Final Diploma

PatentExaminationBoard

Infringement and Validity FD4 (P6)

Tuesday 18 October 2016 10:00 to 15:00

INSTRUCTIONS TO CANDIDATES

- 1. The whole assessment task is to be attempted.
- 2. The total number of marks available for this paper is 100.
- 3. Start each part of your answer on a new sheet of paper.
- 4. Do not state your name anywhere in the answers.
- 5. Write clearly, as examiners cannot award marks to answer scripts that cannot be read.
- 6. The scripts may be photocopied for marking purposes.
 - (a) Use only **black ink**.
 - (b) Write on one side of the paper only.
 - (c) Write within the printed margins.
 - (d) Do not use highlighter pens on your answer script.
- 7. Instructions on what to do at the end of the examination are on the Candidate Cover Sheet.
- 8. Any candidate script removed from the examination room will not be marked.
- 9. This question paper consists of 20 sheets, including this sheet, and comprises: Assessment task (1 sheet) Client letter (1 sheet) Document A (5 sheets) Document B (3 sheets) Document C (4 sheets) Document D (5 sheets).

Assessment task

Your client sends you the letter and documents listed on the Instructions to Candidates.

Your task is to prepare advice to your client on whether the attached granted patent may be enforced and defended.

You should prepare notes on which you would base your advice, in which you:

- a) Provide an opinion on infringement and validity, in the UK only.
- b) Identify other patent-related legal issues pertinent to the facts presented.
- c) Outline possible actions that may be taken to strengthen your client's legal position.
- d) Summarise the opinions formed in a) to c) above.

Total: 100 marks

Client letter

Dear Attorney,

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It was a pleasure to meet you last week. As I mentioned to you then, I own a business and have a bit of a sticky problem with an ex-employee of mine.

5 For years we have produced paper, which we supply to offices the length and breadth of the country. Against my better judgement I was persuaded to consider expanding into other markets and so we launched a range of paper envelopes with tamper-evident portions.

The envelopes were developed in 2012 by myself and the ex-employee (she was our top sales person at the time). The invention was kept confidential until we filed a patent application, which was subsequently granted (Document A). We started selling our lightweight envelopes in early 2015.

- Anyway, the ex-employee and I fell out spectacularly about the direction of the business. She wanted to put all of her efforts into selling paper envelopes and I wanted the business to concentrate on paper sales and so she left us in late 2015. I subsequently heard she had set
- 15 up her own business, Envelopes-4-U.

The reason for my reticence was that we really knew nothing about the envelope market, which, as you know, is distinct from the paper market, both technically and commercially. Anyway, despite my reticence the sales of our paper envelopes have exceeded my expectations and have been wildly successful.

20 Of course, once you have a taste for that sort of financial return it is not easily given up, and so it came as a bit of a shock when I returned from my summer cruise around the South Pacific to find that our sales had plummeted. Our customers have all said that they prefer a new product from Envelopes-4-U, the 'No-Peek', which is described in Document B.

This is a bit of a concern because until this had happened we had the entire UK tamper-25 evident paper envelope market to ourselves, I would hope because of our patent.

I see that Envelopes-4-U say they have a patent. I want it eradicated and so one of the team here completed a very quick search. We have found a US patent document (Document C) and a French patent document, which we have had translated (Document D).

As far as we know, the envelopes in Document D have never been commercialised. Interestingly, according to our research, the cardboard versions of the envelopes mentioned 30 in Document C are two-a-penny all over Europe. Everyone has used them for years. I have never before seen these patent documents (the trade is not very patent savvy). I think the reason why we have not seen the actual envelopes made in accordance with Document C is because, on principle, I never trade with 'Europe' and we never receive mail from there either.

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In any case, I would like to stop Envelopes-4-U in their tracks and start to rebuild my profits. Can you help?

I am off again in a week, so I shall expect a note from you tomorrow setting out all of the relevant points.

Yours faithfully

Mrs FA Rage

Document A

Granted British Patent GB 2123456

(Filed January 2013, Granted September 2016)

Envelopes

The invention relates to envelopes and specifically tamper-evident envelopes.

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There are many types of envelopes, most are fabricated from paper or paperboard, some are fabricated from two different types of material, for example a paper front piece and a reinforcing cardboard or paperboard rear piece. Some have windows on the intended front force and some do not. In one case, these intended for delivery through the mail have a neucle

5 face and some do not. In any case, those intended for delivery through the mail have a pouch portion for holding documents to be transmitted and a flap which is attachable to the pouch, usually with the aid of an adhesive, to secure documents within the pouch.

Whilst adhesive is useful for securing the parts of envelopes together it is not impossible to peel the flap from the pouch and reseal the envelope after viewing, or indeed removing, one or more of the documents.

Accordingly, there is a need to prevent unauthorised opening of an envelope or to at least show that there has been an attempt to open an envelope.

A first aspect of the invention provides a tamper-evident envelope in accordance with Claim 1.

- 15 In this specification, 'lightweight' means fabricated from paper having a basis weight of 80 grams per square metre (80 gsm) or less. We prefer to use a paper having a basis weight of 50 to 80 gsm as such paper provides an optimum balance between the ease with which the paper tears (tearability) and weight, which is important in an envelope. Lighter basis weight papers are not usually suitable for use as envelope material.
- 20 The envelope may comprise one or more slits in the flap, and preferably extending inboard from a short side edge of the flap. When a person pulls the envelope a tear will start at the end of the slit, thereby providing a visual clue that an attempt has been made to open the envelope.
- The envelope may also comprise a perforated line, preferably extending from one or more of the slits. The perforated line is weaker than the bulk material from which the flap is made and so will preferentially tear, thereby providing a further visual clue.

In a preferred embodiment the slits and the line together extend across most, if not all of the flap portion.

Adhesive may be applied to both the flap and the pouch. We have found this to be particularly beneficial because it ensures the most robust adhesion of the pouch and flap and **Cont...** helps to ensure that the flap tears when an attempt is made to open the envelope. Optimally the adhesive is not aligned with the slit or slits or perforated line.

The adhesive on the flap and/or the pouch is preferably a continuous line of adhesive. Where the adhesive is present on both the flap and the pouch it will be of identical form so as to provide optimum adhesion.

The envelope may be fabricated from heavier paper (90–100 gsm) or from cardboard or paperboard, both of which have a basis weight of above 150 gsm.

The invention will now be described by way of example only and with reference to the accompanying drawings, in which:

10 Figure 1 shows an envelope of the invention in an open state; and Figure 2 shows an envelope of the invention in a closed state.

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Referring now to Figure 1, there is shown an envelope 1 having a pouch portion 2 and a flap portion 3 delimited by a fold line 4, about which the flap portion 3 can be rotated to bring the flap portion 3 into facing relations with the pouch portion 2.

15 In the embodiment shown, the flap portion 3 is of trapezium form, with a free edge 3e extending parallel to the fold line 4 and a pair of transverse edges 3t extending orthogonally from the fold line 4. The free edge 3e and the transverse edges 3t are joined together by a pair of sloping or angled edges 3s.

The envelope 1 includes tamper-evident means comprising a pair of slits 5a, 5b which extend inwardly from the transverse edges 3t of the flap portion 3.

Each of the pair of slits 5a, 5b extends through the flap portion 3.

Extending between the slits 5a, 5b is a perforated line 6.

Located between the perforated line 6 and the free edge 3e of the flap portion 3 is a continuous line of adhesive 3a.

- 25 The pouch portion 2 is of rectangular form with major front 2f and rear 2r panels. The pouch portion 2 is typically fabricated by folding and gluing flaps which extend from one of the intended front and rear panels 2f, 2r and glued to the other of the intended front and rear panels 2f, 2r. However, the exact construction of the pouch portion 2 is not critical in this invention and the skilled person knows of plural ways in which the envelope pouch and flap
- 30 may be folded to form an envelope.

The rear panel 2r of the pouch portion 2 includes a trapezoid cut-out to facilitate insertion and removal of documents into and from the pouch portion 2. A continuous line of adhesive 2a is located proximate the top edge of the rear panel 2r of the pouch 2.

In use, and as shown in Figure 2, with the required documents retained within the pouch portion 2, the flap portion 3 is rotated about the fold line 4 to bring the flap portion 3 and

pouch portion 2 into facing relations. The line of adhesive 3a on the flap portion 3 is brought into contact with the line of adhesive 2a on the pouch portion 2, thereby to seal the flap portion 3 to the pouch portion 2.

Each line of adhesive 2a, 3a may be provided with release liners (typically formed from siliconised paper) to protect the adhesive prior to use.

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With the flap portion 3 secured to the pouch portion 2, the envelope 1 may be used to transmit the documents sealed therein.

Should an authorised or unauthorised attempt be made to open the envelope 1, a person will grasp one of the transverse edges 3e of the flap portion 3 and pull. Pulling will be resisted by the mutually secured lines of adhesive 2a, 3a. Because the adhesive is not aligned with the slits and/or perforated line, pulling of the transverse edge 3e of the flap portion will start to cause a tear at the end of one of the slits 5a, 5b. Continued pulling will cause the flap portion 3 to separate about the perforated line 6, thereby providing evidence of an attempt to open the envelope 1.

15 In some embodiments the perforated line 6 need not be present. In some embodiments the slits 5a, 5b need not be present. In either case, an attempt to open the envelope 1 will cause the material from which the flap portion 3 is made to tear at the end of the respective slit 5a, 5b or perforated line 6.

It is essential that the adhesive 2a, 3a is one which is not susceptible to becoming tacky in the presence of, for example, steam. A suitable adhesive is Evertac (RTM), available exclusively from Mr Smith's Glue Shop in Chile.

Claims

- 1. A lightweight envelope comprising a pouch portion for storing documents and a flap portion joined to the pouch portion at a fold line and for sealing the pouch portion, one of the flap portion and the pouch portion bearing adhesive such that when the flap portion is folded about the fold line to be brought into abutment with the pouch portion the portions are secured together, the flap further comprising tamper-evident means arranged to irreversibly indicate opening of, or an attempt to open, the envelope and at least located at or towards either side of the flap portion.
- 2. An envelope according to Claim 1, wherein said tamper-evident means comprises a pair of elongate continuous slits.
- 10 3. An envelope according to Claim 1 or 2, wherein the tamper-evident means comprises a perforated line.

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- 4. An envelope according to Claim 3, wherein the continuous slits and the perforated line together form a continuous line of weakness across at least a major portion of the pouch portion.
- 15 5. An envelope according to Claim 1, wherein the adhesive is a continuous strip of adhesive, which extends across a major portion of the said one of the flap portion and pouch portion.
 - 6. An envelope according to Claim 1 formed from paper, paperboard or cardboard.

Document A



Figure 2

Press Release of Envelopes-4-U

London, July 2016

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Envelopes-4-U is pleased to announce the launch of our new and innovative envelope called 'No-Peek', available now from all good envelope retailers.

5 The No-Peek envelope is a tamper-evident envelope which can readily show evidence of tampering.

The technology has been developed by our dedicated team of envelope technologists and glue specialists over the last two years and we are convinced it is exactly what the market has been crying out for.

10 An example of the No-Peek envelope is shown in the attached diagram but is not limited to the exact form of envelope shown.

The No-Peek envelope has a flap to secure to the body of the envelope. Extending from the edge of the flap there is provided a pair of parallel slits. The slits do not extend to the fold line. Optimally we have found that the slits should extend across over half but less than two thirds of the flap.

Provided on each of the flap and the body is a centrally aligned adhesive strip, which strips contact one another when the flap engages the body. The adhesive is a pressure-sensitive adhesive which causes the flap to be secured to the body. The strip on the flap extends between the slits.

Also present on the flap is a first blob of special adhesive (subject to our pending patent) which, when subjected to a tensile force, changes colour.

Also provided on the body is a second blob of special adhesive which changes colour when subject to a tensile force.

The first and second blobs of adhesive do not overlap the slits when the flap engages the body.

The colour change of the first and second blob may be the same or different.

With the flap secured to the body, the two facing strips of adhesive engage one another, the first blob engages the body and the second blob engages the flap.

The adhesion of the first and second blob to the respective body and flap is more robust than the engagement of the strips of adhesive to one another.

When someone attempts to open the envelope by grasping one of the side edges of the flap, they will have to overcome the strength of adhesion of the first or second blob (as appropriate). As the blob is subjected to a tensile load, it will begin to change colour, thereby indicating that an attempt to open the envelope has occurred.

5 Overcoming the strength of the blob will cause the slit to tear before the strength of the mutually engaged adhesive strips is overcome, thereby providing further evidence that an attempt to open the envelope has been undertaken.

One or both of the first and second blob of adhesive can be applied in the form of indicia, such as a trademark, a 'stop' sign or a word which, upon opening of the envelope, will 'develop' by changing colour.

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Because of the nature of the adhesive which is used to form the first and second blob of adhesive we only apply it to the flap or the body respectively.

The adhesives on the flap and the adhesives on the body may each be covered by a single release liner for protection prior to use.

The No-Peek range of envelopes is available in all standard sizes and all usual materials, 15 including cardboard, paperboard and paper, especially lighter grades of paper, which are of particular demand from our customers who send a lot of mail.

Please note that No-Peek is a registered trade mark of Envelopes-4-U Ltd and the adhesive and the envelope are subject to patent applications.



The 'No-Peek' Envelope

Tamper Detection Envelope

US6123456 (published 15 August 2007)

The present invention relates generally to envelopes and more particularly to a tamper detection envelope which cannot be opened once it is closed without leaving visible evidence that the envelope was tampered with.

SUMMARY OF INVENTION

- 5 The present invention relates to paper or cardboard envelopes or the like and more particularly to a means for protecting the contents of an envelope from tampering. Such protection is achieved in the present invention by providing the envelope closure flap with a tamper detection means that prevents the envelope from being surreptitiously opened and then resealed without being so marred or mutilated as to make the visible detection of such tampering obvious.
- 10 The object of the present invention is carried out by applying the envelope closure flap with a pattern of spaced slits to produce a weakened structure that will break at selected points during tampering. The fracturing of the closure flap at the selected points produces obvious evidence of tampering under visual observation. The spaced slits are arranged in generally parallel lines that crisscross one another at substantially right angles to produce subpanels within the closure flap of a
- 15 generally diamond-shaped configuration. The ends of the spaced slits are separated from one another by normally unbroken connectors which are subject to being torn when the envelope is tampered with. A strip of adhesive is applied either to the closure flap or to the envelope rear panel at least in the region of the subpanels for closing the envelope. Any subsequent attempt to open the envelope by lifting the closure flap will break the normally unbroken connectors between the slits to
- 20 provide a visual indication that the envelope has been tampered with. Moreover, when the envelope is finally opened, the subpanels of the closure flap remain adhered to the rear panel of the envelope.

DESCRIPTION OF DRAWINGS

FIG. 1 is a plan view of a blank for preparing an envelope according to this invention;

25 FIG. 2 shows an envelope according to the present invention formed from the blank of FIG. 1 and ready to be filled;

FIG. 3 shows the envelope of FIG. 2 formed of cardboard after it has been sealed;

FIG. 4 is an enlarged fragmentary view of the closure flap of the envelope of the present invention formed of paper, showing in detail the pattern of slits applied to the closure flap; and

30 FIG. 5 is a plan view of the envelope of FIG. 3, showing the result of lifting the closure flap during a tampering incident.

DETAILED DESCRIPTION

Referring to the drawings, there is shown in FIG. 1 a paperboard or cardboard blank for forming the envelope of the present invention. The blank 10 includes a front panel 11 foldably attached to a rear

panel 12 along a score line 13. The front panel also includes a pair of end closure flaps 14, 15 foldably attached to the side edges of front panel 11 along score lines 16, 17 and an envelope closure flap 18 foldably attached to the top edge along a score line 19. The end closure flaps 14, 15 are each applied with adhesive strips 20, 21 for closing the ends of the envelope and the closure flap

5 18 is applied with a selective pattern of slits for weakening the closure flap structure to render it tamper detectable. The pattern is more fully disclosed in FIG. 4. When the blank is formed from cardboard or paperboard the slit pattern does not extend through the thickness of the cardboard or paperboard, meaning that it is invisible once the envelope is sealed. This is preferred.

FIG. 2 shows the envelope fully formed and ready to be filled before closing. The envelope is closed
with a strip of adhesive 22 applied either to the rear panel 12 or the closure flap 18 itself at least in
the region of the applied slit pattern. The type of adhesive used is not critical. It may be of the dry
type that is wetted for use or a pressure-sensitive adhesive normally covered before use with
release paper. Once the envelope is closed as shown in FIG. 3, the closure is fully tamper detectable.

As stated above, when formed from cardboard the slits are not visible when the envelope is closed.
When the envelope is formed from paper the slits are visible. For convenience the preferred pattern of slits is shown in FIG. 4. The orientation of the slits is designed so that the connectors between the slits are located in places where lifting of the closure flap from any angle will produce stresses that fracture the connectors. In this manner there is no possibility that a careful thief can find a method for opening the envelope without producing some visible evidence of tampering. For this purpose a

- 20 first set of spaced slits 23 is applied to the closure flap 18 in substantially straight, parallel lines which extend at an acute angle A with a free edge 29 of the closure flap. The slits 23 may be made any convenient length depending upon the size of the flap, and they are separated from one another by connectors 24 which are normally unbroken. A second set of spaced slits 25 is also applied to the closure flap 18 in substantially straight, parallel lines which extend at an obtuse angle B with respect
- 25 to the free edge 29 of the closure flap in essentially a crisscross pattern. In a preferred form, the lines of slits 23 and 25 extend at substantially right angles to one another so as to form a plurality of generally diamond-shaped subpanels 26 within the closure flap. The slits 25 are separated from one another by connectors 27 and the points where the lines of slits 23, 25 might normally intersect form additional connectors 28. Each of the connectors 24, 27 and 28 is normally unbroken but is
- 30 susceptible to being fractured when a closed envelope is tampered with. The pattern of slits also includes a single slit 30 which extends from one of the slits 25 to the free side edge 31 of the closure flap 18.

FIG. 5 illustrates how the envelope reacts when it is opened. It will be apparent that any lifting of the closure flap 18 will cause one or more of the connectors 24, 27 and 28 to be severed. This

- disturbance to the closure flap integrity will make it visually apparent that the envelope has been tampered with. Moreover, when the closure flap is lifted further, all of the connectors 24, 27 and 28 are broken so that the diamond-shaped subpanels 26 remain adhered to the rear panel 12. The slit 30 helps to encourage the fracture of the connectors 24, 27 and 28. Alternatively, the single slit 30 may be located at the other free edge of the flap 18 to facilitate opening from that direction.
- 40 [Claims Omitted]



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Translation of FR2222333 (Original published 15 August 1995)

The present invention relates to easy-open envelopes.

Conventionally, a casing for correspondence is called an envelope and comprises a cover having on one of its faces an opening that can be closed by a flap of suitable shape.

- 5 The dimensions of the cover and the shape of the opening and the flap are highly variable. The flap should seal the envelope securely, for example by means of an adhesive or a fastening system.
- However, when the flap is glued or otherwise held closed against the cover, the envelope is not susceptible to a quick and clean manual opening, without use of a suitable instrument, commonly a paper knife (which is not typically available).
- Indeed, it is often the case that a person will open an envelope by using a finger, for example by introducing it into a non-glued side of the flap and exerting a shearing movement. This technique can lead to painful paper cuts.

The tear that results is usually uncertain and unattractive. Moreover, when one of the sides of the envelope undergoes a 20 major tear, the envelope can no longer keep its contents safe from prying eyes. Further, there is always a risk of damaging the contents of the envelope when opened.

Thus, the present invention relates to an easy-open envelope which is economical and devoid of the aforementioned drawbackand which has the potential for providing tamper evidence, in the case of unwanted opening of the envelope.

According to the invention, this object is achieved with a casing for correspondence, comprising a closable cover and a flap of suitable shape, and is provided with quick-release means, characterized in that the means of rapid opening

comprise a single line of weakness extending between the two **Cont...**

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side edges of the flap at a portion thereof not intended to be sealed.

The opening of the envelope is thus carried out precisely at a desired position.

5 In this way, the envelope remains substantially obscured after opening, and enables the envelope to maintain the confidentiality of its contents.

Preferably, the weakening line is defined by a notch formed on one of the lateral edges of the flap and a pre-cut dotted line 10 extending between the points of termination of the notch and the other end of the flap.

This notch can take the form of a cut which may either be in alignment with the pre-cut dotted line, or is inclined towards the axis of articulation of the flap.

15 Preferably, the flap is adapted to be sealed at its free edge, via an adhesive contained on the free edge or a surface portion outside the cover for receiving the flap.

Thus, this embodiment is characterized in that the notch on the side edge of the flap has two distinct functions, the first being to facilitate the opening of the envelope, the second being an opening to discourage tampering therewith.

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Advantageously, the line of weakness is located in the portion of the flap projecting over the opening of the casing when the flap is in the closed position. Thus, after opening of the
envelope, a portion of the flap will remain adhered to the cover and may completely cover the window. The envelope can then be used, after its opening, to keep its contents safe from prying eyes.

To strengthen the inviolability of the envelope, the invention 30 may also provide, at the free edge of the flap or the part of the cover to receive the free edge, a tamper-evident indicator comprising frangible portions intended to be torn off with the remaining flap or, indeed, with the flap if the weakening line is not severed.

Other advantages and features of the invention that emerge from the description given hereinafter are purely illustrative, but not limitative, with reference to the accompanying drawings, in which:

- 5 Figure 1 is a rear view of an envelope according to a first embodiment of the invention, showing the flap in the closed position;
 Figure 2 is a rear view of the casing of Figure 1, showing the flap in the open position.
- 10 As shown in the Figures, the envelope typically comprises a pouch 2 having an opening 3 on its rear face. This opening is closed by a flap 4 dependent from an edge 5 of the front cover.
- Near to its free longitudinal edge 4c, the flap 4 has a bonding area 6 for bonding against an outer surface portion 7 of the back cover 2. The bonding zone 6 is provided with a film adhesive or conventional self-adhesive.

Of course, the adhesive film may equally well not be situated on the bonding zone 6 of the flap 4, but on the outer surface 7.

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Between the edge 5 of the cover and the bonding zone 6, the flap comprises a weakening line 8, 9 which extends between its two side edges 4a, 4b.

This weakening line 8, 9 is located in the portion of the flap 4 which covers, in use, the opening of the envelope, that is to say, near the bonding zone 6.

In the embodiment shown in the Figures, the weakening line 8, 9 is embodied by a notch 9 at the edge 4a and a pre-dotted cut 8. In the example, the pre-dotted cut 8 is dotted parallel to 30 the hinge axis 5 of the flap 4. The notch 9 comprises a Vshaped cut-out formed on the side edge 4a of the flap and inclined towards the axis of articulation of the flap 4.

However, the notch 9 may comprise a slit instead of the cutout, the slit being in alignment with the pre-dotted cut 8. Cont... The unique line of weakness provided in accordance with the present invention allows severing the flap on a specific line to access the opening 3 of the cover 2.

To open the envelope 1 once closed, simply take your fingers 5 between the lower edge 4a of the flap 4 and the cover 2 and run it along the weakening line 8, 9.

Providing the weakening line on the portion of the flap 4 beyond the opening 3 ensures that the non-cutaway portion of the flap 4 completely covers the window 3.

The envelope 1 can then be used, after its opening, to keep 10 its contents safe from prying eyes.

The portion of the flap 4 between the edge 5 and the cut-out may then be opened to extract the contents of the envelope, without having to take off the flap.

- 15 The inviolability of the envelope can be increased by providing frangible portions 10 (Figure 2) at the bonding surface of the envelope. The frangible portions 10 are situated at the part of the cover 7 receiving the flap 4, and each has the form of tabs, each with a cut on the rounded part.
- 20

Thus, an attempt to open the envelope flap 4 tends to pull the tabs 10.

The tabs are then glued on the flap and prevent the latter from then being reattached properly on the cover 2.

25 If the adhesive layer is located on the cover, the pre-cuts 8 are then provided at the free edge of the envelope.

However, it is also possible to provide the frangible portions on the part of the envelope covered by the adhesive film.

The frangible portions can be in any form other than a tab, and since they are able to leave a visible trace of an attempt 30 to open the envelope further provide a source of tamper evidence.





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