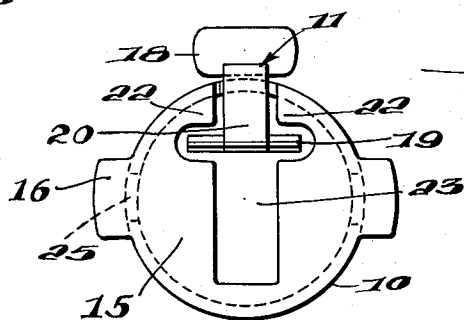
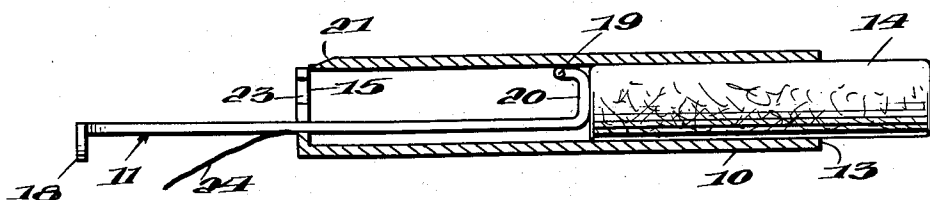
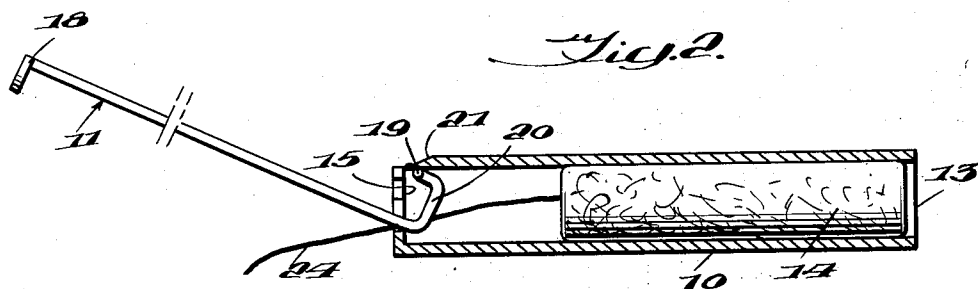
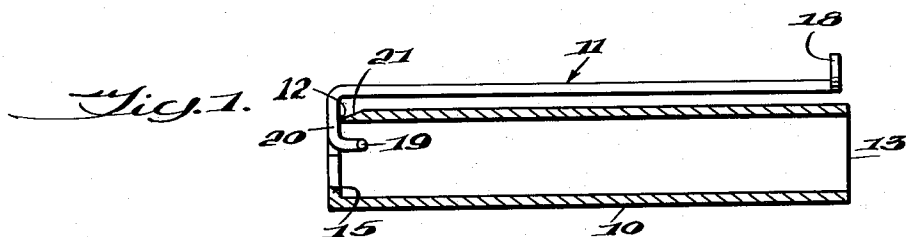
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MOLDED TAMPON APPLICATOR

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3,115,876

MOLDED TAMPON APPLICATOR

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Continuation of application Ser. No. 63,156, Oct. 17, 1960. This application Aug. 10, 1962, Ser. No. 218,476
9 Claims. (Cl. 128-263)

This invention relates to tampon applicators, and among other objects, aims to provide a tampon applicator which is molded as one piece from plastics material and which is adapted to be converted into two pieces by a simple operation by the user; these pieces being a casing for housing the tampon, and an ejector for pushing the tampon out of the casing. Thus the invention aims to provide a tampon applicator so made that an assembly operation is eliminated. A further advantage of the invention is that the one piece construction obviates accidents such as dropping the little ejector, which under the circumstances of the use of the applicator—the place where the use may occur and the state of health of the user—may be quite distressing. Other objects and advantages of the invention will be apparent to those skilled in the art after reading the following description of the preferred form of the invention in conjunction with the accompanying drawings forming a part of this specification.

In said drawings,

FIG. 1 is a longitudinal section through the applicator shown without the tampon, the ejector bar being an integrally molded part of the casing; the scale being enlarged;

FIG. 2 is a view like FIG. 1 but showing a tampon in its initial position in the applicator casing and showing the ejector bar broken away from the casing and partly swung toward operating position;

FIG. 3 is a view like FIG. 2 but showing the ejector bar moved inside the casing against the tampon which is part-way out of the casing;

FIG. 4 is an enlarged end elevation of the casing and ejector bar; and

FIG. 5 is an enlarged perspective view of the applicator as in FIG. 1, that is, prior to breaking off the ejector bar from the casing.

This application is a companion to application Serial No. 63,558 filed October 19, 1960, now U.S. Patent No. 3,034,508. This application is a continuation of application S.N. 63,156 filed October 17, 1960 and now abandoned.

Referring particularly to the drawings, the applicator of my invention consists of only two elements, a tubular casing 10 and an ejector bar 11, which are initially molded in one piece and joined at the point indicated at 12. Ejector bar 11 is about as long as the casing 10. The mold for this device is a simple three draw mold, and the plastics used in molding may be such materials as polystyrene, modified polystyrene, polyethylene, polypropylene, etc.

Casing 10 is essentially a hollow cylindrical tube open at one end 13 to receive and discharge the tampon 14, which is any well known brand of tampon. At the opposite end of the casing an end wall 15 is provided with integral wings or handles 16 projecting outwardly on opposite sides to make it easy to hold the device while operating the ejector bar 11.

The ejector bar 11 consists of a straight shank having an integral handle 18 at its outer or free end, and an integral cross bar 19 providing a retaining element, formed on its inner end 20, which is re-entrant to place the cross bar 19 inside the casing when the applicator is first made. The inner end 20 is initially anchored at 12 to a thin area 21 of casing 10. The ejector bar initially lies mostly outside the casing with its shank parallel to the longitudinal axis of the casing. When the ejector bar is broken

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away from the casing its long shank provides the necessary leverage and the bar is then engaged behind the fins 22 which are integral with end wall 15. See FIG. 2. The T-shaped opening 23 permits swinging of the ejector bar and subsequent movement thereof against the tampon 14 to eject it. The usual withdrawal string 24 attached to the tampon is also shown.

Opening 25 (FIG. 5) is one of two openings on opposite sides of the casing used in molding the device but playing no part in the functioning of the applicator.

Having described my invention, I wish it to be understood that this description is merely illustrative, and that the invention may assume other forms within the scope of the appended claims.

I claim:

1. A molded one-piece tampon applicator consisting of a casing for housing a tampon and an ejector bar initially lying almost wholly outside the casing and integrally attached thereto at one end thereof but separable therefrom at the point of attachment and movable into the casing through said one end to effect discharge of the tampon through the opposite end of the casing.

2. A tampon applicator made entirely from plastics materials comprising a tubular tampon holder open at one end to receive and discharge a tampon, and a tampon ejector integrally attached to a thin segment of the holder at the opposite end thereof, the ejector being elongated to afford the necessary leverage to permit breaking its union with the tampon holder, the ejector being movable manually through the tampon holder from end to end to effect discharge of the tampon from the holder.

3. A tampon holder and applicator made entirely from plastics materials comprising a tubular tampon-holding casing open at one end to receive and discharge a tampon, and an ejector attached to a thin segment of the casing wall at the opposite end thereof, the ejector lying outside the casing for most of its length but being movable inside the casing to eject the tampon after it has been swung to break the union with the casing wall.

4. A tampon applicator comprising a tubular casing open at one end and partly closed at the other end, and an elongated ejector bar integrally attached at one end to the casing at said other end but breakable at the point of attachment by swinging the ejector bar, the partly closed end of the casing admitting the end of the ejector bar that is freed by said breakage thereby to permit ejecting a tampon housed in said casing through said open end.

5. A tampon applicator comprising the combination of a casing for holding a tampon, said casing having one end open for delivery of the tampon, and a tampon ejector detachably secured to the casing at the end thereof which is opposite the tampon-delivering end, said ejector when so secured lying almost wholly on the outside of the casing, said ejector when detached from the casing being movable into the casing to contact and eject a tampon therefrom.

6. A molded tampon applicator composed of plastics materials comprising a casing for holding a tampon, said casing having one end open for delivery of the tampon, and a tampon ejector detachably secured to the casing at the end thereof which is opposite the tampon-delivering end, said ejector when so secured lying almost wholly on the outside of and alongside of the casing, said ejector when detached from the casing being movable into the casing through the end thereof which is opposite the tampon-delivering end and being adapted to contact and eject a tampon from said end.

7. A tampon applicator comprising, an elongated tubular casing adapted to house a tampon of shorter length than the casing near one end of said casing, said one end of said casing being substantially open to permit loading and ultimate ejection of said tampon from the casing, an

3 elongated ejector element frangibly secured to the end of the casing opposite the open end thereof, said ejector element including a first portion extending axially along the outer wall of said casing and a second portion suitably configured to extend into the opposite end of the casing, said first portion, when severed from said casing, being manually pivotal into axial alignment with the casing so as to serve as a tampon ejector.

8. A vaginal tampon comprising in combination, an elongated tubular casing having an open end and a partially closed end, a fluid absorbent batt maintained under compression within said casing adjacent said open end, an elongated ejector element having a major portion extending axially along the outer wall of the casing and terminating in a reversely contoured portion extending into said casing through the partially closed end, means securing the ejector element to the casing adjacent the partially closed end thereof while permitting easy manual severance of the element from said casing prior to use, and means associated with the contoured portion of the ejector element to prevent withdrawal of said element from the casing after severance of the element from said casing and during manual pivoting of said element into axial alignment with the casing to serve as a batt ejector.

9. A vaginal tampon comprising in combination, an

4 elongated tubular casing having an open end and a partially closed end, a fluid absorbent batt of a length shorter than said casing being maintained under compression within said casing adjacent said open end, said partially closed end being provided with a diametric channel enlarged chordally of said casing so as to define a cross-like aperture, an elongated ejector element extending along the outer wall of the casing and terminating in a reversely contoured portion extending into said casing through said diametric channel, means lightly securing said element to said casing adjacent the partially closed end thereof while permitting easy manual severance of said element from said casing prior to use, and means associated with the reversely contoured portion to prevent withdrawal of said element from the casing after severance of said element from said casing and during manual pivoting of the element into a position to serve as a batt ejector.

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