June 11, 1968 J. C. WHITMAN 3,387,366

FILM SLITTER

Filed March 28, 1967

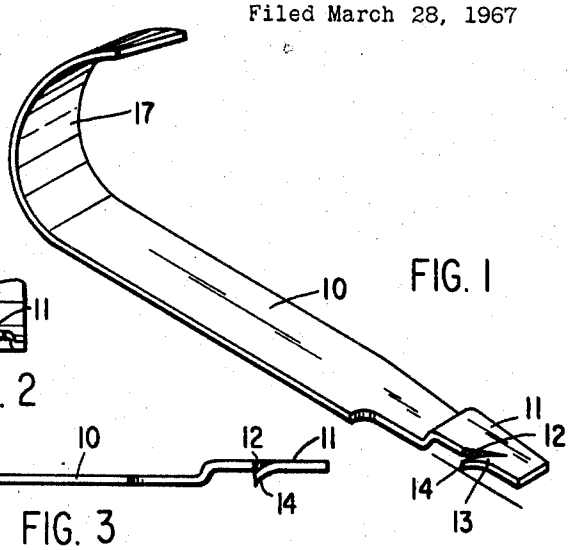


FIG. 1

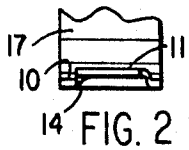


FIG. 2

FIG. 3

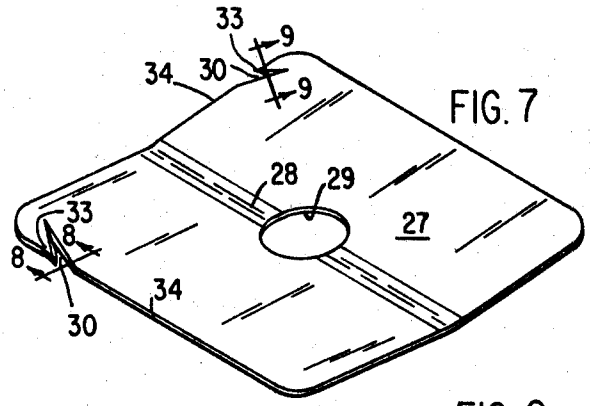


FIG. 7

FIG. 8

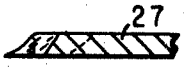
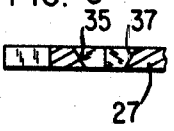


FIG. 9



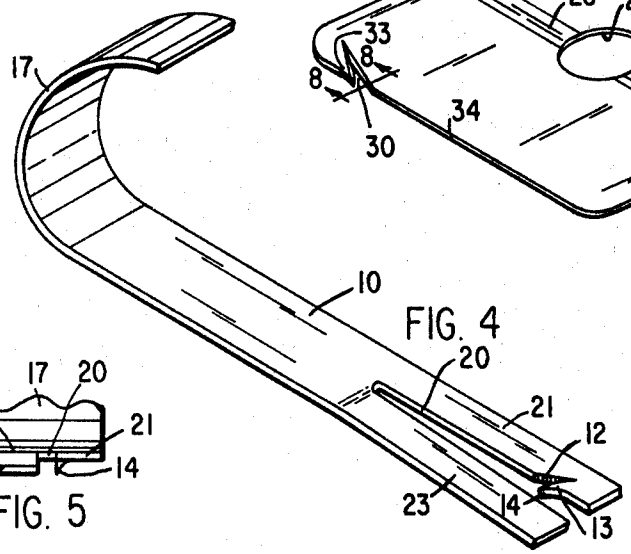


FIG. 4

FIG. 5

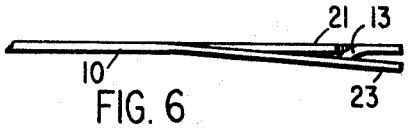


FIG. 6

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FILM SLITTER

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2 Claims. (Cl. 30—2)

ABSTRACT OF THE DISCLOSURE

A flat member is incised to form a triangular portion, the apex area of which is bent outwardly from the flat member to provide a pointed barb for penetrating and slitting the film as the member is moved along the film.

BRIEF SUMMARY OF THE INVENTION

Many products, especially food products, are at present packaged in thin plastic sheet material. Invariably, the film containing the product is sealed, necessitating severance of the film in order to remove the contents of the package. Most plastic films used in packaging are tough and extremely resistant to tearing by the fingers. Accordingly, it is necessary to use a knife, or other sharp-pointed instrument, to open the package, with the possibility of injury to the person and/or damage to the product, or material, within the package.

This invention has as an object a film slitting device embodying a particular simple structure capable of being produced at very low cost and which serves as a convenient means for slitting plastic film, particularly for opening packages which may include products, or articles, having extreme resiliency, the slitter requiring substantially no pressure against the film during the slitting operation.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a perspective view of a film slitter embodying my invention.

FIGURE 2 is an end view of the forward portion of the slitter.

FIGURE 3 is a side elevational view of the forward portion of the slitter.

FIGURE 4 is a view, similar to FIGURE 1, illustrating an alternate form of slitter shown in FIGURE 1.

FIGURES 5 and 6 are respectively end and side views of the forward portion of the slitter shown in FIGURE 4.

FIGURE 7 is a perspective view of a modified form of the slitter.

FIGURE 8 is a view taken on line 8—8, FIGURE 7.

FIGURE 9 is a view taken on line 9—9, FIGURE 7.

DETAILED DESCRIPTION

The slitter is formed from a flat member. In FIGURES 1–4, the flat member is in the form of an elongated strip **10**. The flat body member is relatively thin and formed of suitable material, such as stainless steel.

In the arrangement shown in FIGURES 1, 2 and 3, the forward end portion **11** of the strip is formed with an incision **12** extending inwardly from one side of the strip and inclining forwardly toward the forward end edge of the strip. This incision, in conjunction with the adjacent side edge, defines a triangular tab **13**, with the pointed end extending rearwardly and bent outwardly from the flat member to form a barb protruding downwardly below the plane of the strip, whereby the pointed end **14** extends rearwardly. The strip **10** is provided at its rear portion with an upwardly extending handle which, preferably, is formed by curving the rear portion of the strip **10** upwardly and forwardly, as at **17**.

In operation, the strip **10** is laid upon the film and moved rearwardly, the barb point **14** penetrating the film and, upon rearward movement of the device, is effective to slit the film.

Preferably, as shown in FIGURES 1, 2 and 3, the forward portion **11** is offset upwardly from the remainder of the strip **10**, and is of less width. The portion **11** is offset upwardly a distance comparable to the distance the tab **13** is bent downwardly, whereby the point **14** is positioned substantially coplanar with the bottom side of the strip **10**. With this arrangement, when the slitter is placed upon the film, the rear portion of the strip **10** is tilted upwardly and the device turned to move the barb point **14** into piercing engagement with the film. Thereupon, the strip **10** is moved flatly along the film, the downwardly bent tab raising the film in the area of engagement by the point **14** and accordingly, the slitter is effective to slit the film regardless of the uneven surface of the material in the package, and also without injury to the material in the package.

In FIGURES 4, 5 and 6, the strip **10** is formed with a slot **20**, preferably located medial of the side edges of the strip, and extending rearwardly from the front edge thereof. The incision **12** is formed at the inner edge of one of the legs of the bifurcated formation, as the leg **21**. The leg **23** is bent downwardly so that the under surface thereof is coplanar with the point **14** of the barb **13**.

In operation, the device is placed upon the film and the front end portion is moved downwardly under slight pressure, the leg **23**, acting as a spring shoe, is thereupon moved upwardly in the plane of the leg **21**, exposing the cutting point **14** of the barb for engagement with the film.

In the drawings, the thickness of the strip and the downward displacement of the barb **13** is exaggerated. The slitters in use are formed of stainless steel strip only a few thousandths of an inch in thickness, and the barb is displaced downwardly only a few thousandths of an inch, which is sufficient to effect penetration and slitting of the film.

Referring to FIGURE 7, the flat member is in the form of a plate **27** shown as of rectangular form. The plate **27** may be bent in its central area, as indicated by the lines **28**, and it may be formed with a central aperture **29**. The curvature of the plate aids in picking the slitter up from a flat surface. The aperture **29** provides a finger hole by which the device can be more conveniently manipulated. Also, the hole **29** permits the device to be hung on a peg, or the like.

The plate **27** is formed at one edge, and preferably in proximity to one corner, with a notch **30**, the notch being inclined at an acute angle to the edge of the plate, the notch forming a triangular barb **33** which is bent outwardly slightly from the plane of the edge **34** in which the notch **30** is formed. The sides of the notch are inclined, as at **35**, **37**, see FIGURE 9.

The device shown in FIGURE 7 is used by moving the edge in which the notch **30** is formed along the surface of the film, the point of the barb **33** penetrating and slitting the film.

I claim:

1. A film slitter comprising a substantially flat member, said flat member having a bifurcated forward end portion, said flat member having a triangular portion struck out from the inner side edge of one leg of said bifurcated portion, the apex area of said triangular portion being bent outwardly from said one leg providing a barb protruding downwardly below the plane of said one leg, the opposite leg of said bifurcated portion being inclined downwardly from the leg portion in which said triangular barb is formed, said opposite leg being yieldable upwardly to permit said barb to penetrate and slit a film when said member is moved therealong.

2. A film slitter as set forth in claim 1, wherein the rear portion of said flat member is curved upwardly and forwardly providing an integral handle portion.

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