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FIG. 1.

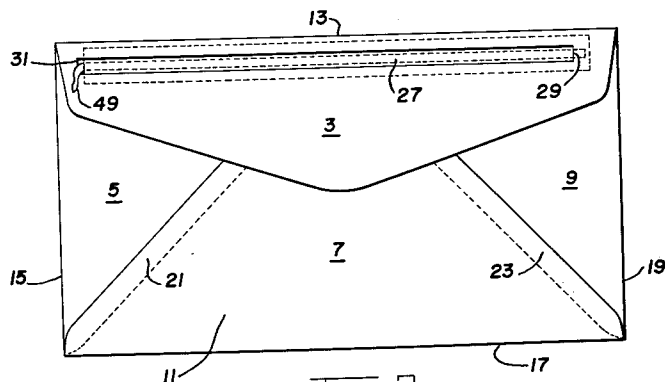
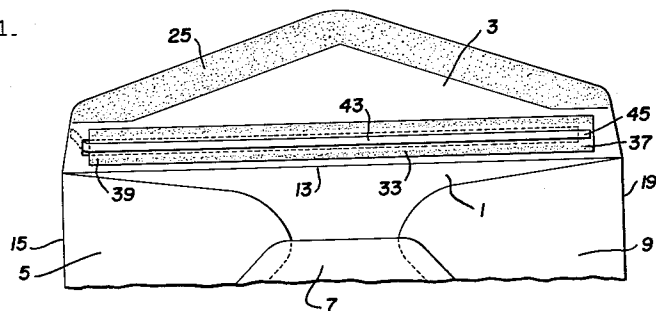


FIG. 2.

FIG. 3.

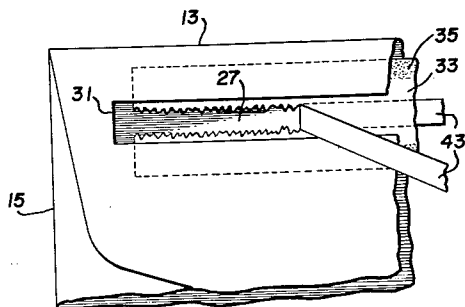
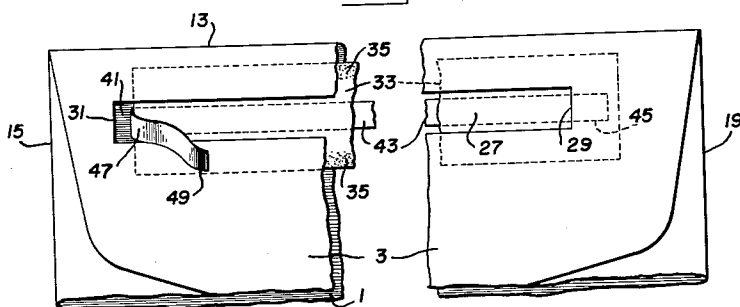


FIG. 4.

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1 Claim. (Cl. 229-86)

The present invention relates to envelopes, and more particularly to envelopes having means for readily opening the envelope along a predetermined line.

An object of the present invention is the provision of an envelope which can be quickly and easily opened.

Another object of the present invention is the provision of an envelope which can be opened with no danger of tearing the contents of the envelope.

A further object of the present invention is the provision of an envelope which can be opened without mutilating of the envelope other than by cutting a slot therein.

Still another object of the present invention is the provision of an envelope so constructed that a neat and even opening slot may be formed therein without the aid of external implements.

Finally, it is an object of the present invention to provide an envelope having the above advantages which will be simple and inexpensive to manufacture and sturdy and dependable in use.

Other objects and advantages of the present invention will become apparent from a consideration of the following description, taken in connection with the accompanying drawing, in which;

FIGURE 1 is a fragmentary view of an envelope according to the present invention with the flap open and showing the under or inner side of the self-contained opening arrangement of the present invention;

FIGURE 2 is a view of an envelope according to the present invention showing the flap closed so as to reveal the upper or outer side of the self-contained opening arrangement of the present invention;

FIGURE 3 is an enlarged fragmentary view of a portion of FIGURE 2; and

FIGURE 4 is a view of a portion of FIGURE 3 but showing the envelope partly opened.

Referring now to the drawing in greater detail, there is shown in FIGURES 1 and 2 a paper envelope comprising a rectangular front panel 1 to the top edge of which is swingably joined a rear panel or flap 3 and to the side and bottom edge of which are joined rear panels 5, 7 and 9 so that when flap 3 is closed and sealed, a composite rear panel 11 is formed which overlies and is the same size as front panel 1. The junction between panels 1 and 3 is marked by a straight fold line 13; and the junctions between panel 1 and panels 5, 7 and 9 are marked by straight fold lines 15, 17 and 19, respectively. It should be noted that fold lines 15 and 19 are parallel to each other and that fold lines 13 and 17 are also parallel to each other and perpendicular to fold lines 15 and 19 and that each fold line interconnects the ends of the two adjacent fold lines. Rear panels 5 and 7 are interconnected by a glued seam 21 and rear panels 7 and 9 are interconnected by a glued seam 23 in their regions of overlap. A strip of mucilage 25 is provided on the under edge of flap 3 to seal the envelope when the mucilage is moistened and the flap is closed.

The structure described thus far is entirely conventional in a variety of envelopes. The improvement on this conventional structure which comprises the present invention is as follows:

A narrow, elongated slot 27 extends through flap 3 along a major portion of the length of the flap. Slot 27 is parallel to and spaced from fold line 13, and the ends of slot 27 are spaced from the adjacent end edges

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of flap 3 by portions of the material of the flap. Thus, end 29 of slot 27 terminates short of the adjacent edge of flap 3 and short of fold line 19, while end 31 of slot 27 terminates short of the adjacent end edge of flap 3 and short of fold line 15.

Secured to the inner or under side of flap 3, that is, the side of flap 3 which is adjacent panel 1 when the envelope is closed, is an elongated, easily tearable strip 33 which covers at least a major portion of slot 27 and is parallel to slot 27 and extends on opposite sides of the slot. Both longitudinal side edges of strip 33 on either side of slot 27 are provided with lines of mucilage 35 by which strip 33 is secured to portions of flap 3 marginally of slot 27. One end 37 of strip 33 covers and extends beyond end 29 of slot 27; while the other end 39 of strip 33 terminates short of end 31 of slot 27 so as to define between end 39 of strip 33 and the material of flap 3 which delineates end 31 of slot 27 a small opening 41 through flap 3.

Strip 33 thus comprises a portion of the envelope and more particularly a portion of flap 3 and serves with the remainder of flap 3 to present a sealing portion of the envelope which is initially open only through relatively small opening 41. Strip 33 in the illustrated embodiment is of cellophane and is transparent and relatively much more flexible than the paper comprising the remainder of flap 3 and may be torn with relative ease lengthwise of slot 27.

Extending along the rear of strip 33, which is the inner side of the envelope or the side of strip 33 adjacent panel 1, is a slender, elongated flexible tear member 43 in the form of a narrow strip of a width less than that of slot 27. In the illustrated embodiment, tear member 43 is a colored filament of cellophane of a strength and thickness greater than the strength and thickness of strip 33. Tear member 43 extends lengthwise of and overlies slot 27 in parallelism therewith, each longitudinal side edge of tear member 43 being spaced inwardly from the adjacent longitudinal side edge of slot 27 as seen best in FIGURE 3. One end 45 of tear member 43 is secured to the side of strip 33 adjacent panel 1 and overlaps and extends beyond the adjacent end 29 of slot 27 in the direction of fold line 19 but does not extend beyond end 37 of strip 33. The other end 47 of tear member 43 extends through opening 41 between end 39 of strip 33 and the material of flap 3 which delineates end 31 of slot 27 and terminates on the outside of the envelope, that is, on the side of flap 3 opposite strip 33, in a pull tab 49.

The operation of the invention is as follows:

From the position of the envelope shown in FIGURE 1, the sender may fold the envelope, moisten the mucilage on the flap and close and seal the envelope to the position shown in FIGURE 2. The envelope may be addressed and stamped on the side of panel 1 opposite that shown in FIGURE 1. To open the envelope, the recipient need only grasp pull tab 49 between the fingers and exert a pull thereon in virtually any direction, whereupon the opening operation illustrated in FIGURE 4 takes place. Pull tab 49 causes tear member 43 to sever strip 33 lengthwise of slot 27 until the crook of tear member 43 which performs the severing operation reaches end 29 of slot 27 and is prevented from traveling further to the right as shown in FIGURE 3 by the material which delineates that end of slot 27. Accordingly, the relationship between tear member 43 and slot 27 will now be seen to be very important, as the tear member when opening slot 27 continuously stresses the material of strip 33 between itself and the longitudinal edges of slot 27. The material of the major portion of flap 3 being paper of greater stiffness than the material of strip 33, it is evident that the material of strip 33 during opening of the envelope is sheared against the edges

of the slot to facilitate the tearing of strip 33 without breaking tear member 43.

The relationship of tear member 43 to end 31 of slot 27 must also be emphasized. It is obvious that the greatest force needed to sever strip 33 must be exerted at the very beginning of the opening operation, when the parts are arranged as seen in FIGURE 3. This is because tear member 43 is then acting against a smooth, unbroken edge of end 39 of strip 33. Once the tear is started, it may be continued with much less force. Therefore, it is quite important to note that the configuration of end 31 of slot 27 is most favorable to the tearing action at the initial stage thereof. This is because when tearing begins, not only is end 39 of strip 33 sheared between the longitudinal edges of slot 27, but also the material delineating the end 31 of slot 27 holds the longitudinal edges of the slot most rigidly together at that point. Later in the tearing operation, when strip 33 is being sheared against medial portions of the longitudinal edges of slot 27, the edges of the slot tend much more to spread apart; but since the force required to shear the portions of strip 33 remote from end 39 thereof is greatly reduced, this tendency is unobjectionable.

Certain special advantages of the present invention should also be noted. For example, envelopes according to the present invention may be manufactured quite easily and inexpensively by the use of equipment not substantially different from that already used in envelope manufacture. Slot 27 may be cut by the same type of work operation used at present to form the apertures for windowed envelopes. Similarly, the strip 33 may be formed and applied by substantially the same type of work operation now used to apply the glassine used to close the windows of envelopes. It is not necessary that end 37 of strip 33 be provided with mucilage; and hence, the individual strips 33 may be gummed and cut on a mass basis. Similarly, as tear member 43 is secured to strip 33, the strip and tear member may be applied to flap 3 together as a unit. To this end, pull tab 49 may be disposed so as normally to rest flat against the outer side of strip 33, that is, so as to be doubled back upon itself about end 39 of strip 33. In this way, strip 33 and tear member 43 may be applied together as a unit and no special provision will be needed for inserting tab 49 through opening 41.

Another important advantage of the present invention is that by its very nature and arrangement, it suggests its operation to the user. The slot 27 gives the appearance of providing an opening into the envelope; and the strip 33, of a transparent material such as cellophane, does not appear to close this opening by itself. Instead, tear member 43, which is colored or opaque or otherwise made to contrast with the adjacent portions of flap 3, stands out in slot 27 as it is viewed through the slot and through the transparent material of strip 33. Thus, a distinctive stripe or band is visible on flap 3 and terminates in pull tab 49, so that it is suggested to the recipient of the envelope that the tab be pulled so as to open the envelope along the slot marked by the extensive visible portion of tear member 43.

From a consideration of the foregoing disclosure, it will be obvious that all of the initially recited objects of the present invention have been achieved.

Although the present invention has been described and illustrated in connection with a preferred embodiment, it is to be understood that modifications and variations may be resorted to without departing from the spirit of the invention, as those skilled in this art will readily understand. For example, although the invention has

been illustrated in connection with a particular type of envelope, it will be obvious that it is just as readily adaptable to a variety of other types of envelopes including windowed envelopes, self-sealing envelopes, etc. Also, although slot 27 and the associated novel structure of the invention has been shown in place on flap 3, it will of course be appreciated that it can be applied to any other panel of the envelope at the top, bottom or sides of, or diagonally across the envelope. For example, a very convenient alternative location is at the bottom of the front panel of the envelope. Also, it will be appreciated that it is not necessary that strip 33 overlap end 29 of slot 27. Instead, end 37 of strip 33 and end 29 of slot 27 could be substantially co-terminous. If tear member 43 at end 45 thereof were also co-terminous with strip 33, then it is obvious that tear member 43, instead of remaining attached to the envelope as in the illustrated embodiment, would tear free from strip 33 and could be discarded. These and other modifications and variations are considered to be within the purview and scope of the present invention as defined by the appended claim.

What is claimed is:

An envelope comprising a first panel, a second panel joined to said first panel along a fold line and adapted to overlie said first panel when the envelope is closed, one of said panels having a narrow, elongated slot therethrough, the ends and side edges of the slot being spaced from the edges of said one panel by portions of the material of said one panel so that the slot is disposed entirely within the confines of said one panel, an easily tearable strip secured to said one panel on the same side of said one panel as the other panel when the envelope is closed, the strip overlying at least a major portion of the slot, the strip having one end edge disposed closely adjacent one end of the slot on the same side of said one end of the slot as the other end of the slot, said one end edge extending transversely across the side edges of the slot and a substantial distance on either side of the slot, the material of the strip immediately adjacent said end edge thereof being secured to said one panel on both sides of the slot, and a slender, flexible tear member extending lengthwise of and overlying the slot and disposed on the same side of the strip as said other panel when the envelope is closed, one end of the tear member being secured to the envelope adjacent said other end of the slot, the other end of the tear member extending through said one end of the slot between said end edge of the easily tearable strip and the material of said one panel at said one end of the slot, said other end of the tear member terminating outside the envelope in a pull tab, so that when the envelope is closed and the tab is pulled, the material of said one panel at said one end of the slot will hold the side edges of the slot at said one end of the slot in such orientation relative to each other that the tear member and the side edges of the slot at said one end of the slot will coact to shear the material of said easily tearable strip adjacent said one end edge thereof so as to initiate a tear beginning at and extending transversely from said one end edge lengthwise of said easily tearable strip thereby to open the envelope.

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