

12

EUROPEAN PATENT APPLICATION

21 Application number: **88402037.1**

51 Int. Cl.4: **B 65 D 27/10**

22 Date of filing: **04.08.88**

30 Priority: **05.08.87 US 81792 11.05.88 FR 8806427**

43 Date of publication of application:
08.02.89 Bulletin 89/06

84 Designated Contracting States:
AT BE CH DE ES FR GB IT LI LU NL SE

71 Applicant: **MOORE BUSINESS FORMS, INC.**
300 Lang Boulevard
Grand Island New York 14072-1697 (US)

72 Inventor: **Hutchinson, Wilbur P.**
318 N.School Street
Mt. Prospect Illinois 60056 (US)

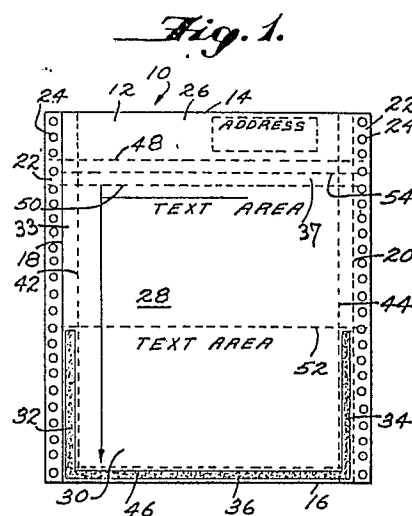
Juteau, Olivier
42 rue de Suresnes
F-92380 Garches (FR)

74 Representative: **de Boisse, Louis Arnaud et al**
CABINET de BOISSE 37, Avenue Franklin D. Roosevelt
F-75008 Paris (FR)

54 Mailer obtained from a continuous web.

57 The invention relates to a mailer obtained from a continuous web, which is divided into equal lengths.

The lengths of web are divided into three panels (26, 28, 30) by transverse fold lines (52, 54). The middle panel (28) and a second panel (30) are folded one over the other and bonded along lines of adhesion (32 to 35) to form a bag adapted to receive an insert. The third panel (26), which is smaller than the others, constitutes a flap provided with a line of adhesive (38, 40) for adhering it on the rear surface of one of the other panels (28, 30).



Description

Mailer obtained from a continuous web.

The present invention relates to a mailer obtained from a continuous web by cutting the latter into sheets of equal lengths, folding these sheets into panels of shorter length, and bonding these panels to one another.

Others have earlier thought to provide mailer by folding over sheets of paper in various ways, see US-A-3,352,481, US-A-894,124, US-A-1,794,223, US-A-2,773,638 and US-A-3,352,481. However, US-A-1,803,704 involves a Z-fold configuration. It has a full length third flap, and requires side flaps for securing the mailer together. US-A-3,152,800 also involves a Z-fold configuration. It not only has a full length third flap, but two additional longitudinal flaps as well.

In the patent FR-A-2,431,964 the Applicant described an envelope of the type indicated above, which is obtained by folding each length of web into three panels of equal length with the aid of a Z-fold with the panels bonded to one another, one of the panels carrying the address on one face and the other panels carrying information on the same face, the address and the information being printed in the course of the same passage through a printer. This envelope, which has the advantage of being made from a single continuous web, has the disadvantage that it is not possible to insert a document into it after the folding and the bonding of a part of the envelope.

The present invention seeks to provide a mailer or envelope of the kind indicated above, with which it is possible to effect a part of the bonding so as to form a bag into which it will be possible to insert documents, the mailer then being closed by the remainder of the bonding operations.

In order to achieve this result, present invention provides a mailer obtained from a continuous web having front and rear surfaces by cutting the latter into sheets of equal lengths, folding these sheets into panels of shorter length, and bonding these panels to one another characterized in that it comprises

-a first panel, middle, carrying on its front face a longitudinal line of adhesion close to each of its longitudinal edges,

-a second panel carrying on its front face a longitudinal line of adhesion close to each of its longitudinal edges, the lines of adhesion of the first and second panels being bonded to one another after folding to seal the envelope along the side edges, the second panel being of the same length as the first one, or slightly shorter longitudinally, and connected to said first panel by a fold line,

-a third panel smaller longitudinally than the second panel but longer than the difference in length between the first and second panels, said third panel being joined to the first panel on the opposite side to the second panel by a fold line and carrying at least one line of adhesive along one of its edges.

In one embodiment said third panel carries a longitudinal line of adhesive along its longitudinal

edges on its rear surface, and an address area is provided on its front surface; and said first and second panels carry a text area on their front surface, whereby the sheet may be Z-folded to place the text area on the inside and the address area on the outside of the envelope.

Preferably, the mailer includes a line of adhesion on the front surface of the second panel adjacent the edge opposite to its fold line, to seal said edge of the mailer when the adhesive is activated.

More preferably, the mailer further includes a line of adhesion on the rear surface of the third panel adjacent the edge opposite to its fold line, to further seal this edge of the mailer when the glue is activated.

According to another embodiment, the second panel is slightly shorter longitudinally than the first panel, and the third panel carries the said line of adhesion on its front surface, close to that transverse edge which is opposite to its fold line, and the said line of adhesion of the third panel is provided with an activatable adhesive.

Preferably, in this embodiment, the longitudinal lines of adhesive of the first and second panels are continuous from one panel to the other across the fold line separating them, and stop a short distance from the opposite edges of said first and second panels.

Preferably, in anyone of the previous embodiments:

-the line of --- adhesion carried by the third panel comprises an adhesive of the type activatable by moisture, the envelope obtained from a continuous web provided on its margins with drive perforations, and the lines of adhesion on said continuous web are placed further inside than said drive perforations, so that the latter can be removed before despatch of the envelope,

- the longitudinal lines of adhesive of the first and second panels consist of an adhesive material which adheres to itself through pressure and/or heating.

Illustrative embodiments of the present invention will next be provided, with reference to accompanying drawings.

Figure 1 is a view of the front side of a sheet from which a mailer is constructed,

Figure 2 is a view of the rear surface of the sheet of Figure 1, turned over from left to right,

Figure 3 shows the mailer which results from the Z-folding of the sheet of Figures 1 and 2,

Figure 4 is an isometric view of the sheet of Figures 1 and 2 in the folding process, and with a nested insert in place,

Figure 5 is an isometric view of a length of web intended to form an envelope according to another embodiment of the invention, its front side face being visible, and

Figure 6 is a view in perspective of the envelope of Figure 5 thus formed, before its final closing.

In the present text it is to be understood that

"transverse" indicates a direction at right angles to the length of the original web and that "longitudinal" indicates a direction parallel to that length. Similarly, the expressions "front face" and "rear face" each relate to one respective face of the original web.

Referring to the drawings 1 to 4, the mailer 10 is made up of a sheet of paper 12 having a top edge 14, a bottom edge 16, a side edge 18 and a side edge 20. Detachable margins 22 with tractor holes (drive perforations) 24 therein may be used for handling in automated processing equipment.

As the mailer is formed the first step will be printing on the front surface (Fig. 1). Address information will be printed on a top area 26, while text information will be printed on a mid-area 28 and on a bottom area 30. This printing may be done by the computerized variable printing process if desired.

The next step in forming the mailer will be to place strips of heat seal adhesive on the paper 12. Strips 32, 34 and 36 are placed along the borders of the front surface of the bottom area 30, as shown in Figure 1, for adhering on corresponding lines of adhesion 33, 35, 37 of the mid-area 28. Strips 38 and 40 are placed at the sides of the rear surface of top area 26, as shown in Figure 2. Also, a strip of adhesive 41 may be placed (but not required) on the rear surface along the top edge.

It will be understood that the strips of adhesive adjacent the respective side edges may be placed anywhere along the edges so long as there will be adequate adhesive to properly seal the mailer when completed to satisfy users and postal authorities. In other words, the adhesive may be intermittent, such as dots. When "strip" of adhesive is used in the appended claims such intermittent coverage is included.

Similarly, when "line of adhesion" is used it is to be understood that such a line may carry a strip or dots of adhesive, but it may not carry any adhesive but be intended to adhere to an adhesive carried by a corresponding part of another panel.

To facilitate opening of the mailer, as described hereinafter, lines of weakening (perforation lines) 42, 44, 46, 48 and 50 are provided.

Figure 3 shows the mailer folded and ready for mailing. The manner of folding is shown in Figure 4. There are two folds, one along line 52, and the other along line 54. The directions of folding are shown by the arrows in Figure 4. The mid-area, bottom area and top area correspond respectively to the first, second and third panels as above mentioned.

The top area 26 of the mailer is substantially of less height than the area 28 and 30 (which are of equal height). The height of the top area need only be enough for receiving address information and meet postal specifications.

If the lines of weakness 42, 44, 46, 48 and 50 are created in the sheet 12, the envelope may be opened by the user tearing off the marginal regions. The usual legend, "To Open Tear Along Dotted Line" may be printed along the vertical margins of the completed mailer, albeit in that case some printing would be necessary on the rear surface of the sheet 12.

It will be noted that the mailer 10 is constructed

from a rectangular (or square) sheet of paper, with no need for special cutting to provide side flaps.

All of the adhesive strips lie along the edges of the sheets, rather than being on side flaps or the like.

Figure 5 shows a sheet 110, of which only the front side is visible. The sheet 110 is divided by two fold lines 112, 114 into three successive panels: a central or first panel 116 is situated between the two transverse fold lines 112 and 114, a second panel 118 is situated between the first transverse fold line 112 and a bottom edge 120, and the third panel 122 is situated between the second transverse fold line 114 and the top edge 124 bounding the sheet.

On the longitudinal edges of the panels are detachable margins 126 with lines of tractor holes 128 intended for driving the web through a printer and through the various treatment stations. Two strips of adhesive 130 extend parallel to the longitudinal edges of the panels 116 and 118, further inside said panels than the drive holes. These strips of adhesive cross the first fold line 112 but stop a short distance from the bottom edge 120 and from the fold line 114. The strips of adhesive 130 consist of an adhesive material which adheres to itself through pressure and/or heating.

The panel 122 carries a transverse strip of adhesive 132 situated a short distance from the top edge 124. This strip of adhesive consists of an adhesive of the type activatable by moisture, of the type found on commercially available envelopes.

The length of the first panel 116 exceeds by a few millimeters that of the second panel 118, which is almost twice that of the panel 122.

In Figure 6 the panels 118 and 122 have been fixed to one another by folding along the line 114 and bonding to themselves the lines of adhesive 130. A bag has thus been formed which is closed on three sides and open on the fourth side, and into which it is possible to insert a document. As the first panel 116 is larger than the second panel 118, a part of the first panel 116 is not covered by the second panel and is visible in Figure 6.

After insertion of a document into the bag, the envelope can be closed by folding the third panel 122 about the fold line 114, in the direction of the arrow 134. The third panel thus forms a closure flap, which is applied against the first face, visible in Figure 6, of the second panel 118. For the final closing of the envelope the line of adhesive 132 will first have been activated by moisture, and it then adheres to the panel 118.

The address is shown on the first face (not visible in the drawings) of the first panel 116.

In Figure 6 the envelope has been shown with the longitudinal margins 126, carrying the drive holes 9, removed. The resulting envelope thus has an appearance very close to that of envelopes at present in use.

Claims

1. A mailer obtained from a continuous web

having front and rear surfaces by cutting the latter into sheets of equal length, folding these sheets into panels of shorter length, and bonding these panels to one another, characterized in that it comprises :

- a first middle panel (28, 116) carrying on its front face a longitudinal line of adhesion (33, 35, 130) close to each of its longitudinal edges,
- a second panel (30, 118) carrying on its front face a longitudinal line of adhesion (32, 34, 130) close to each of its longitudinal edges, the lines of adhesion of the first and second panels being bonded to one another after folding to seal the envelope along the side edges, the second panel being of the same length as the first one, or slightly shorter longitudinally, and connected to said first panel by a fold line (52, 112),
- a third panel (26, 122) smaller longitudinally than the second panel (30, 118) but longer than the difference in length between the first and second panels, said third panel being joined to the first panel (28, 116) on the opposite side to the second panel by a fold line (54, 114) and carrying at least one line of adhesive along one of its edges.

2. A mailer as claimed in claim 1, characterized in that the said third panel carries a longitudinal line of adhesive (38, 40) along its longitudinal edges on its rear surface, and an address area (26) is provided on its front surface ; and said first and second panels carry a text area on their front surface, whereby the sheet may be Z-folded to place the text area on the inside and the address area on the outside of the mailer.

3. A mailer as claimed in claim 2 characterized in that it includes a strip of adhesive (36) on the front surface of the sheet adjacent the bottom edge (16), to seal the bottom edge of the mailer when the adhesive is activated.

4. A mailer as claimed in claim 2 or 3 characterized in that it includes a strip of adhesive (41) on the rear surface of the sheet adjacent the top edge (14), to further seal the top edge of the mailer when the glue is activated.

5. A mailer as claimed in claim 1 characterized in that the second panel (118) is slightly shorter longitudinally than the first panel (116), and the third panel (122) carries the said line of adhesion on its front surface, close to that transverse edge (124) which is opposite to its fold line (114), and the said line of adhesion (132) of the third panel is provided with an activatable adhesive.

6. A mailer as claimed in claim 5 characterized in that the longitudinal lines of adhesive (130) of the first and second panels (116, 118) are continuous from one panel to the other across the fold line (112) separating them, and stop a short distance from the opposite edges (114, 120) of said first and second panels.

7. A mailer as claimed in claim 5 or 6 characterized in that the transverse strip of adhesion (132) carried by the third panel (122)

consists of an adhesive of the type activatable.

8. A mailer as claimed in one of claims 1 to 7 and obtained from a continuous web provided on its margins with drive perforations (24, 128) characterized in that the longitudinal lines of adhesion (32-35, 38; 130) on said continuous web are placed further inside than said drive perforations, so that the latter can be removed before despatch of the envelope.

9. A mailer as claimed in claims 1 to 8 characterized in that the longitudinal lines of adhesion (32-35, 38; 130) of the first and second panels consist of an adhesive material which adheres to itself through pressure and/or heating.

Fig. 1.

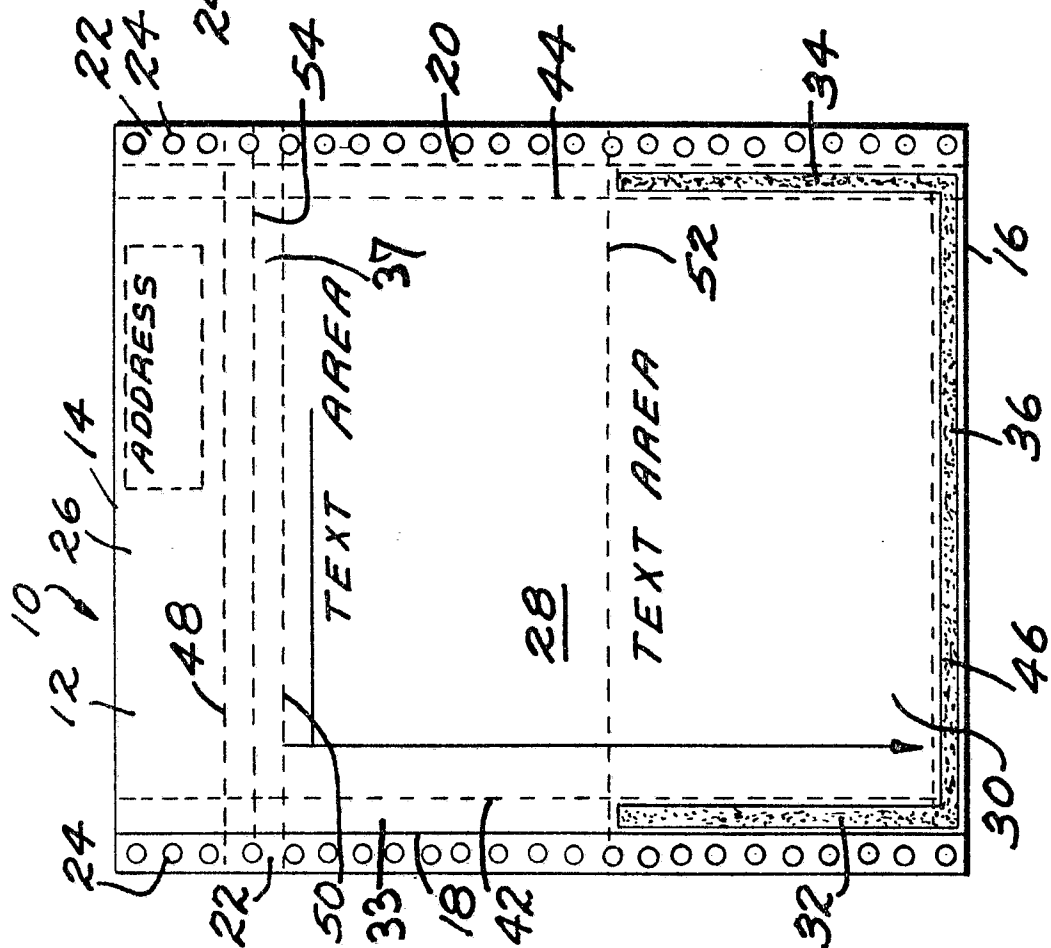
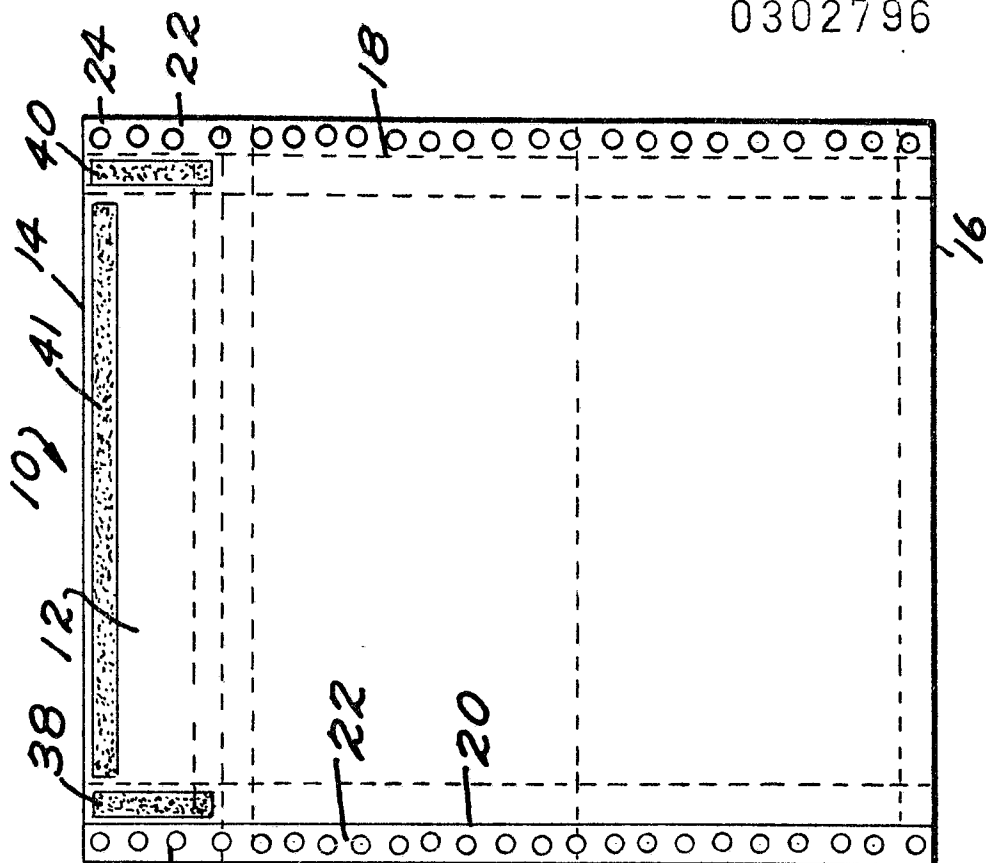
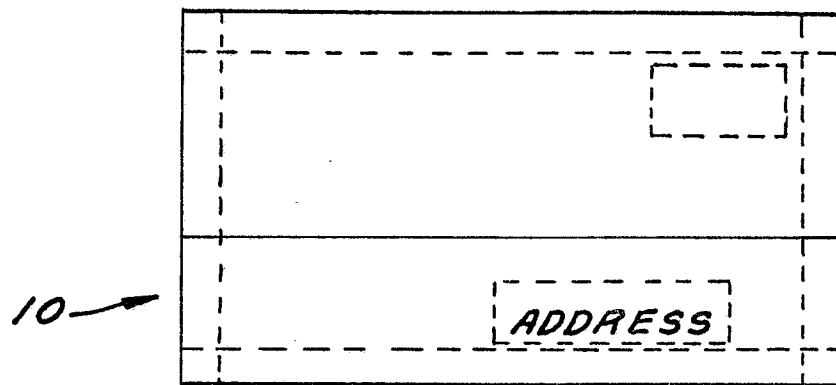
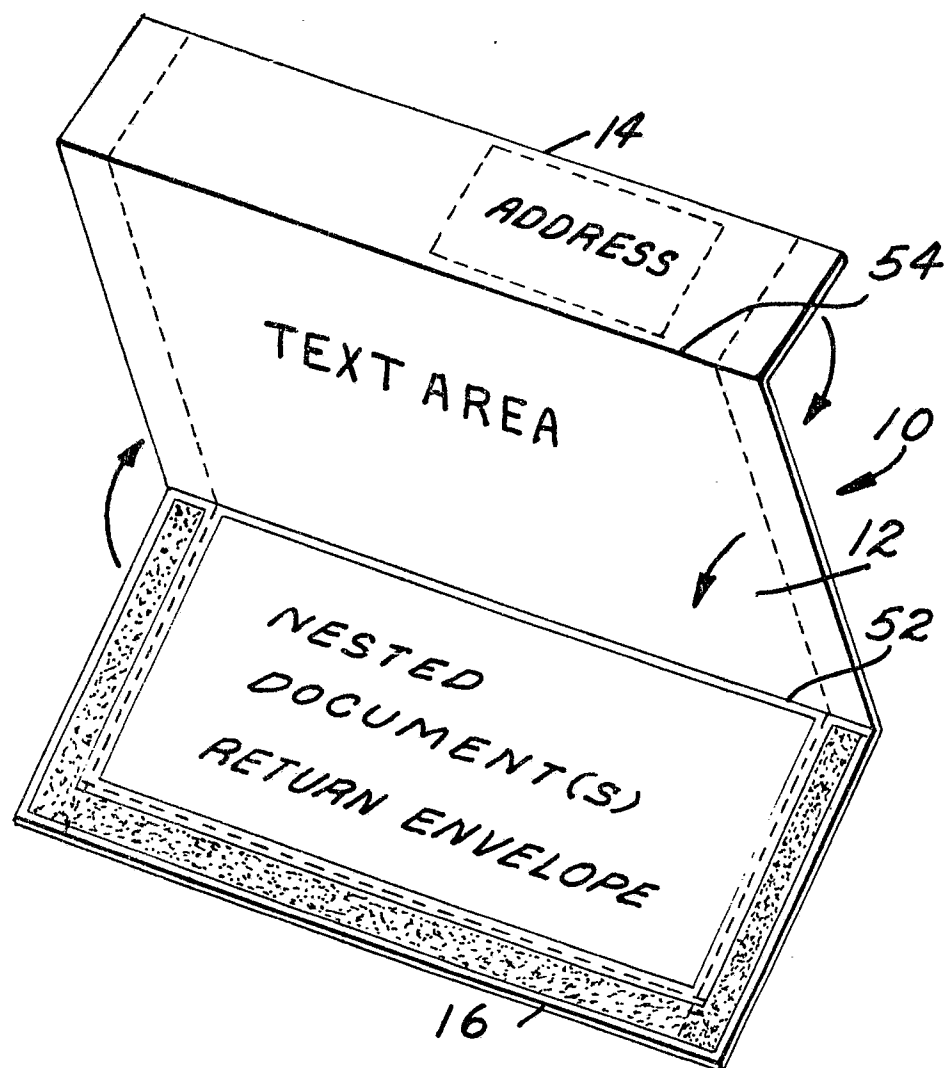


Fig. 2.



0302796

Fig. 3.*Fig. 4.*

0302796

FIG.: 5

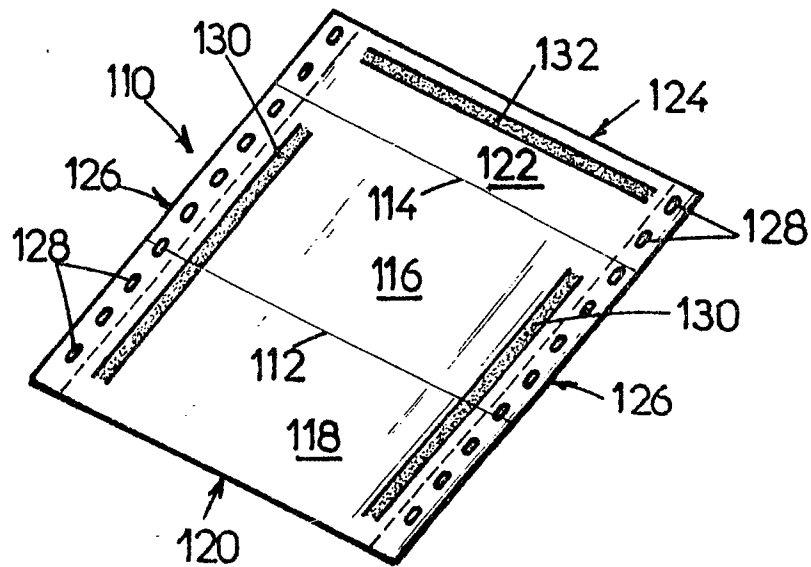


FIG.: 6

