March 12, 1968 E. P. JOHNSON ET AL 3,372,861

SELF-SEALING ENVELOPE

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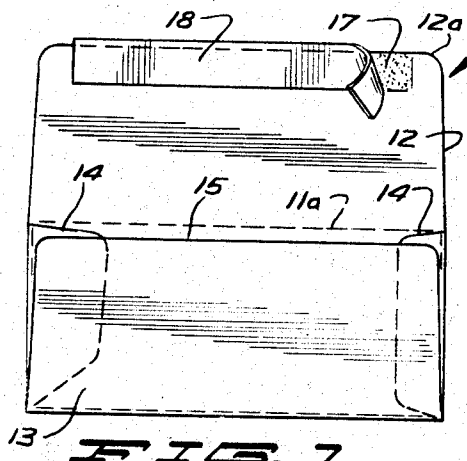

FIG. 1

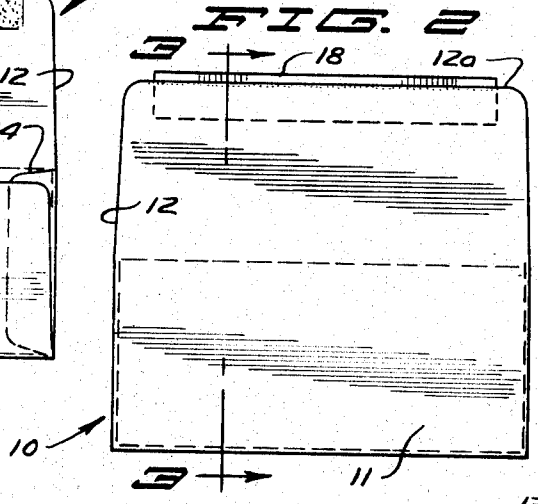

FIG. 2

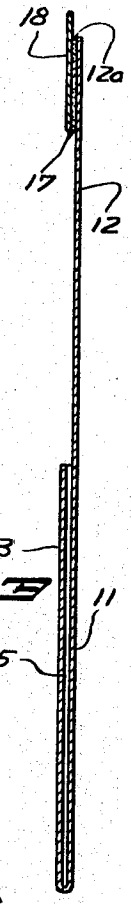

FIG. 3

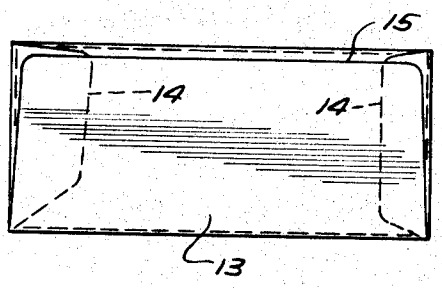

FIG. 5

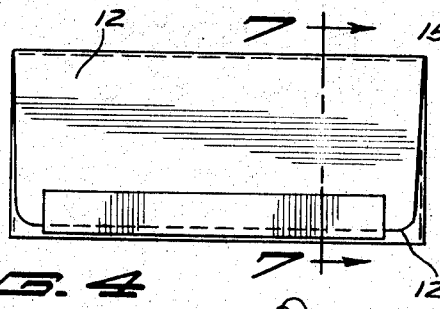

FIG. 4

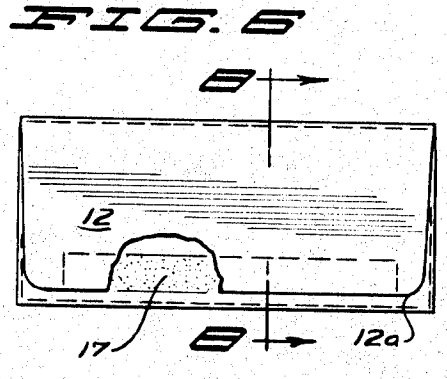

FIG. 6

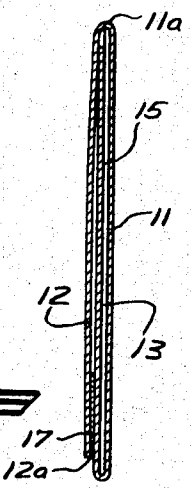

FIG. 8

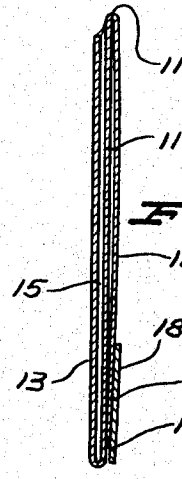

FIG. 7

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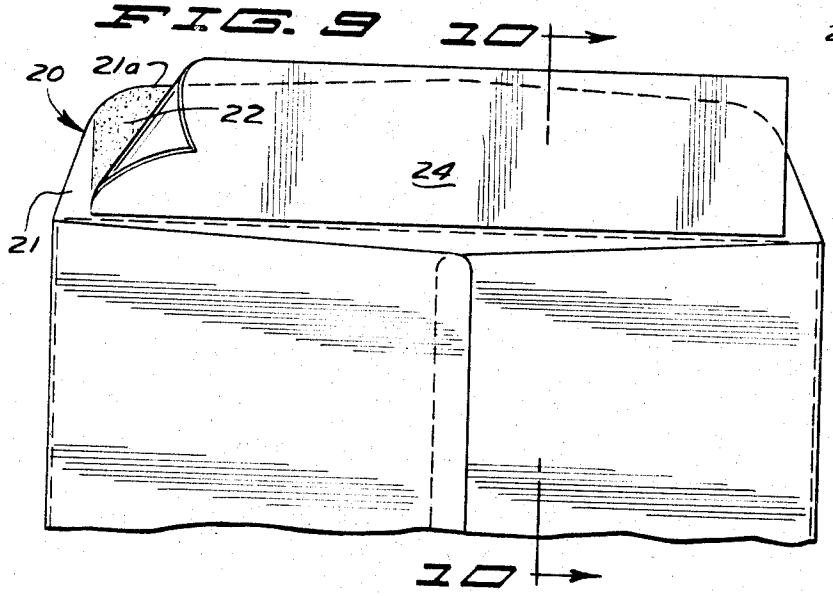
FIG. 9



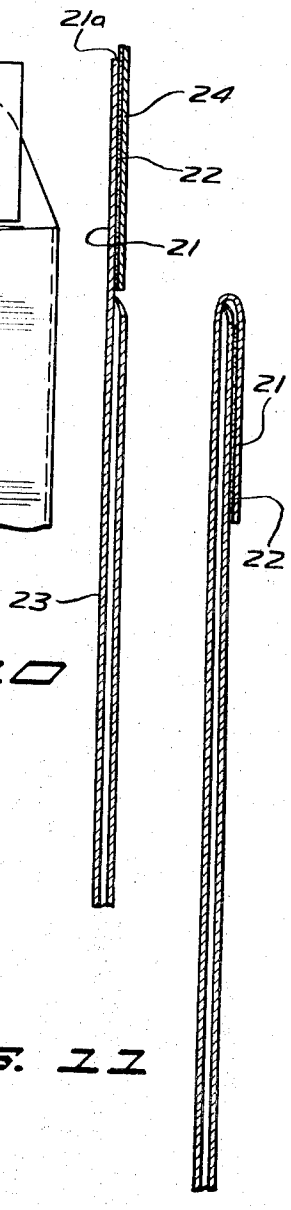
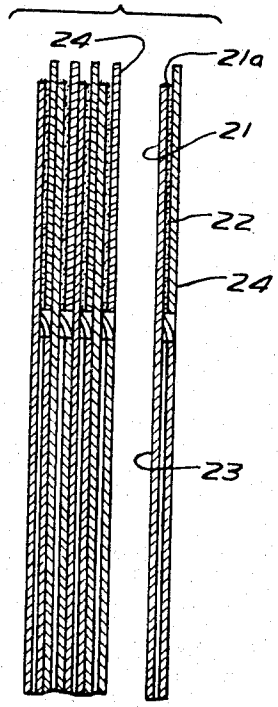


FIG. 10

FIG. 11

FIG. 12



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SELF-SEALING ENVELOPE

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Filed May 26, 1966, Ser. No. 553,185
3 Claims. (Cl. 229—80)

ABSTRACT OF THE DISCLOSURE

The present invention relates to an envelope construction and more particularly to self-sealing envelopes which self-sealing is provided through a particularly positive pressure sensitive adhesive. This adhesive is applied to this particular envelope along one sealing area adjacent the edge of a closure flap and is overlapped onto the actual edge of the flap. The area adjacent the flap is protected with a quick release cover thereover that the adhesive located on the edge of the flap itself is exposed such that the flap may be held open to facilitate filling of the envelope.

This invention particularly discloses the use of a positive pressure sensitive adhesive cement or the like which will afford a particularly strong bond when its carrier is applied to another article. In order to permit the usage of such high contact pressure sensitive materials a quick release element is provided to cover the adhesive so that the envelopes or the like to which the adhesive is applied may be stacked in close side by side relationship.

It is a further object of this invention to provide a positive adhering material to envelopes and the like which is sealed upon the application of a very slight pressure thereto and which adhesive when utilized with porous paper stock provides a positive bond by actually migrating into the porous material such that upon separation or attempted separation of the sealed portions, absolute evidence of entrance will be indicated. This is to say that an envelope cannot be opened by any of the well-known methods without showing evidence that the bond was broken. This particular application of course becomes very important when papers or valuables are to be delivered or carried in these envelopes.

Another particular object of this invention is to provide a gummed adhesive portion on an envelope or the like wherein a certain portion of the envelope is supplied with gum to permit sealing of the flap in position to hold the envelope open at all times. This particular application becomes important when in certain instances it is necessary to provide a booklet or the like of a specific size and envelopes must be attached within the booklet. In this particular case, then, the envelope flap may be held in open position by providing a certain limited gum exposure area on a rear side of an envelope flap and by applying and folding the envelope flap rearwardly to open the pocket of the envelope.

It is an object of applicant's invention to provide an envelope having a quick, positive, pressure sealing adhesive thereon with a quick release covering thereover which will afford means to stack the envelopes or the like in adjacent side by side relationship while preventing adhering of the envelopes to one another.

It is an object of this invention to provide an envelope having an adhesive on selected portions thereof which adhesive when sealed against other envelope portions will form a positive seal and will evidence any attempts to break or open the seal.

These and other objects and advantages of my invention will more fully appear from the following description made in connection with the accompanying drawings,

wherein like reference characters refer to the same or similar parts throughout the several views, and in which:

FIG. 1 is a front elevation of an envelope embodying the concepts of applicant's invention shown in open position;

FIG. 2 is a rear elevation of an open envelope;

FIG. 3 is a vertical section taken substantially along line 3—3 of FIG. 2;

FIG. 4 is a rear elevation view of the envelope illustrating the flap folded rearwardly to hold the envelope in open position;

FIG. 5 is a view taken opposite of that of FIG. 4;

FIG. 6 is a front elevation of the envelope with the flap in sealed closed position;

FIG. 7 is a vertical section taken substantially along line 7—7 of FIG. 4;

FIG. 8 is a vertical section taken substantially along line 8—8 of FIG. 6;

FIG. 9 illustrates the concept of the invention on a large packet type envelope;

FIG. 10 is a vertical section taken substantially along line 10—10 of FIG. 9;

FIG. 11 is a view similar to FIG. 10 illustrating the envelope in sealed position; and

FIG. 12 is a vertical section through a typical stacking or packing arrangement for the envelopes.

In accordance with the accompanying drawings the concept of applicant's invention is illustrated on a form of conventional envelope **10** which includes a front panel **11** having a closure flap **12** extending from one side **11***a* thereof, a rear panel **13** and closure edge flaps **14—14**. The front and rear panels **11, 13** are joined by edge flaps **14** to provide a pocket **15** therebetween.

To close and seal the envelope **10** a high tack, pressure sensitive cement area **17** is provided on the edge portion of closure flap **12** such that when the flap **12** is folded against the rear panel **13** a positive seal is obtained. The particular cement utilized is designed to give high adhesion and when utilized with porous materials as usually employed in envelope manufacture the cement will migrate into the now coated surface, in this case panel **12**, and will form a positive seal therewith. The final seal accomplished with this cement and the envelope stock utilized will not permit opening of the envelope without positive evidence of entry. In other words the seal cannot be separated without tearing the envelope material. A cement having these qualities is sold by the H. B. Fuller Company under the designation SC–302–9.

In the application of this cement to the closure flap **12** care is taken to provide an overlap of the cement onto the edge **12***a* of flap **12**. This overlap feature then provides an additional sealing edge to allow flap **12** to be folded against front panel **11** as illustrated in FIGS. 4, 5 and 7 to hold the envelope in an open position. The purpose of holding the envelope **10** in such position is to reduce the overall height of the envelope such that the same may be inserted edgewise into a booklet or the like.

One use for this particular envelope is as a traffic ticket. In this use the envelope ticket is included in a ticket booklet which must be of a specific width and the size of the envelope **10** when flap **12** is so folded corresponds to this width. The envelope ticket is used for the mail in of violation money and therefore the positive, tamper proof-sealing is also important.

The cement overlap on flap edge **12** permits the flap **12** to be held to front panel **11** by a narrow sealing line and separation of these elements is obtained due to the narrow line without total destruction of the panels **11, 12.**

To prevent accidental sealing a quick release paper **18** is provided over cement area **17** and this paper **18** or other similar material such as silicone stock is easily removable from area **17** without removing any cement

therefrom. The quick release element **18** then provides a protective covering for area **17** while still permitting the overlap portion on edge **12***a* to seal. As shown, the release material **18** extends above flap **12** to provide a gripping edge.

The concepts of this invention are also illustrated on a large packet type envelope **20**. In this form a sealing flap **21** is provided with the positive, pressure sensitive cement area **22** with an overlap on the edge **21***a* of flap **21**. This overlap again will permit rearward sealing of flap **21** against front panel **23** of the envelope **20**.

A quick release covering **24** is provided to normally cover the cement area **22** and prevent accidental sealing thereof but is again removable without destroying the cement capabilities.

A package of such packet envelopes **20** is illustrated in FIG. 12 where it should be obvious that adjacent envelope sealing areas including the overlapped areas are separated by the quick release coverings **24**. This is particularly necessary when considering the cemented overlap portion **21***a* as this overlap could easily adhere to the next adjacent envelope if such release covering **24** were not available.

This same packaging, separate shut concept is included when the envelope flaps are folded back upon themselves. As illustrated in FIG. 7 such folding back will prevent exposure of cement areas and therefore prevent accidental sealing of envelopes contained in a package.

The particular cement utilized in this application is of particular importance as it is of high bonding quality under very light pressure. From a protection standpoint, the high bonding quality is important and from the user's standpoint the light pressure is important.

It should be obvious that applicants have provided a unique sealing method that utilizes a unique high pressure cement and which will be useful in many applications exclusive of the envelope field.

It will, of course, be understood that various changes may be made in the form, details, arrangements and proportion of parts without departing from the scope of the invention, which generally stated consists in the matter set forth in the appended claims.

What we claim is:

1. An envelope construction including:

(a) a front panel;

(b) a rear panel;

(c) means for closing said panels, at least their end portions, to define a pocket therebetween;

(d) a closure flap arranged on one of said panels and foldable against the other of said panels for closing said pocket;

(e) a pressure sensitive cement arranged on selected areas adjacent the edge of said closure flap; and

(f) a quick release material normally covering the cement area and extending beyond the edge of said flap and being removable therefrom to expose said area for sealing against said other panel.

2. An envelope construction including:

(a) a front panel;

(b) a rear panel;

(c) means for closing said panels, at least their end portions, to define a pocket therebetween;

(d) a closure flap arranged on one of said panels and foldable against the other of said panels for closing said pocket;

(e) a pressure sensitive cement on selected areas of said flap and on the edge portion of said flap which cemented edge portion is exposed at all times; and

(f) a quick release material normally covering the cement area and extending beyond the edge of said flap and being removable therefrom to expose said area for sealing against said other panel.

3. An envelope construction including:

(a) a front panel;

(b) a rear panel;

(c) means for closing said panels, at least their end portions, to define a pocket therebetween;

(d) a closure flap arranged on one of said panels and foldable against the other of said panels for closing said pocket;

(e) a pressure sensitive cement on selected areas of said flap including one portion arranged adjacent one edge of said flap and a second portion arranged on the edge of said flap, said edge portion being exposed for sealing at all times; and

(f) a quick release material normally covering the cement area and extending beyond the edge of said flap and being removable therefrom to expose said area for sealing against said other panel.

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