

[54] ENVELOPE

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[58] Field of Search 229/85, 51 TS

[56] References Cited

UNITED STATES PATENTS

1,306,224 6/1919 Godley 229/85
1,336,646 4/1920 Mendenhall 229/85 X

2,349,234 5/1944 Barker 229/85
2,828,065 3/1958 Heywood 229/85
3,227,359 1/1966 Hanlon 229/51 TS X
3,297,235 1/1967 Robbins 229/85

FOREIGN PATENTS OR APPLICATIONS

575,866 3/1946 Great Britain 229/85

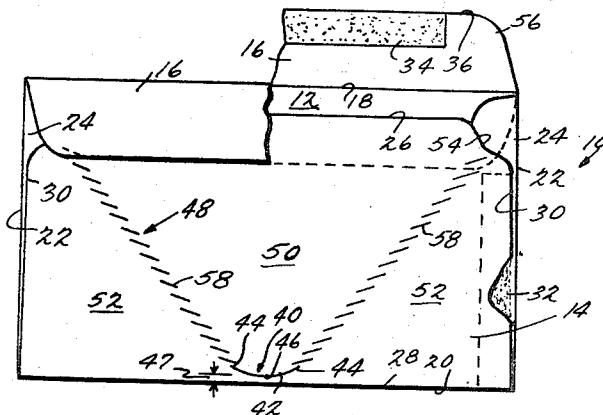
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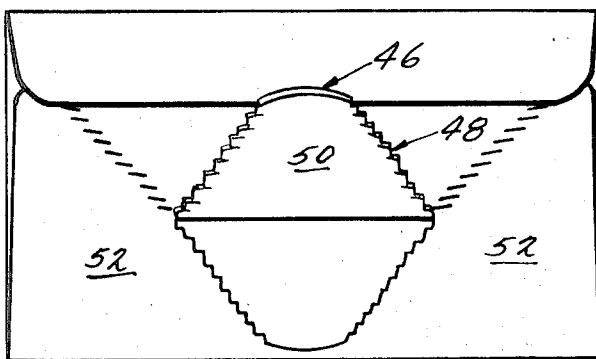
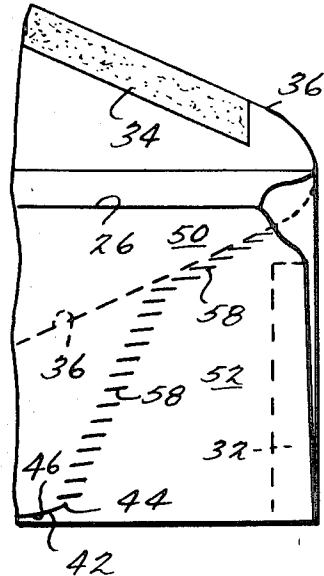
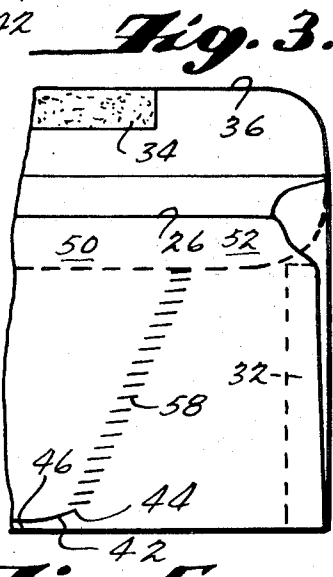
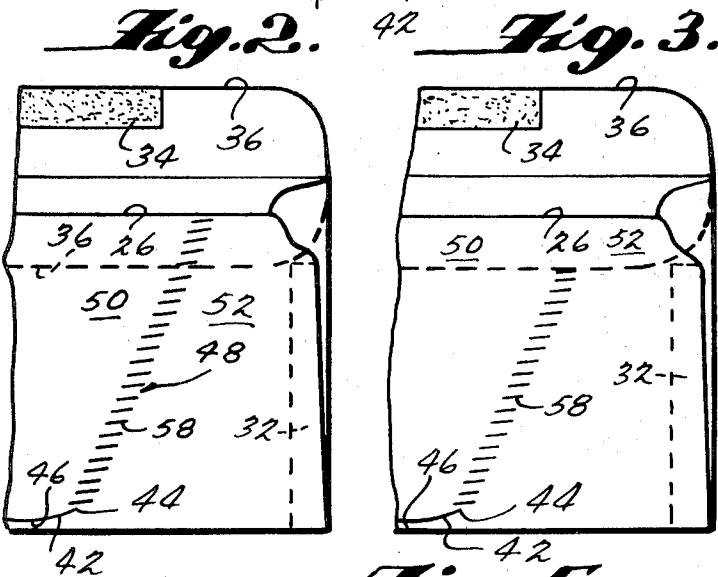
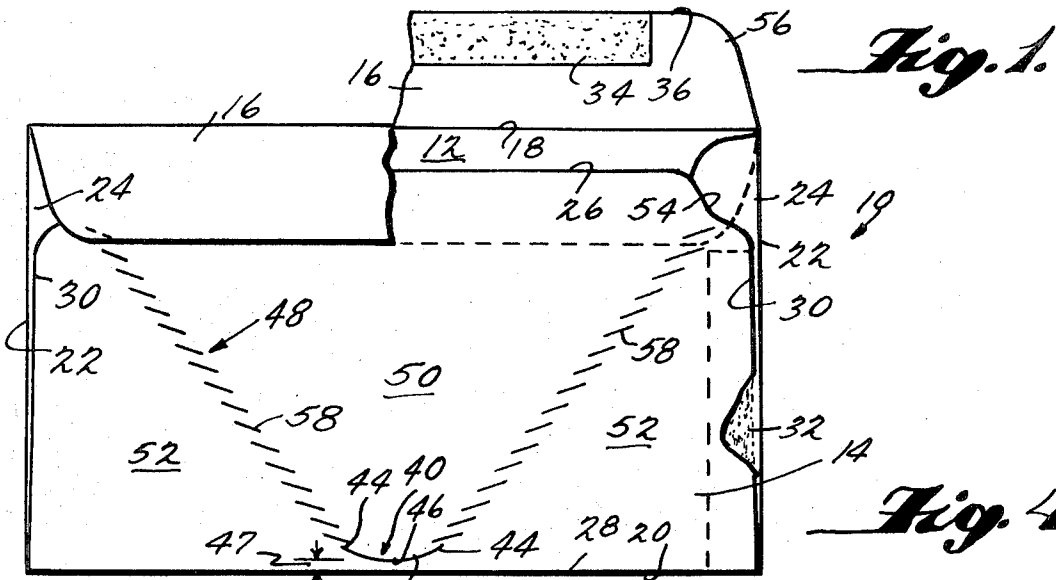
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[57] ABSTRACT

A side-seam envelope having, on its back panel, a tab defined by a tab die cut spaced a sort distance from the bottom edge of the back panel and a pair of tear lines extending upwardly from the free ends of the die cut to at least the free bottom edge of the flap in its secured position.

18 Claims, 5 Drawing Figures





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ENVELOPE

BACKGROUND OF THE INVENTION

This invention relates to an envelope and more particularly to a side-seam envelope having an opening device which insures easy access to the envelope and full disclosure of the contents thereof.

In an era of mass mailings, emphasis has been on envelope constructions which provide quick and easy devices for opening the envelope. Such devices include tear strips along an edge of the envelope or tear-out, triangular sections on the back of a diagonal-seam envelope, such as disclosed in the U.S. Pat. to Robbins, No. 3,297,285 of Jan. 10, 1967. On the other hand, some devices work from the front side of the envelope in conjunction with the window, such as the tear strip in Heywood, U.S. Pat. No. 2,828,065 of Mar. 25, 1958.

There is no attempt in any of these inventions to provide a device which, when opened, will disclose the entire contents of the envelope to the viewer. In each instance, one end or an end panel is ripped thereby enabling one to easily remove the contents from the ripped end of the envelope. Some individuals will not take the time to open an envelope nor, once opened, will they take the time to remove and examine all of the contents. Rather, the envelope and its contents find the wastebasket before the viewer is hit with the "selling message."

In order to get the selling message to the addressee, it is desirable to have an easy means of opening the envelope and furthermore to have a means which will disclose a sufficient portion of the major selling message to attract the interest of the addressee. There are some problems with the prior art which relates to quick opening devices. Most mass mailing envelopes have window constructions. Therefore, any attempt to remove a substantial portion of the front panel of the envelope is complicated because of the construction of the window. Devices which start at the window and work towards one edge of the envelope do not disclose a sufficient portion of the contents of the envelope. A further problem encountered with devices which operate on the front side of the envelope is that the top and most readily viewable insert, once a portion of the front panel has been torn away, is the address sheet or the reverse side of the return envelope, since the address appearing thereon must show through the window.

If the envelope is turned over so that the most important message would be readily viewable once the back panel is removed, another problem is presented. The envelopes shown in the prior art are generally diagonal-seam envelopes. It is quite easy to position the tear lines so that one panel of the diagonal-seam envelope can be removed. However, where it is necessary to remove more than one panel, the tear lines must pass across sealed seams. Since the tear lines are cut in the envelope blank before it is folded, it is readily apparent that it is quite difficult to register the cuts forming the tear line at the overlapping seams. Moreover, when the envelope is glued, the glue might seep through the tear cuts and completely defeat the purpose of the tear line.

SUMMARY OF THE INVENTION

The present invention is designed for use in mass mailings. Its purpose is two fold. First, like other envelopes, there is provided a device which enables the envelope to be easily opened. Second, the opening device is constructed in such a way that the most important message is readily viewable when the envelope is opened.

In the present invention the envelope uses a side seam so that the major portion of the back panel is free of glued seams. The tear line starts with a die cut defining a tab adjacent the bottom edge of the back panel and proceeds upwardly to the bottom edge of the flap in its sealed position. At that point, the tear line can stop; it can proceed under the flap to the upper edge of the back panel; or it can proceed along the free edge of the flap in its sealed position to a point where it intersects a

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free edge of the back panel of the envelope. In some constructions this point might occur on an edge which overlies a side seam. In such constructions, it is contemplated that the glued portion of the side seam would terminate short of the overlapping tear line.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a back, plan view of the envelope in a sealed condition with parts broken away for clarity;

FIG. 2 is a fragmentary back plan view of a modification of the tear line in FIG. 1;

FIG. 3 is a fragmentary back plan view of another modification of the tear line in FIG. 1;

FIG. 4 is a fragmentary back plan view of still another modification of the tear line in FIG. 1; and

FIG. 5 is a fragmentary back plan view of the envelope in FIG. 1 after it has been ripped open.

DETAILED DESCRIPTION OF THE DRAWINGS

FIG. 1 comprises a plan view of the backside of a side-seam envelope 10. The envelope includes a front panel 12, a back panel 14, and a flap 16. The front panel 12 has upper 18 and bottom 20 edges and opposed side edges 22. A pair of opposed side seams 24 are integrally connected to the front panel along the side edges 22. The side seams are folded back to lie adjacent or contiguous to the front panel. The back panel has upper 26 and bottom 28 edges and opposed side edges 30. The bottom edge 28 of the back panel is integrally secured to the bottom edge 20 of the front panel. The back panel is folded up to lie adjacent or contiguous to the front panel and is secured to each side seam 24 along at least a portion of the side seam by an adhesive means shown at 32. The upper edge 26 of the back panel defines the throat of the envelope.

The flap 16 is integrally secured to the front panel along the upper edge 18 of the front panel and has the usual adhesive strip 34 adjacent its free bottom edge 36. The flap is adapted to be folded back in the usual manner and to be secured by the adhesive strip 34 to the back panel.

An opening means is provided on the back panel for providing an easy method for opening the envelope while simultaneously providing a full disclosure of the inserts not shown, in the envelope. The opening means comprises a tab 40 defined by the area between a tab die cut 42 extending through the back panel and having two upwardly turned, free ends 44. As illustrated, the tab die cut is arcuate or crescent in shape, but within the scope of the invention it could take various configurations. The free, upwardly turned ends 44 insure that the tab, when pulled to initiate the tear, will start an upward tear leading to the top of the back panel.

The lowermost point 46 on the tab die cut is spaced a short distance 47 from the bottom edge 28 of the back panel. If the lowermost point on the tab die cut occurred at the bottom edge of the panel, it could be easily ripped when the front and back panels are folded during the manufacture of the envelope. Moreover, if the lowermost point on the die cut fell exactly on the bottom edge of the envelope, it might be ripped during mailing. The lowermost point 46 on the tab die cut is spaced a short distance from the bottom edge of the back panel to permit a full disclosure of the contents of the envelope when it is ripped opened. Furthermore, if this point was spaced more than a short distance from the bottom edge of the back panel, the inserts, mechanically placed in the envelope, might snag on the tab die cut. If the tab die cut is only a short distance from the bottom edge, such as one-eighth of an inch, the flap can still be folded over the inserts and sealed if the inserts snag, since there is generally greater than one-eighth of an inch clearance between the upper edge of the front panel and the top of the inserts when fully inserted in the envelope.

A tear line 48 extends upwardly from each free end 44 of the die cut to at least the free bottom edge 36 of the flap in a secured position. The tear line is not directly connected to the

free end 44 of the die cut but the pulling of the tab will result in the paper between the free end of the tab die cut and the tear line being easily ripped. It will be noted that the adhesive strip 32 of the flap, when it is in its secured position, falls between the opposed tear lines 48. When the envelope is torn open along the tab die cut and tear line, the back panel is divided into a torn portion 50 and a remaining portion 52, as further illustrated in FIG. 5. Thus, the adhesive strip 32 of the flap is secured to the torn portion 50 and terminates short of the remaining portion 52 of the back panel.

The arrangement of the tear lines could take a variety of configurations. Preferably, the tear lines diverge as they move upwardly from the tab die cut. As the tear lines diverge (assuming something greater than a minimal divergence), there is apt to be a tendency for the tear not to follow the lines unless there is some reinforcement in the torn portion. It will be found, for instance with respect to the envelope illustrated in FIG. 1, that the tear will diverge from the tear lines when the flap is not secured to the back panel. The point of divergence is approximately halfway up the tear line. At this point, the tendency for the tear to assume a vertical path is greater than its tendency to follow the diverging, inclined path of the tear line. The ability of the tear to follow the tear line depends in part upon the depth and amount of support which the secured flap gives to the torn portion of the back panel. It might even be possible to arrange tear lines in any given configuration so long as the torn portion is reinforced by some means, such as a clear plastic compound applied to the back panel between the tear lines.

In FIG. 1, the tear lines extend upwardly toward a corner of the envelope. As illustrated, the envelope has a McIntyre cut 54 which exposes a portion of the side seam 24. This cut is desirable for use with mechanical inserting machines since a vacuum means operates on the exposed side seam to lift the back panel during mechanical insertion of the envelope contents. The tear lines extend up to the adjacent proximity of the McIntyre cut, but do not in this embodiment, nor in any other embodiment, intersect the edge of the back panel. Otherwise, this cut, raw edge might cause jamming or tearing during mechanical insertion. As shown, the tear lines extend under the corners 56 of the flap, with the adhesive strip terminating short of these corners.

In the embodiment shown in FIG. 2, each tear line rises more abruptly and extends up to the bottom edge 36 of the flap and then under the bottom edge of the flap to the upper edge 26 of the back panel. Again, the tear line terminates in the adjacent proximity of the upper edge, but does not actually intersect this edge. The adhesive portion of the flap in its secured position falls between the tear lines.

Each tear line shown in FIG. 3 terminates at the bottom edge of the flap. At this point, the adhesive portion of the flap lies within an imaginary vertical line drawn from a termination of the tear line to the upper edge of the back panel. In operation, the tear line is followed up to the bottom edge of the flap or, for that matter, a slight distance under the flap, and then follows a free tear, which is generally vertical in direction, through the paper. The tear is effective because the adhesive portion of the flap remains on the torn portion of the back panel and terminates short of the remaining portion of the back panel. In essence, the free tear follows the most direct approach from the termination of tear line to the upper edge of the back panel. This embodiment is probably less desirable than that shown in FIG. 2, for instance, since the free tear is less attractive than the finished tear.

Still a further modification is shown in FIG. 4 where each tear line extends upwardly to the free bottom edge of the flap in a secured position and then turns outwardly and approximately follows the free bottom edge of the flap to a free edge of the back panel. This design is most effective when used in conjunction with a V-flap such as disclosed in FIG. 4. When the tear line follows the free bottom edge of the flap, it generally intersects an edge of the back panel at a point which overlies the side seam. Accordingly, it is necessary in this em-

bodiment to short-glue the side seams so that the adhesive means 32 does not interfere with the tear strip.

The tear line itself could assume a number of configurations. For instance, the tear line could comprise a plurality of spaced perforations, but a tear line having this configuration is often hard to follow when diverging from the direction of pull. The same problem also occurs with respect to a plurality of spaced, end-to-end slits since such a tear line is hard to follow as you pull up on a triangular-shaped, torn panel. Preferably, the tear line comprises a plurality of spaced slits 58 which are illustrated as being straight. Each of the slits is obliquely inclined with respect to the direction of the tear. The slits are laterally displaced outwardly with respect to the subjacent slit and laterally displaced inwardly with respect to the superjacent slit. Thus, adjacent slits are partially overlapping so that the configuration of the tear (see FIGS. 1 and 5) follows the slit line to its upper, outer end and then passes, approximately vertically, to the superjacent slit where it again follows the contour of that slit to its upper, outer end. The tear path thus has a stepped effect which is illustrated in FIG. 5. If the overall tear line is approximately straight, as is preferable, the slits will be approximately parallel. By being obliquely inclined, there is a reduced tendency for the slits to interfere with the mechanical insertion of contents into the envelope.

In one operative model of the invention, an envelope 4 ½ × 7 ¾ inches had a tab die cut having its lowermost point three-sixteenth inch from the bottom edge. The angle between the two tear lines was approximately 80° with each slit being obliquely inclined from a horizontal at approximately 15° (i.e., the cut angle). The slits were approximately three-eighth inch long and spaced vertically from each other by one-eighth inch.

It should be readily apparent that there are infinite variations depending basically upon the size of the envelope and the angle of the tear or "action line". It is readily apparent that the greater the cut angle, the better the tearing action. Moreover, there is a direct relationship between the length of each slit or cut and the number of parallel cuts as well as the vertical distance between adjacent slits—the longer the slit the fewer the parallel cuts and the greater the vertical distance between the slits.

The invention has disclosed the tear lines falling on the back panel. If the envelope has, by chance, a reverse flap, the flap would be secured to the front side or at least to the side with the address and postage. If there was a window, the tear lines could go around the window so that the window would lay within the torn portion of the panel. Of course, in this construction, one advantage of the invention is negated because the address label or return envelope is the first thing disclosed upon opening the envelope. Within the scope of the invention, however, the back panel is defined as the panel to which the flap is adapted to be secured.

While the preferred forms of the invention have been illustrated in the drawings and discussed above, it should be adequately clear that considerable modification may be made thereto without departing from the principles of the invention. Therefore, the foregoing should be considered in an illustrative sense rather than a limiting sense, and accordingly the extent of this invention should be limited only by the spirit and scope of the claims appended hereto.

What is claimed is:

1. A side-seam envelope comprising:

- a front panel having upper and bottom edges and opposed side edges;
- a pair of opposed side seams, each side seam being integrally connected to the front panel along one of said side edges and being folded back to lie adjacent the front panel;
- a back panel having upper and bottom edges, the bottom edge of the back panel being integrally secured to the bottom edge of the front panel, the back panel being folded up to lie adjacent the front panel and being secured to each side seam along at least a portion of the side seam;

a flap integrally secured to the front panel along the upper edge of the front panel, the flap having an adhesive strip adjacent its free bottom edge, the flap adapted to be folded back and secured to the back panel by said adhesive strip;

a tab defined by the area between a tab die cut extending through the back panel and having two upwardly turned, free ends, the lowermost point on the tab die cut being spaced a short distance from the edge of the back panel; and

means defining a tear line cut through the back panel and extending upwardly from each free end of the die cut to at least the free bottom edge of the flap in its secured position, the tear line when fully torn dividing the back panel into a torn portion and a remaining portion, the adhesive portion of the flap in its secured position on the back panel terminating short of the remaining portion of the back panel.

2. The envelope defined in claim 1 wherein the tab die cut is crescent-shaped.

3. The envelope defined in claim 1 wherein the tear lines diverge as they move upwardly from the tab die cut.

4. The envelope defined in claim 1 wherein each tear line comprises a plurality of spaced slits.

5. The envelope defined in claim 4 wherein each slit is straight.

6. The envelope defined in claim 4 wherein each slit is obliquely inclined with respect the direction of the tear.

7. The envelope defined in claim 4 wherein each slit is approximately parallel to the adjacent slit.

8. The envelope defined in claim 7 wherein each slit is laterally displaced outwardly with respect to the subjacent slit and partially overlaps the subjacent slit.

9. The envelope defined in claim 8 wherein each slit is

obliquely inclined.

10. The envelope defined in claim 4 wherein each slit is laterally displaced outwardly with respect to the subjacent slit and laterally displaced inwardly with respect to the superjacent slit and wherein each slit partially overlaps the subjacent slit and is partially overlapped by the superjacent slit.

11. The envelope defined in claim 10 wherein each slit is obliquely inclined.

12. The envelope defined in claim 1 wherein the angle between the tear lines is approximately 80°.

13. The envelope defined in claim 1 wherein each tear line terminates short of the side seam.

14. The envelope defined in claim 1 wherein each tear line extends upwardly and terminates adjacent the upper edge of the back panel and under the flap.

15. The envelope defined in claim 1 wherein each tear line extends upwardly and terminates adjacent the bottom free edge of the flap in its secured position.

16. The envelope defined in claim 1 wherein the upper portion of each side seam is free of any adhesive connection to the back panel and wherein each tear line extends upwardly and outwardly until the tear line is adjacent an edge of the back panel overlapping an unsecured portion of the side seam.

17. The envelope defined in claim 1 wherein each tear line extends upwardly to at least the free bottom edge of the flap in its secured position and wherein the tear line then turns outwardly and approximately follows the free bottom edge of the flap in its secured position until the tear line is adjacent a free edge of the back panel.

18. The envelope defined in claim 17 wherein said free edge of the back panel overlaps an unsecured portion of the side seam.

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