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(54) MAILING ENVELOPE

(57) The mailing envelope has row of oblique cuts in registration with the adhesive area of the back where the corresponding closure flap will adhere, so that in one of the extremities of the row of oblique cuts there is provided a special larger cut with a different inclination, said cut forming a means for initiating the opening of the envelope, by tearing out the aligned oblique cuts, when pulling from the respective extremity of the flap. Likewise, a second special cut provided at the opposite extremity of the row of oblique cuts will form the means

to evidence a fraudulent attempt to open the envelope, the reason being that, when pulling from that second flap extremity in order to try to separate it from the back of the envelope, a tearing is produced in the transverse direction to the envelope. Both the oblique cuts and the extreme cuts for initiating the opening and tamper evidencing, are applicable to envelopes with straight, trapezoidal or triangular flaps.

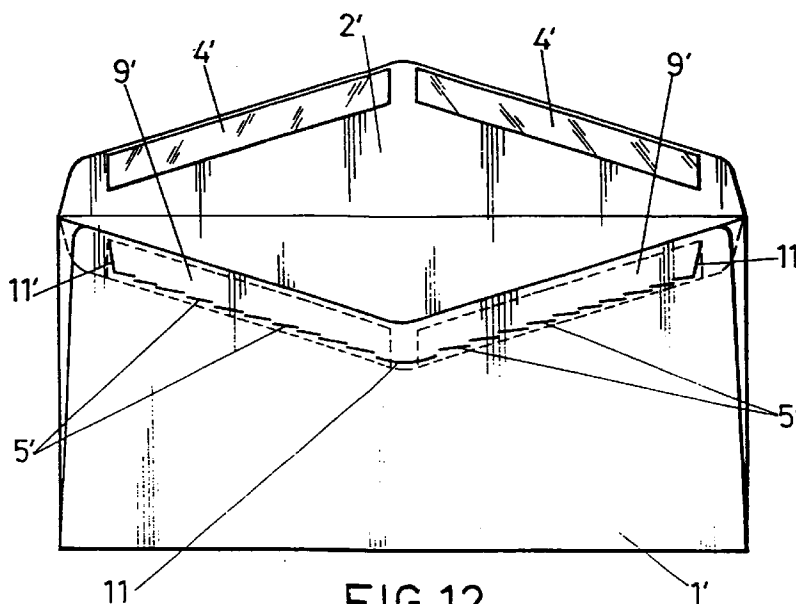


FIG. 12

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Description

OBJECT OF THE INVENTION

The present invention refers to an envelope, in other words a classic paper container used to send any type of letter or document, that has been greatly improved, specifically in order to make it easier to open the same, once its task has been completed, as well as to reveal fraudulent or unauthorized opening of the envelope itself, making it inviolable.

BACKGROUND OF THE INVENTION

It is known that envelopes are shaped as a type of rectangular container, open at one of its sides, where there is a sealing flap aided by an adhesive strip, that at times is moistenable and other times it makes contact, in such a way that once the envelope has been conveniently sealed, the opening of the same by the addressee turns out to be a bit difficult, since the envelope must be opened without damaging the contents thereof.

The conventional solution for this purpose is the use of the classic letter-opener, which taking advantage of the lack of absolute sealing existing especially in the vertexes of the envelope, is inserted in one of them tearing one of the edges thereof. This solution, though it offers some optimal results, nevertheless has the inconvenient problem that on many occasions there is no letter-opener available, and one has to resort to the use of other objects, not normally used for this purpose and whose use is far from optimal.

A more advanced solution consists of, after choosing which is the edge for opening the envelope, to conveniently fasten a string to the same, that emerges slightly through one of its ends, in such a way that the addressee of the envelope needs only to pull on the free end of the thread, achieving the rapid opening of the same. This solution, undoubtedly effective, nevertheless has the basic problem of making the envelope more expensive upon including this additional means for opening same.

Besides, it happens that careful pulling on the sealing flap allows it to become loose from the back and thus the documents inside cannot be analyzed without authorization. In other words, on many occasions envelopes may be opened fraudulently and may be later sealed back up, without the addressee becoming aware of this fact.

DESCRIPTION OF THE INVENTION

The envelope that the invention proposed has been designed and structured in order to fully satisfactorily solve the above mentioned problem, in such a way that, without the least repercussion on the manufacturing cost of the same, the envelope offers an extremely rapid, simple and effective opening means, allowing the addressee to realize if the same has been fraudulently

opened without authorization.

For this purpose, more specifically and from a basic structure that coincides with that of any conventional envelope, the invention centers on providing in the body of the envelope, specifically under the sealing flap of the same, a plurality of cuts independent from each other, that entirely affect the gummed area and that define between them small connections, easily frangible, in such a way that upon pulling on one of the ends of the sealing flap, or the middle of the same, depending on the type of envelope, the same is opened by tearing the same.

In order to achieve this purpose the cited cuts must be placed right next to the free edge of the sealing flap, in such a way that in the opening operation the gummed area of the body of the envelope remains basically fastened to the flap, thus favoring the tearing operation.

In accordance with another one of the features of the invention it has been provided for that said cuts turn out to be rather oblique with regard to the free edge of the sealing flap, defining on the back of the envelope a slightly broken tearing line, that makes the tearing operation easier.

Finally, it is necessary to point out that one of said cuts, the one corresponding to be beginning of the opening operation will be different from the other ones, specifically larger, this starting cut being established in one of the ends of the sealing flap, when it is rectilinear, or in the middle of the same when said sealing flap has a free angular edge, in accordance with the two most normal conventional types of envelopes.

In any case, it suffices to grasp the flap at the initial tearing point provided for, that will be conveniently indicated on the envelope, so that with slight pulling tearing takes place along the alignment of cuts and thus the envelope opens up entirely.

Another object of the invention is to provide the envelope with means to allow the addressee to know if there has been fraudulent opening thereof, for which purpose aside from the initial tearing cut cited above and larger than the cuts that form the alignment on the back of the envelope, another larger cut has been provided for in the opposite end, all in such a way that if ones tries to loosen the flap from this second end, by means of careful pulling, the uncontrolled tearing of the corresponding area of the envelope would take place and thus fraudulent or unauthorized opening of the envelope would be revealed. In other words, it makes the envelope inviolable.

In the case of envelopes with a triangular flap, aside from the center cut for starting the tearing, there will also be two other larger cuts corresponding with the outside ends of the areas where the smaller alignments of cuts will be provided for on each side of the cited center cut for initial tearing.

DESCRIPTION OF THE DRAWINGS

To complete the description that is being made and

for the purpose of providing a better understanding of the features of the invention, the present description is provided with a set of drawings wherein as an integral part of the same, the following has been shown in an illustrative and non-restrictive manner:

Figure 1 is a rear view of an envelope with a straight flap, made in accordance with the improvements object of the present invention, which appears open, representing in the same with a broken line, the sealed position of the flap.

Figure 2 is a view of the envelope of the above figure, but now it is sealed.

Figure 3 again shows the envelope of figure 2, in the initial opening state.

Figure 4 again shows the envelope of the above figures in the limit opening by means of tearing the flap.

Figure 5 shows a view similar to that of figure 1 but corresponding to an envelope with a triangular flap, also made in accordance with the object of the present invention.

Figures 6 to 8 show the same details as figures 2 to 4, but corresponding to an envelope with the triangular flap of figure 5.

Figure 9 shows a rear view of the envelope shown in figure 1, but in this case provided with the second larger cut that will be the means of inviolability of the envelope, since an attempt to loosen the sealing flap from that end in which said cut is made would involve the tearing of the envelope according to an irregular path but practically crosswise one.

Figure 10 shows the envelope of the above figure but sealed.

Figure 11 shows the same envelope as in figures 9 and 10, in the initial opening position at both ends, showing in one case the tearing by means of the alignment of cuts and in the other case the crosswise tearing of the envelope.

Figure 12 shows a rear view of an envelope with a triangular flap, similar to the one of figure 5, with the two larger cuts of the ends corresponding to the areas or edges in which the alignments of parallel cuts are made.

Figure 13 shows the envelope of the above figure sealed, there being three arrows indicating the points or ends from which one can pull the sealing flap to tear open the envelope along the alignment of cuts or to cause the tearing in an attempt of fraudulent opening.

PREFERRED EMBODIMENT OF THE INVENTION

In view of these figures one can observe how the proposed envelope has the shape of any conventional envelope, materialized by a body (1) provided with a sealing flap (2) with a straight or trapezoidal shape, wherein a broad rectilinear edge (3) is defined, as shown in figure 1, or else materialized by a body (1')

aided by a triangular shaped flap (2'), defining an angular free edge (3'), as seen in figure 5. It can be materialized by any other basic shape, without this affecting at all the essence of the invention, having in any case close to the free edge (3-3') of the flap (2-2') thereof, an adhesive strip (4), that may be continuous as in the example of figure 1 or made into two symmetric portions (4') as in the example in figure 5, that may be either moistenable or by contact, in the latter case helped by a protective strip of paraffin coated, silicon coated or the like, and that in any case constitutes the means for sealing the flap (2-2') to the envelope (1-1'), to achieve sealing of the same after the corresponding contents has been inserted therein.

Now then, from this basic and conventional structure, the invention is centered on making on the back of the envelope, that corresponds to reference (1) itself, a plurality of cuts (5-5') which are not very large, that form a parallel alignment very close to the imaginary line (6) of the cited body (1) receiving the free edge (3-3') of the flap (2-2') after sealing the same.

These cuts (5-5') preferably in an oblique position, define between them easily frangible connections (7), that convert this alignment of cuts (5-5') into a line of opening by tearing, when one pulls on the flap itself (2-2') fastened to the body (1) of the envelope in the previous operation of sealing the same.

In order to facilitate the tearing operating and in the specific case of an envelope (1) with a straight or trapezoidal flap shown in figures 1 to 4, the existence of an initial cut (8) has been provided for. It is located in correspondence with one of the ends of the flap and that transversally affect the entire gummed area (9) by which the flap (2) is fastened to said body (1) by means of the adhesive strip (4), in such a way that when one pulls on this vertex of the flap (2), conveniently indicated by the arrow (10) that appears in figure 2, and specifically in the oblique direction of the cited arrow, there is a progressive tearing of the connections (7) by means of the cuts (5), as shown in figure 3, until the envelope is entirely opened as is shown in figure 4.

On the other hand and in the specific case of the envelope (1') provided with a triangular flap (2') shown in figures 5 to 8, in this case it has been provided for that the starting cut (11) has an arched shape and is located opposite the free edge (3') of the flap, specifically between the two side alignments of cuts (5'), in such a way that when one pulls on the middle vertex of the flap, in accordance with the arrow referred to as (12) in figure 6, the tearing of the body (1') of the envelope takes place in a similar way as in the previous case, in this case towards both sides and symmetrically, as shown in figure 7, until the envelope is opened entirely, as shown in turn in figure 8.

Hence and as it has been said above, it suffices to simply pull on the indicated area (10-12) of the envelope in order to achieve the tearing and subsequent opening of the same along the line provided for this purpose, that ensures perfect access to the inside and the absolute

lack of risk of damaging the contents thereof.

In figured 9, 10 and 11 one can see the envelope (1) of figures 1 to 4, but provided with means that will indicate if said envelope has been opened fraudulently. The references of the elements and parts common to both envelopes (one represented in figures 9, 10 and 11; and the other represented in figures 1 to 4) will be the same in both cases.

Now then, in said figures 9, 10 and 11, the envelope (1) in question, aside from all the features described for the envelope of figures 1 to 4, has the particularity that in the part opposite the gummed area (9) where there is the cut (8) for starting the tearing, there is a second cut (8a) that is going to define an inviolability means of the envelope, since when one carefully pulls on the flap (2) by the vertex that has been represented by arrow (10a), in an attempt of fraudulent opening, then the envelope will tear as is represented in figure 11.

On the other hand and in the event of an envelope with a triangular flap as shown in figures 12 and 13, envelope that corresponds to that which is shown in figures 5 to 8, it can also be provided with the means that will reveal a case or attempt of fraudulent or unauthorized opening.

In this case, the envelope (1') aside from the cut for starting tearing (11) has a pair of cuts (11') in the ends of the gummed areas (9'), in such a way that if one pulls on the center area or vertex, as arrow (12) of figure 3 indicates, it will open in the exact same way as the envelope (1') of figures 5 to 8. Now then, if one pulls on the ends of the flap (2') as indicated by the arrows (12') then the tearing would take place just as it happened in envelope (1) of figures 9, 10 and 11 when one pulled on the end corresponding to the arrow indication (10a), revealing an attempt of fraudulent opening.

The cuts (8a) and (11') referred to for the embodiment of the envelopes corresponding to figures 9 to 11 and to figures 12 and 13, respectively, are connected to the final cut (5) and (5') of the alignments of oblique cuts made in the respective gummed areas of said envelopes.

Claims

1. Envelope that being of the type that is structured from a body with a generally rectangular shape, provided with a mouth in correspondence with one of its edges, sealable by means or a foldable flap, attachable to the body by means of adhesive, essentially characterized in that the back surface of its body (1-1') includes a plurality of cuts (5-5') that are aligned parallel and close to the free edge (3-3'), of the sealing flap (2-2'), when folded over or for sealing the same and remaining under it, cuts (5-5') substantially close that define together small connections (7), easily frangible by means of tearing when conveniently pulling on the flap (2-2') when sealed to the envelope, for which purpose said alignment of cuts (5-5') affects the entire strip (9-9')

of fastening by a adhesive.

2. Envelope, according to claim 1, characterized in that the cited cuts (5-5') have a slightly oblique arrangement with respect to the alignment itself, or in other words with respect to the free edge (3-3') of the flap (2-2') when sealed.
3. Envelope, according to the above claims, characterized in that it includes a special initial cut (8-11), that in the case of conventional envelopes with trapezoidal flap (2) it is placed in correspondence with one of the ends thereof, affecting entirely and transversally the adhesive area (9), and that in the case of an envelope with a triangular flap (2') it is placed in correspondence with the middle vertex and free from the same, relating two side and symmetric tearing areas.
4. Envelope, according to the above claims, characterized in that on the outside surface of its flap (2-2') it includes a graphic element (10-12) corresponding to the pulling point provided for opening the same.
5. Envelope, according to the above claims, characterized in that in the case of an envelope with a trapezoidal sealing flap, aside from the initial tearing cut (8) there is in the end opposite the adhesive area or strip (9), a second special cut (8a) provided for to reveal fraudulent opening of the envelope when one pulls on the respective end of the flap (2), in whose end there is the graphic element (10a) corresponding to the pulling area.
6. Envelope, according to claims 1 to 4, characterized in that in the case of an envelope (1') with a triangular sealing flap (2') aside from the center initial tearing cut there is, in the ends of both symmetric and side adhesive areas (9'), both special cuts (11') provided for to reveal fraudulent opening of the envelope when one pulls on the respective end of the flap (2'), in whose ends there are graphic elements (12') corresponding to pulling areas.

7. Envelope, according to claims 5 and 6, characterized in that the cut (8a) of the envelope (1) has a direction contrary to the cut (8) of the end opposite the adhesive area (9), belonging to the envelope itself (1); while the cuts (11') provided for on the ends of the symmetric and side adhesive areas (9') of the envelope (1') have different directions from each other; it being provided for that the pulling from the ends corresponding to the graphic elements (10a) and (12') of the sealing flap, causes irregular and almost transversal tearing of the back portion of the envelope (1-1') between the respective alignment of cuts (5-5') and the free edge corresponding to the mouth of said back of the envelope (1-1').

Amended claims under Art. 19.1 PCT

[received by the International Bureau 5th July 1996 (05.07.06); original claims 1-7 replaced by amended claims 1-14 (4 pages)]

[Original claims 1 and 3 have been replaced by amended claims 1, 3, 4 and 9.

Original claim 2 is unchanged.

Original claim 4 has been replaced by amended claim 14.

Original claim 5 has been replaced by amended claims 5 and 6.

Original claim 6 has been replaced by amended claims 10 and 11.

Original claim 7 has been replaced by amended claims 7, 8, 12 and 13.]

1. Mailing envelope, comprising a body (1-1') with generally rectangular contour, provided with a mouth corresponding with one of its edges, sealable by a foldable closure flap (2-2'), attachable to the body (1-1') by means of an adhesive attachment strip (9-9'), the envelope including on the reverse or back surface of its body (1-1'), a plurality of cuts (5-5') aligned parallel and adjacent to the free edge (3-3') of the closure flap (2-2'), folded or sealed for the same and remaining hidden under it, substantially adjacent cuts (5-5') which define together small connections (7), easily frangible by means of tearing when conveniently pulling on the closure flap (2-2') when sealed on the envelope, for which purpose, said alignment of cuts (5-5') affects the entire strip (9-9') fastened by adhesive, the envelope including a special initiating cut (8-11) larger than the cuts (5-5') of said plurality of cuts (5,5'), characterized in that the special initiating cut (8-11) is situated in such a way that it remains hidden under the closure flap (2-2') in folded or sealing position of the same.

2. Mailing envelope according to claim 1, characterized in that the cited cuts (5-5') adopt a slightly oblique arrangement with respect to the alignment itself, or in other words, with respect to the free edge (3-3') of the closure flap (2-2') when closed.

3. Mailing envelope according to any of the claims 1 and 2, characterized in that the closure flap (2) is a trapezoidal closure flap (2), the special initiating cut (8) placed in correspondence with one of the ends of said closure flap (2).

4. Mailing envelope according to the previous claim, in which the special initiating cut (8) transversally and integrally affects the adhesive zone.

5. Mailing envelope, according to any of the claims 3 and 4, characterized in that in addition to the special initiating cut (8) it presents on the opposite

extremity of the strip (9), attached by adhesive, a second special cut (8a) provided in order to evidence a fraudulent attempt to open the envelope when pulling from the respective end of the closure flap (2).

6. Mailing envelope according to the previous claim, characterized in that in said opposite extremity, a graphic element (10a) has been provided, corresponding to the pulling point.

7. Mailing envelope, according to any of the claims 5 and 6, characterized in that the second special cut (8a) of the envelope presents an opposite direction to the special initiation cut (8).

8. Mailing envelope, according to any of the claims 5-7, characterized in that it has been provided that the pulling from the extremity corresponding to the second special cut (8a) produces the irregular and approximately transversal tearing of the reverse side of the envelope, comprised between the respective alignment of the cuts (5) and the free edge corresponding to the mouth of said back side of the envelope.

9. Mailing envelope according to any of the claims 1 and 2, characterized in that the closure flap (2') is a triangular closure flap (2'), the special initiating cut (11) being situated in correspondence with the middle vertex and free from the closure flap (2'), relating two side and symmetric tearing areas.

10. Mailing envelope, according to claim 9, characterized in that besides the special initiating cut (11) it presents, on the opposite extremities of the two symmetrical and side areas of the flap (9'), attached by adhesive, two second special cuts (11') provided to evidence fraudulent opening of the envelope when pulling from the respective end of the closure flap (2').

11. Mailing envelope according to the previous claim, characterized in that in the cited opposed extremities, graphic elements (12') have been provided, corresponding to the pulling points.

12. Mailing envelope according to any of the-claims 10 and 11, characterized in that the second special cuts (11') provided on the extremities of the symmetrical and side areas of the strip (9'), attached by adhesive to the envelope, present opposite directions between each other.

13. Mailing envelope according to any of the claims 10-12, characterized in that it has been provided that the pulling from the ends corresponding to the second special cuts (11') produce the irregular and approximately transversal tearing of the reverse

section of the envelope, comprised between the respective alignment of the cuts (5') and the free edge corresponding to the mouth of the cited reverse side of the envelope.

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14. Mailing envelope, according to any of the claims 1-13, characterized in that on the external side of its closure flap (2-2') it includes a graphic element (10-12) corresponding to the pulling point foreseen for the opening of the envelope.

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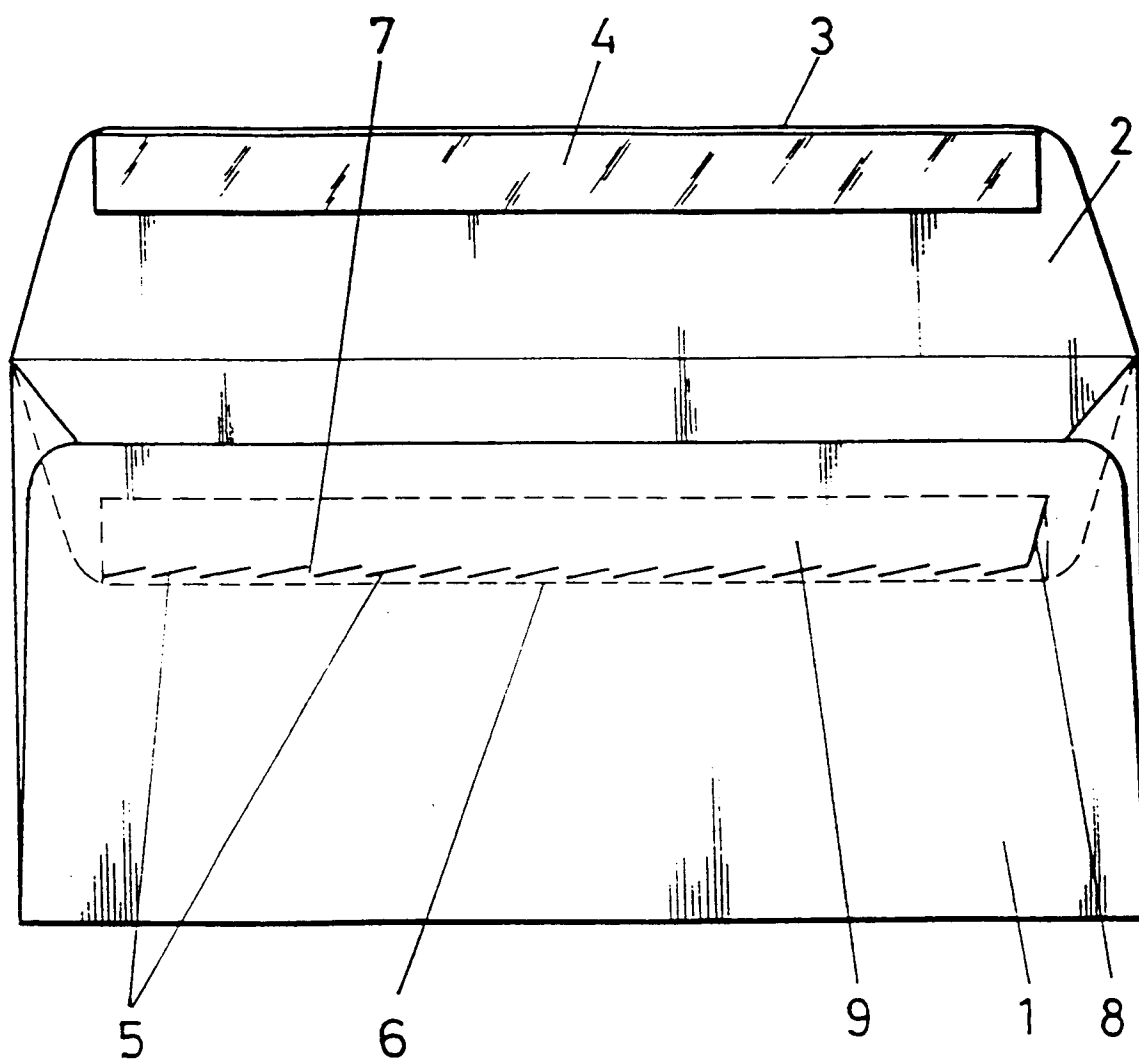
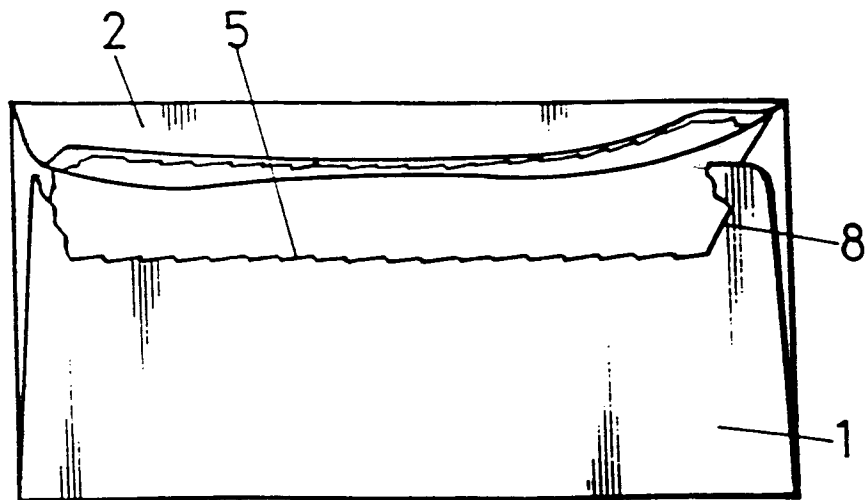
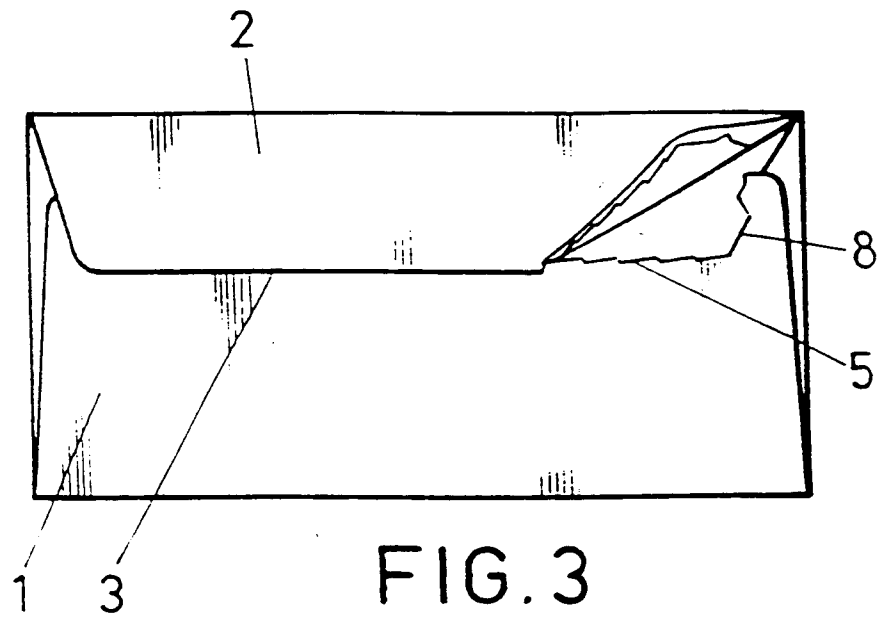
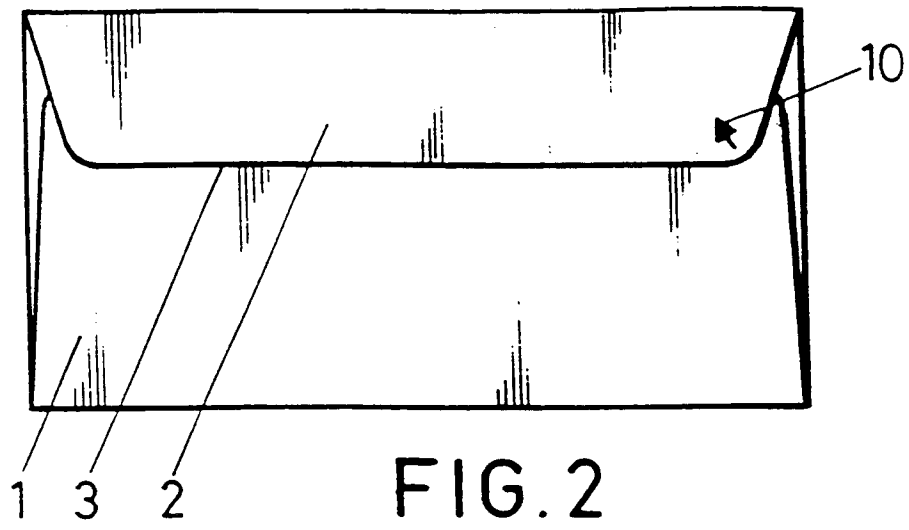


FIG. 1



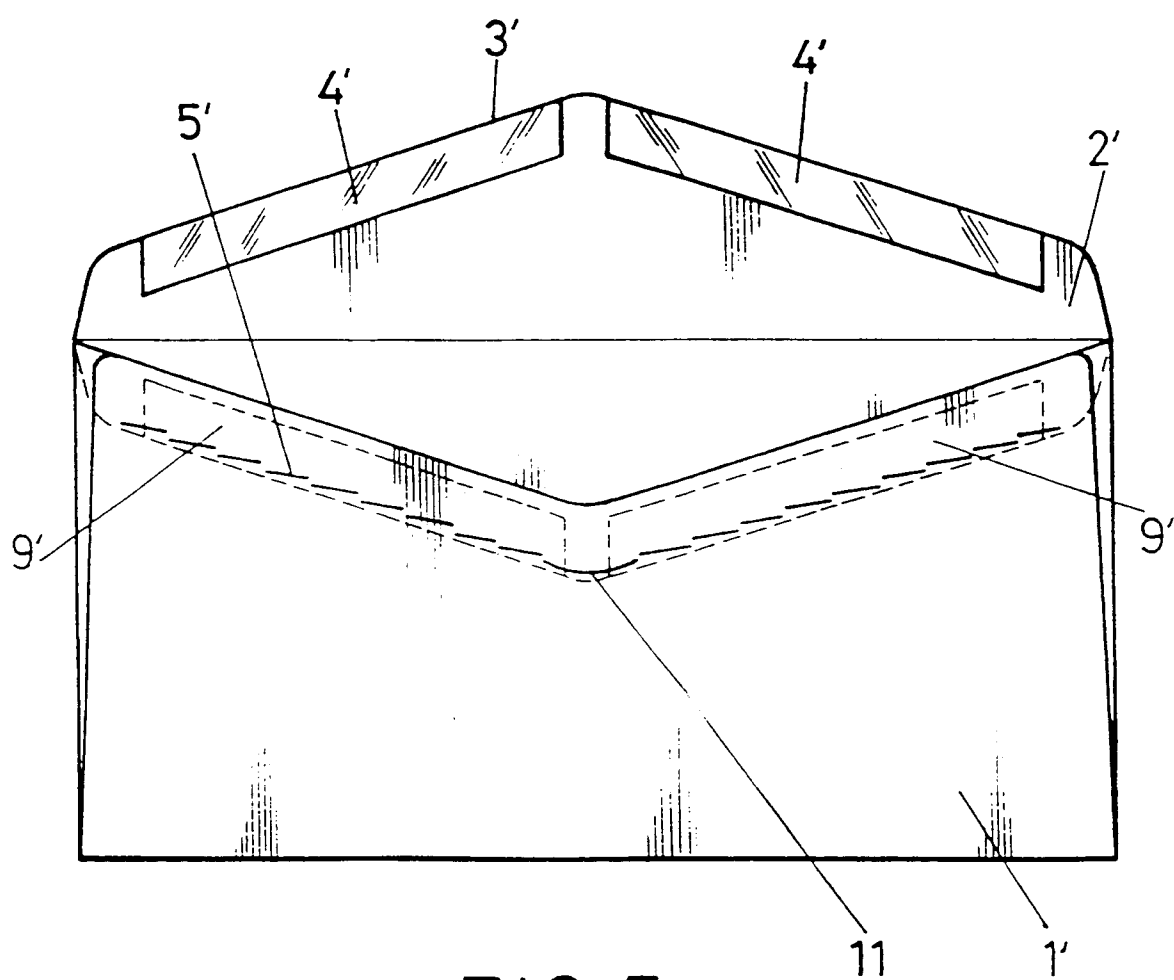
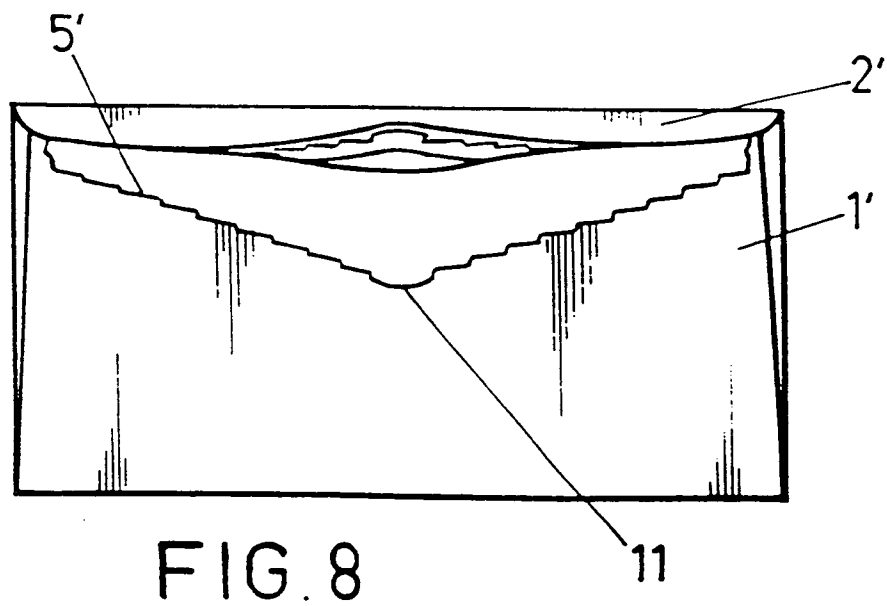
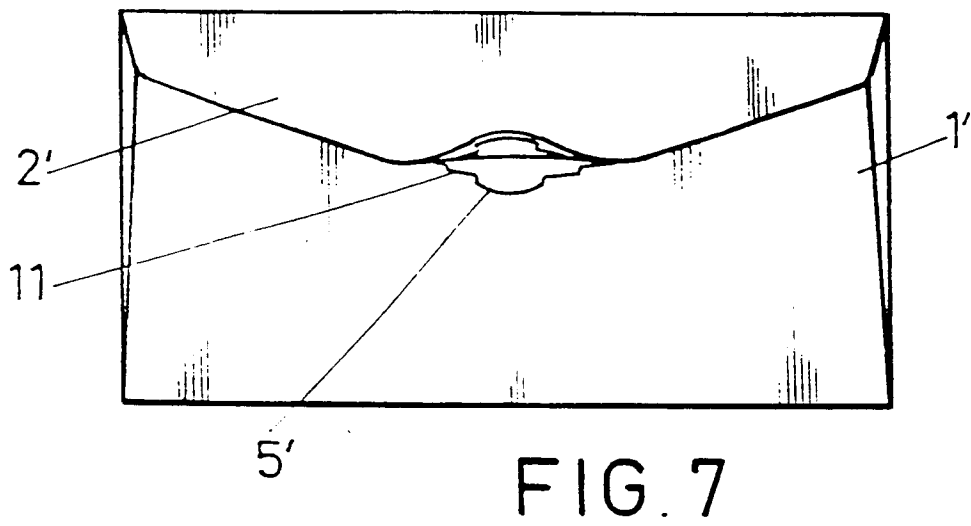
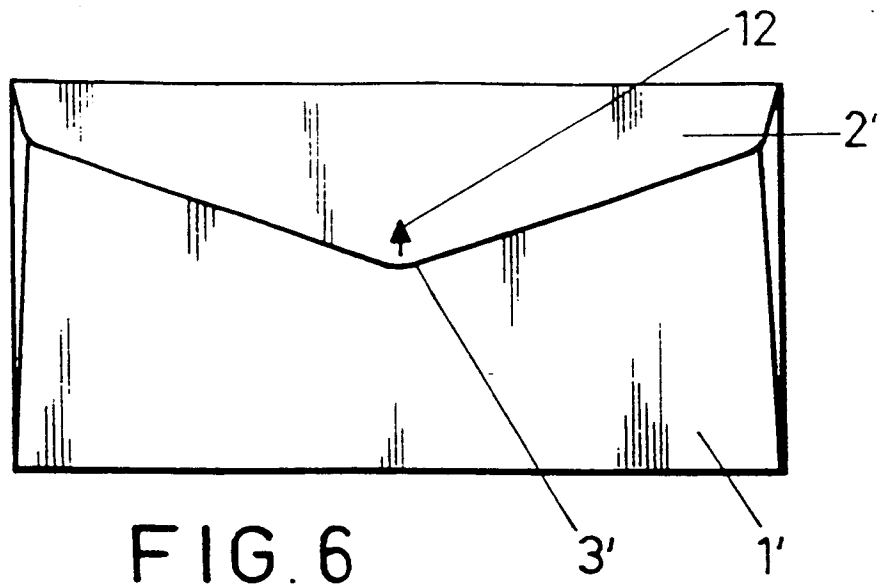
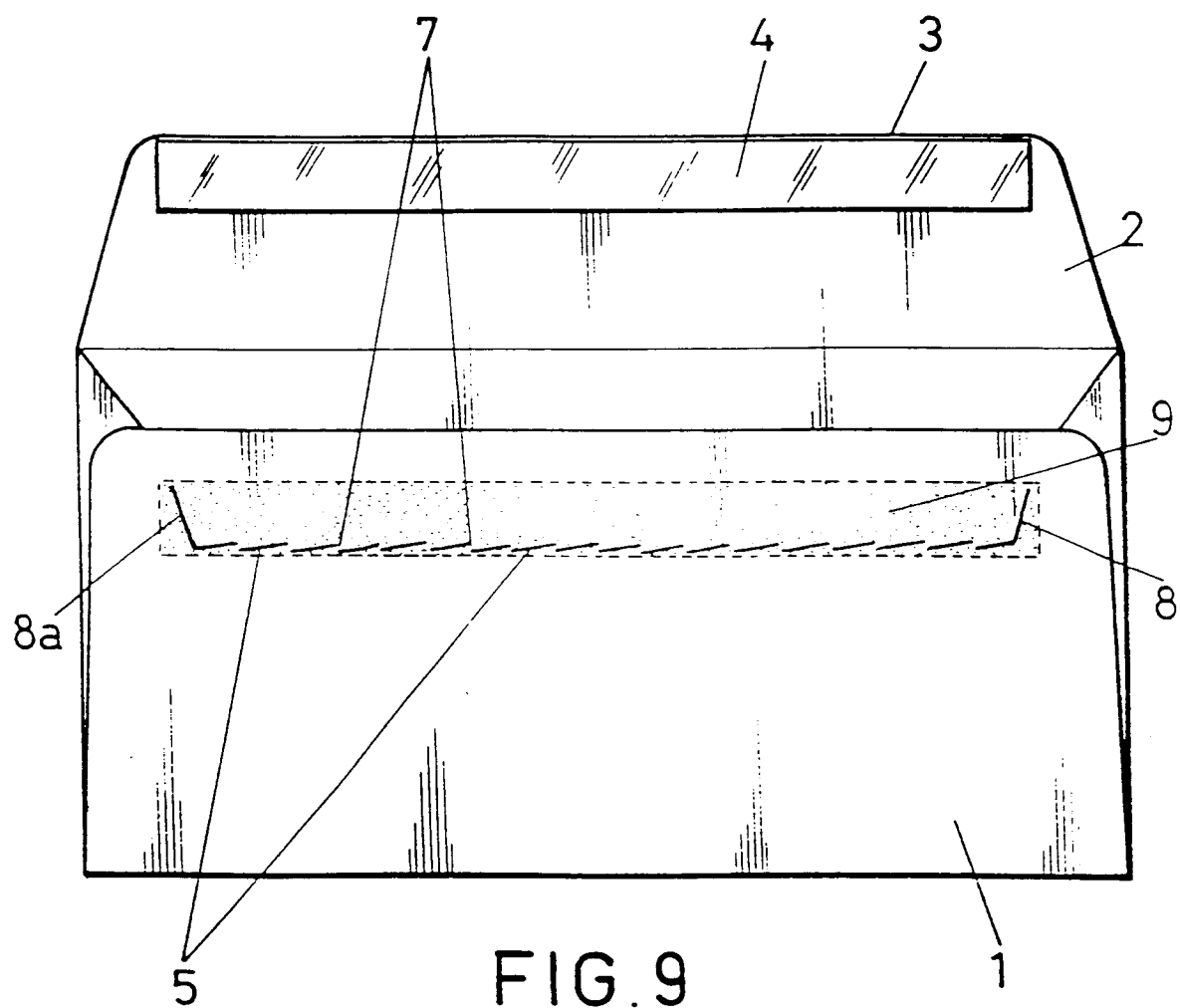
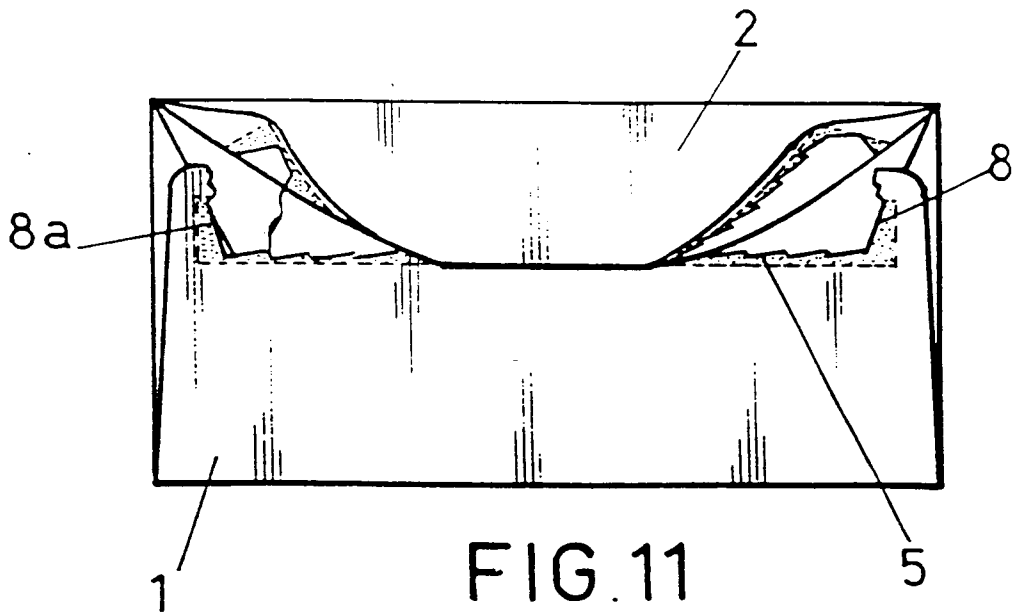
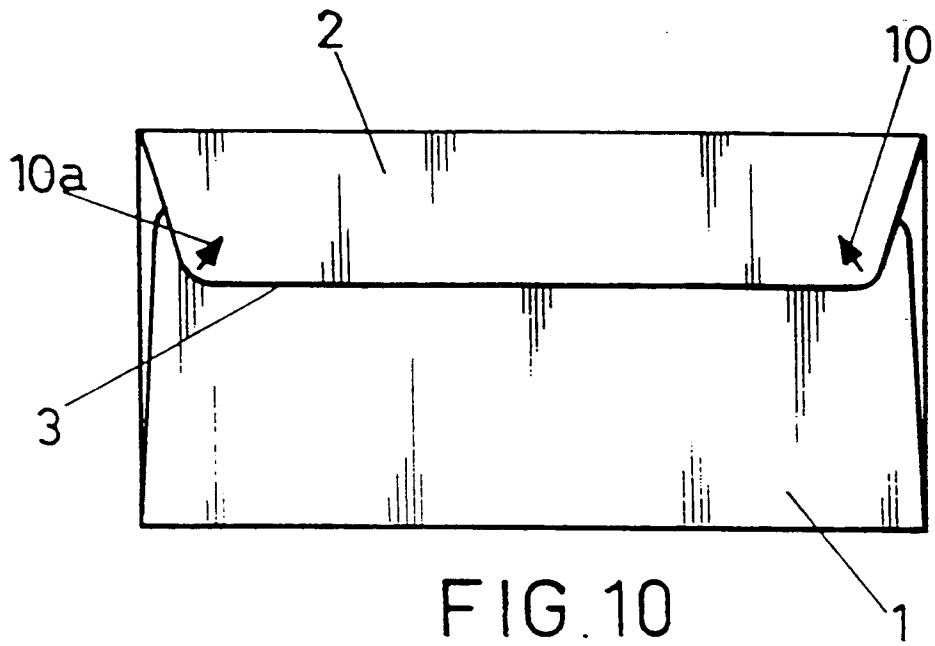


FIG. 5







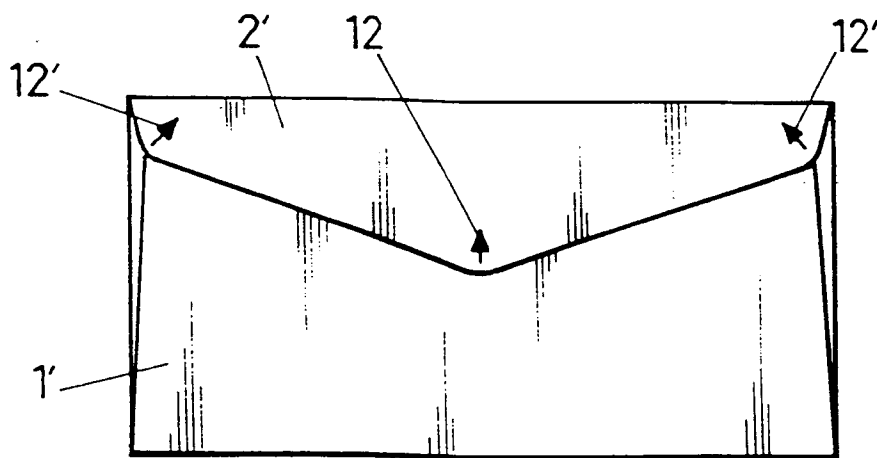
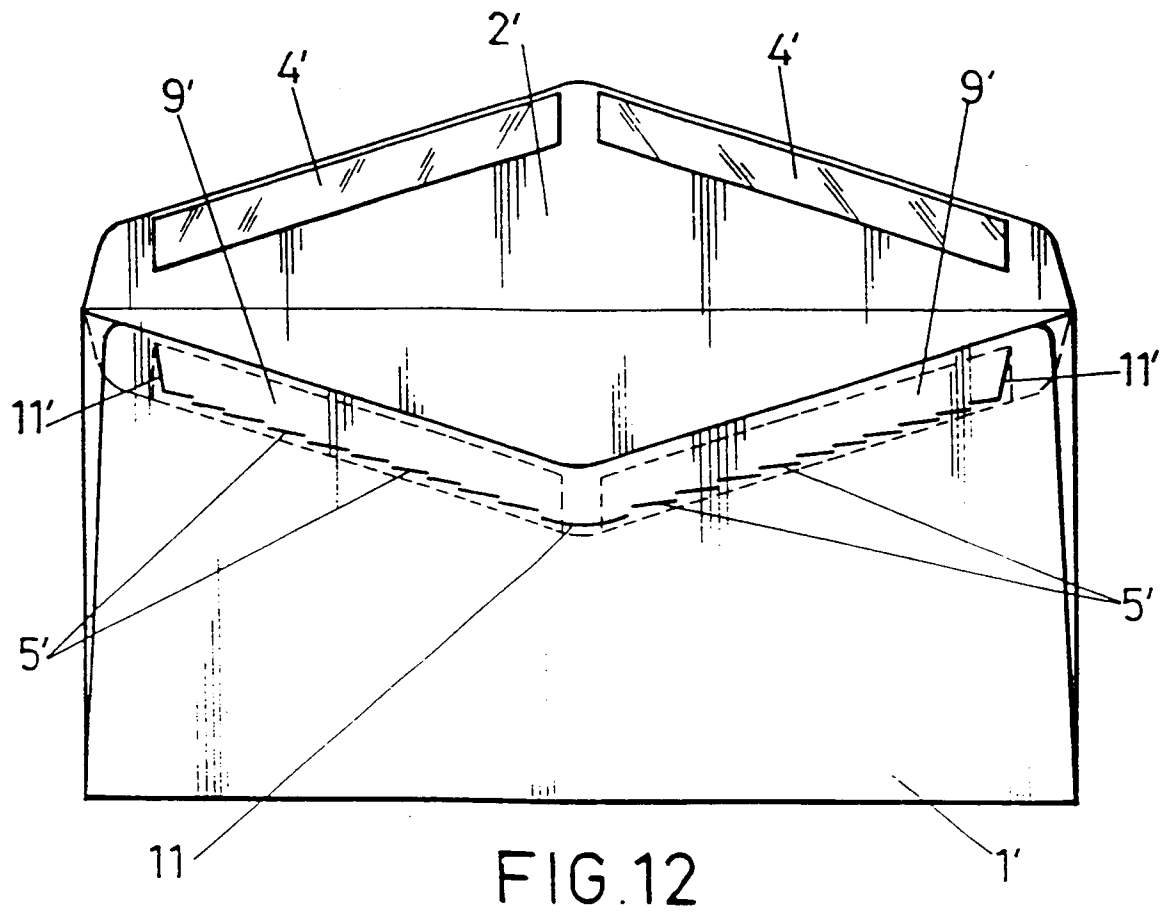


FIG. 13

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES 96/00021

A. CLASSIFICATION OF SUBJECT MATTER IPC ⁶ : B65D27/34 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC ⁶ : B65D Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 1336646 A (MENDENHALL) 13 April 1920	1-3
Y	see the whole document	4
Y	US 3464621 A (DAY) 2 September 1969 see column 5, line 51-line 57; figure 1	4
X	DE 9409360 U (CURTI 1000 EUROPE GMBH) 4 August 1994 see figure	1
A	US 4607749 A (JACOB) 26 August 1986 see figures 2-4	1
A	US 3652008 A (GROTEFEND) 28 March 1972 see figure 1	1
☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
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Date of the actual completion of the international search 23 April 1996 (23.04.96)		Date of mailing of the international search report 22 May 1996 (22.05.96)
Name and mailing address of the ISA/ EUROPEAN PATENT OFFICE Facsimile No.		Authorized officer Telephone No.