May 11, 1965 J. R. PAULSON 3,182,892

ENVELOPE AND OPENING MEANS THEREFOR

Filed June 24, 1963

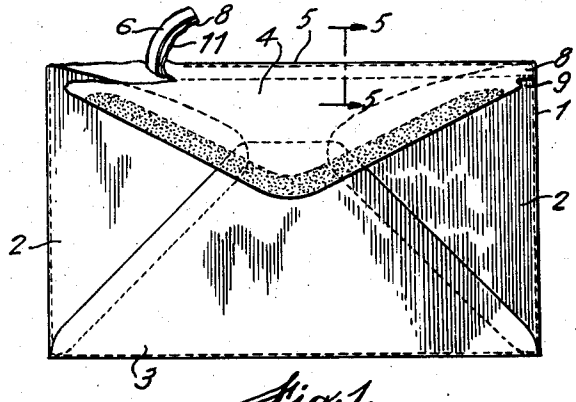


Fig. 1.

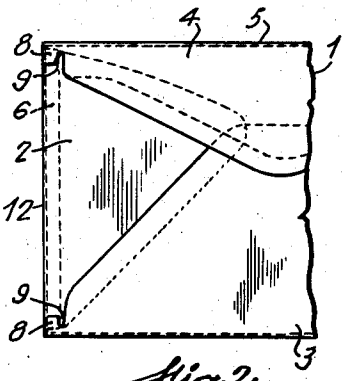


Fig. 2.

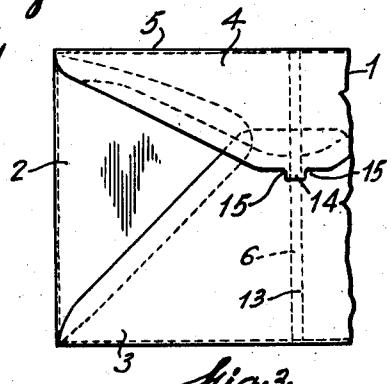


Fig. 3.

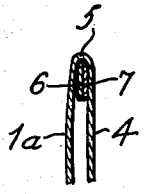


Fig. 5.

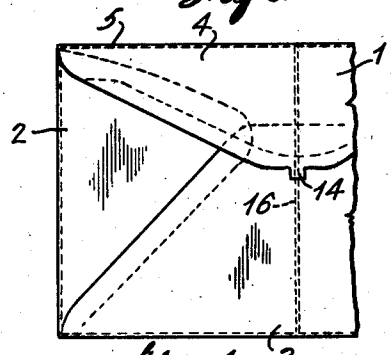


Fig. 4.

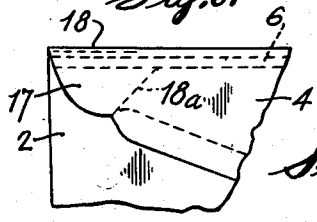


Fig. 6.

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ENVELOPE AND OPENING MEANS THEREFOR

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2 Claims. (Cl. 229—86)

This invention relates to envelopes and more particularly to an envelope having opening means incorporated therein. This application is a continuation-in-part of Serial Number 95,208, filed March 13, 1961, now abandoned.

The opening of envelopes, particularly in business establishments where a large number are involved, is an awkward and time-consuming operation. Various types of envelope opening machines have been proposed which, however, frequently result in damage to the contents of the envelopes. Moreover, such machines are costly and often inconvenient to use.

The use of tear strips and threads in envelopes has also been heretofore proposed but their incorporation with the envelope structure presents certain disadvantages. The general appearance of the envelope is frequently marred by the opening device. More important, the safe and positive nature of the closure is impaired, making use of such a device unsuitable for first class type of mail matter. Still more important, for widespread commercial acceptance of such an idea in association with standard envelopes, cost is a major factor. Obviously, unless an envelope purchaser is convinced that his use of an envelope having an opening device of time-saving and convenient character is likely to promote widespread use of such an envelope (and thus react to his own benefit), he is unlikely to purchase the envelope unless he can do so at a cost competitive with standard envelopes.

It is an object of this invention to provide an envelope having opening means incorporated therein which is of relatively minor and negligible cost, which is simple and effective in use, which does not alter the general appearance of the envelope, and which does not interfere with the safety of the envelope closure.

The invention is applied to a conventional envelope comprising a single imperforate sheet of material, such as paper of uniform strength and texture throughout, and folded along lines defining a rectangular front panel and generally triangular, overlapping bottom, side and top flaps, the overlapping areas of the side and bottom panels being adhesively secured together, and the overlapping area of the top flap being adhesively coated for securement to the side and bottom flaps to form therewith a rear panel. In such a standard envelope, the top flap is defined generally by a pair of angularly-related edges extending from a first point centrally of the rear panel to the respective ends of the fold line thereof.

In accordance with the invention, a single narrow tear strip is adhesively attached to the inner surface of the top flap in spaced parallel relation with the fold line between the top flap and the front panel, the strip having its ends flush with the edges of the top flap intersected thereby.

In one specific aspect of the invention, a pull tab section is defined by providing a weakened line in the top flap and extending from one of its edges adjacent one end of, and in angular relation with the fold line thereof and intersecting the tear strip at a second point to define such tab. The top flap is notched at the terminus of the weakened line at its intersection with said one edge. There is a second weakened line in the top flap extending from said one edge thereof, parallel with and between the tear strip and the fold line between the top flap and the front panel and terminating adjacent

the second point. The defined tab is free of adhesive coating.

The invention will be described with reference to the accompanying drawing, in which,

FIGURE 1 is a plan view of an envelope incorporating the invention,

FIGURE 2 is a section on line 2—2 of FIGURE 1, and

FIGURE 3 is a partial plan view of a somewhat modified form of structure,

FIGURES 4, 5 and 6 are views of other modified forms of structure.

Referring to the drawing, **1** is an envelope of generally conventional structure and formed from a blank of paper or like material. The envelope has a front panel **1***a* and a back panel constituted by side flaps **2**, bottom flap **3** pasted to the side flaps, and a top closure flap **4** adapted to be adhesively secured to flaps **2** and **3** to form a closure. The closure flap **4** is defined by a fold line **5** constituting its line of juncture with the front panel **1***a* and a pair of converging edges **5***a*.

Adhesively secured to the inner face of closure flap **4**, in closely spaced parallel relation to its fold line or line of juncture **5** with the front panel **1***a* is a tear strip **6**, the adhesive layer attaching the strip to the flap being indicated at **7**.

While the tear strip **6**, in a broad aspect of the invention, may be formed from any suitable material, such as a strip of fabric or paper, in a more specific aspect of the invention, the material of the strip is of significant importance. To this end, the strip is formed of linear polyethylene ribbon. A ribbon of such material of a thickness of 1 to 1½ mils and a width of 1/16 to 1/8 inch has a break tensile strength of 40,000 to 45,000 pounds per square inch at normal room temperatures of the order of 73° F. A suitable type of linear polyethylene ribbon is that made by Dawbarn Brothers, Incorporated, under the trade name DLP 33.

Use of such a linear polyethylene strip has the advantage that it produces an unnoticeable increase in the thickness of the envelope in the area of attachment while possessing a strength that will never yield under any tearing force applied in the envelope opening operation.

Another advantage of the use of a linear polyethylene strip is that it is susceptible to the application of adhesive thereto and subsequent application to the envelope in a rapid, continuous operation.

An important feature of the invention resides in the fact that the tape is coextensive in length with the closure flap **4**, i.e., the ends of the strip do not project beyond the flap or envelope.

Another important features of the invention resides in the fact that no pull tab as such is provided for the tear strip. Rather, a section **8** of the conventional closure flap at each end of such flap is identified as a pull tab section by means of a shallow notch **9** in each edge **5***a* adjacent its joint of juncture with fold line **5**. The normal area of applied adhesive on flap **4** is indicated at **10**, and the notches **9** are preferably formed just beyond the ends of the adhesive band.

Each notch **9**, as shown, preferably has a maximum depth of one-eighth inch with relatively long converging edges **11** (say, of at least one-quarter inch) whereby no narrow protrusion occurs on the edges **5***a*. It will be apparent that, in the conventional manufacture of envelopes, a large number (say, 500) of blanks are cut in a single operation and thus, any edge protrusion would be difficult to provide. Thus, the conventional manufacture of the envelope is not interfered with other than the slight modification of the cutting of flap **4**.

Since there is no protruding tab, the tab section **8** is not subject to accidental lifting from the underlying face of the envelope. Since the tab section **8** is not

itself adhesively fixed to the underlying flap **2**, it may be readily manually engaged by the thumb and finger of the recipient and may be pulled laterally of the envelope, as shown in FIGURE 1, to pull the strip **6** from the envelope, such action resulting in the severing of the overlying portion **11** of the closure flap to open the envelope.

FIGURE 3 illustrates a modification wherein lines **12** and **13** are perforations, cuts, or other weakening of the paper of the flap. The line **12** may be substantially coincident with the fold line **5** and in slightly spaced parallel relation to the adjacent edge of strip **6**. The line **13** is in converging angular relation to line **12** and begins at the base of the recess defining the tab section and terminates in slightly spaced relation to strip **6** and in transversely opposed relation to the terminal point of line **12**.

In use, the user will grasp the edge portion of tab section **8** and on exerting a pull thereon across the envelope will initially sever the tab lines **12** and **13** to form a clearly and positively defined pull tab section which may be employed to complete the envelope opening in the manner previously described.

I claim:

1. An envelope comprising a single imperforate sheet of material of uniform strength and texture, and folded along lines defining a rectangular front panel and generally triangular, overlapping, bottom, side, and top flaps, the overlapping areas of said side and bottom flaps being adhesively secured together, and a single narrow tear strip of linear polyethylene adhesively attached to the inner surface of said top flap in spaced parallel relation with, and contiguous to, the fold line between said top flap and said front panel, said strip being coextensive with said fold line and having its ends flush with the respective free edges of said top flap intersected thereby, said strip having a width not substantially exceeding one-eighth inch, a thickness not substantially exceeding one and one-half mils, and a break tensile strength of 40,000 to 45,000 p.s.i., there being a notch in one said edge of said top flap at a point therein closely adjacent one end of the fold line thereof and the corresponding end of said strip, said notch having a depth not substantially exceeding one-eighth inch and converging edges each of at least one-quarter inch in length, said notch defining a pull tab section, the inside surface of said top flap along the edges thereof being adhesively coated for securement to said side and bottom flaps, the inside surface of said tab section being free of adhesive.

2. An envelope comprising a single imperforate sheet of material of uniform strength and texture throughout, and folded along lines defining a rectangular front panel and generally triangular, overlapping bottom, side and top flaps, the overlapping areas of said side and bottom panels being adhesively secured together, the overlapping area of said top flap being adhesively coated for securement to said side and bottom flaps to form therewith a rear panel, and a single narrow tear strip adhesively attached to the inner surface of said top flap in spaced parallel relation with, and contiguous to the fold line between said top flap and said front panel, said strip having its ends flush with the edges of said top flap intersected thereby, said top flap being defined generally by a pair of angularly-related edges extending from a first point centrally of said rear panel to the respective ends of the fold line thereof, there being a weakened line in said top flap and extending from one said edge thereof adjacent one end of, and in angular relation with the fold line thereof, and intersecting said strip at a second point to define a pull tab, the area of said tab being free of adhesive coating, said top flap being notched at the terminus of said weakened line at its intersection with said one edge, there being a second weakened line in said top flap extending from said one edge thereof, parallel with and between said strip and the fold line between said top flap and said front panel and terminating adjacent said second point.

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