

(12) STANDARD PATENT
(19) AUSTRALIAN PATENT OFFICE

(11) Application No. **AU 2010302425 B2**

(54) Title
A napkin

(51) International Patent Classification(s)
A47G 11/00 (2006.01)

(21) Application No: **2010302425**

(22) Date of Filing: **2010.09.28**

(87) WIPO No: **WO11/039533**

(30) Priority Data

(31) Number
0917051.5
0918432.6

(32) Date
2009.09.29
2009.10.21

(33) Country
GB
GB

(43) Publication Date: **2011.04.07**

(44) Accepted Journal Date: **2016.01.14**

(71) Applicant(s)
GANT INNOVATIONS LIMITED

(72) Inventor(s)
Shaw, Gail

(74) Agent / Attorney
Golja Haines & Friend, PO Box 1417, West Leederville, WA, 6901

(56) Related Art
US 5194299
US 4306316
US 2005/0106349

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 April 2011 (07.04.2011)

(10) International Publication Number
WO 2011/039533 A4

(51) International Patent Classification:
A47G 11/00 (2006.01)

(21) International Application Number:
PCT/GB2010/051616

(22) International Filing Date:
28 September 2010 (28.09.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0917051.5 29 September 2009 (29.09.2009) GB
0918432.6 21 October 2009 (21.10.2009) GB

(71) Applicant (for all designated States except US): **GANT INNOVATIONS LIMITED** [GB/GB]; 5 Osborne Terrace, Newcastle upon Tyne, Tyne and Wear NE2 1SQ (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **SHAW, Gail** [GB/GB]; 32 Guildford Street, Hendon, Sunderland, Tyne and Wear SR2 8JQ (GB).

(74) Agent: **ARCHER, Graham**; Urquhart-Dykes & Lord LLP, Cale Cross House, 156 Pilgrim Street, Newcastle upon Tyne, Tyne and Wear NE1 6SU (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

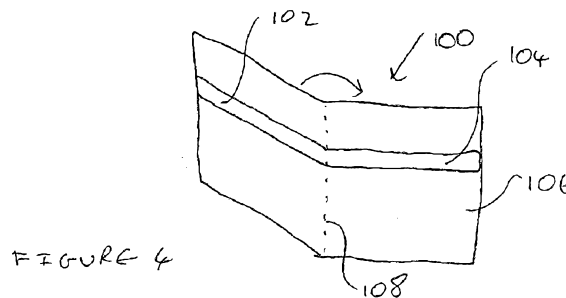
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- with amended claims (Art. 19(1))

Date of publication of the amended claims: 3 June 2011

(54) Title: A NAPKIN



(57) Abstract: A napkin is disclosed. On a first surface of the napkin first and second adhesive portions are adhered so that they are brought into engagement with each other when the sheet is folded in half along a first fold. The adhesive is of a type that will allow the first and second adhesive portions to separate and allow the sheet to be adhered to an object such as clothing.

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A NAPKIN

5 The present invention relates to the application of adhesive to a napkin, and relates particularly but not exclusively, to the application of adhesive to a napkin for the purpose of adhering the napkin to a person. When sitting eating a meal people typically place a napkin on their lap or tuck a napkin into their clothes to prevent any misplaced food/drink from coming into contact with their clothes thereby causing stains. However, napkins tend to slide off all types of
10 clothing, in particular sheer materials such as silk and therefore do not provide the protection outlined above when needed most for example when wearing an expensive dress at a dinner party.

15 A known solution to this problem is to apply double sided sticky tape to a napkin. However, applying the double sided sticky tape requires a certain degree of human dexterity which may only be copied by a complex machine. Also, waste is produced during the implementation of this solution because the material peeled away from the double sided sticky tape in order to expose the
20 adhesive needs to be disposed of. Furthermore, double sided sticky tape is expensive. These three factors prohibit the implementation of this known solution on a mass scale.

In the above discussion of the background art, any reference to information that
25 is known, is provided only for the purpose of facilitating an understanding of the background art to the present invention, and is not an acknowledgement or admission that any of that material forms part of the common general knowledge in Australia as at the priority date of the application in relation to which this specification has been filed.

30

Preferred embodiments of the present invention seek to overcome the above disadvantages of the prior art.

Throughout this specification, unless the context requires otherwise, the word “comprise” and variations such as “comprises”, “comprising” and “comprised” are to be understood to imply the presence of a stated integer or group of integers but not the exclusion of any other integer or group of integers.

5

According to a first aspect of the present invention there is provided a napkin comprising:

a sheet having a first surface; and

first and second adhesive portions adhered to the first surface;

10

wherein the sheet is folded along a first fold before said first and second adhesive portions are sprayed onto the first surface of the sheet; and

15

wherein the first and second adhesive portions are adapted to engage each other when the sheet is folded along a second fold perpendicular to the first fold and the adhesive is of a type that will allow the first and second adhesive portions to separate and allow the sheet to be adhered to an object.

20

By placing two portions of adhesive on a napkin in such a position that they come into engagement with one another when the napkin is folded provides the advantage that the napkin can be subsequently unfolded and adhered to an object such as a person or a person's clothes. Also because expensive double sided sticky tape need not be used to realise the present invention the need to dispose of backing strips is eliminated. This provides the advantage of significantly reducing manufacturing costs, from the high cost of using double-sided tape seen in the prior art.

25

30

Furthermore, due to the elimination of the requirement for backing strips, less dexterity is required to apply adhesive to a napkin. The present invention may therefore be implemented quicker using less complicated machinery than that which is already known thus providing the advantages of further reducing the cost of, and increasing the speed at which, the solution embodied by the present invention may be implemented.

One of the most significant cost factors in the production of napkins is transportation. This results from the very light-weight nature of this product making it inefficient to transport in that the vehicle carrying the product is capable of carrying significantly heavier goods within its volume. It is therefore
5 important in the transportation of napkins that the packaged product is transported in as compacted and compressed form as possible. The use of double-sided tape {or any other reinforcing tape) will increase the bulk of the napkins within their packaging meaning that fewer napkins can be transported per unit of volume. The volume of and weight of the napkins of the present
10 invention is barely distinguishable from that of a plain napkin without adhesive and therefore can be treated exactly like a non-adhesive napkin of the prior art. Indeed once the adhesive has been applied and the second fold has been made, the napkin can then be handled in exactly the same manner as a non-adhesive napkin

15

It is also the case that heavy woven (non-disposable) napkins are often used to reduce the likelihood of them being dislodged since the heavier fabric is less likely to be blown off the lap of the person wearing it. Although the present invention is equally applicable to heavy fabric napkins, further reducing the
20 likelihood slippage, the present invention means that there is less need to use such heavy material which reduces the cost of laundry or makes disposable napkins a more environmentally sustainable alternative .

Furthermore, the present invention is of particular use for people of limited
25 mobility or in places where mobility is limited. For example, the elderly, people with certain movement limiting disabilities and children may easily lose their napkin and not be able to retrieve it. Similarly in cramped conditions, such as on an aeroplane it may not be easy to reach a dropped napkin. For people who are partially sighted, and for the fully sighted in low light conditions, it is easy
30 to not realise that a napkin is no longer in position. Because the present invention ensures the napkin remains in place this problem is alleviated.

In a preferred embodiment the first and said second adhesive portions together form a strip of adhesive extending along said first surface parallel to said first fold.

5 This allows the edge of the napkin to which the adhesive has been applied to, or applied adjacent to, to be folded over allowing the napkin to be stuck to itself thereby providing the advantage of allowing the napkin to be used as a regular napkin which does not adhere to objects if a user so requires

10 In a preferred embodiment the first and second adhesive portions together form a strip of adhesive extending along the first surface parallel to the first fold.

By applying a strip of adhesive to a napkin allows the above advantages to be realised at the same time as maximising the speed of the manufacturing process.

15

The napkin comprises a second fold.

This provides the advantage of minimizing the size of the folded napkin.

20 According to another aspect of the present invention there is provided a method of applying adhesive to a napkin, the method comprising the steps of:

folding the napkin along a first fold;

spraying first and second adhesive portions onto a first surface of the napkin; and

25 folding the napkin along a second fold perpendicular to the first fold such that the first and second adhesive portions are brought into engagement with each other;

wherein the adhesive is of a type that will allow the first and second adhesive portions to separate and allow the napkin to be adhered to an object.

30

In a preferred method the first and second adhesive portions together form a strip of adhesive extending along the first surface parallel to the first fold.

The adhesive is sprayed onto the first surface.

5 This provides the advantage of further increasing the speed of the manufacturing process.

According to another aspect of the present invention there is provided an apparatus for applying adhesive to a napkin, the apparatus comprising:

10 a first folding means for folding a napkin along a first fold;
adhesive applying means operable to spray first and second adhesive portions onto a first surface of said napkin; and

a second folding means for folding said napkin along a second fold perpendicular to the first fold such that said first and said second adhesive portions are brought into engagement with each other;

15 wherein said adhesive is of a type that will allow said first and said second adhesive portions to separate and allow said napkin to be adhered to an object.

20 In a preferred embodiment the adhesive applying means applies said first and said second adhesive portions together to form a strip of adhesive extending along said first surface parallel to said first fold.

25 According to a further aspect of the present invention there is provided a napkin manufacturing apparatus comprising sheet material forming apparatus for forming at least one sheet material;

cutting means for cutting said sheet into napkins; and adhesive applying apparatus as set out above.

30 In a preferred embodiment the adhesive is applied to said sheet material before said sheet material is cut into napkins

Preferred embodiments of the invention will now be described, by way of example only and not in any limitative sense, with reference to the accompanying drawings in which:-

5 Figure 1 is a perspective view of an example of a napkin to which adhesive has been applied;

Figure 2 is a perspective view of the napkin in figure 1 into which a first fold is being introduced;

10

Figure 3 is a perspective view of the napkin in figure 2 into which a second fold is being introduced;

15 Figure 4 is a perspective view of another example of a napkin to which adhesive has been applied;

Figure 4A is a perspective view of the napkin in figure 4 into which first and second folds have been introduced;

20 Figure 5 is a perspective view of another example of a napkin to which adhesive has been applied;

25

Figure 5A is a cross sectional view of a tape portion which has been applied to the napkin in figure 5;

Figure 6 is a perspective view of the napkin in figure 6 being prepared for use;

Figure 7 is a perspective view of another example of a napkin to which adhesive has been applied;

30

Figure 8 is a first perspective view of the napkin in figure 7 being prepared for use; and

Figure 8A is a second perspective view of the napkin in figure 7 being prepared for use.

5 In order to modify a napkin 100 adhesive must be applied to it. First and second adhesive portions 102, 104 are applied to a first surface 106 of a napkin 100, as shown in figure 1. Typically such adhesive may be applied by spraying it directly onto the napkin 100 but may be done using any other method. The napkin 100 is then folded along a first fold 108 so that the first and second
10 adhesive portions 102, 104 are brought into engagement with each other, as shown in figure 2. The napkin 100 may then be folded along a second fold 109, see figure 3. Any other number of folds may be further introduced into the napkin 100 so that the folded napkin is of a required size.

15 The adhesive of the first and second adhesive portions 102, 104 is to be of a type that will allow the first and second adhesive portions 102, 104 to separate so that after unfolding a napkin 100 which was previously folded like in figure 2, the napkin may to be subsequently adhered to a person, a person's clothing, or any other object. An example of an adhesive product that can be used in the
20 implementation of the present invention is 3M's "Re-Mount" spray or any similar product that can be sprayed onto a surface and adhered to another surface. Another example is the 3M product sold under the brand "Spray 75" which is also a repositionable adhesive. In selecting the adhesive used consideration must be give to the fact paper napkins are often compressed in
25 order to remove air from the packaging and thereby reduce the volume of the packaged napkin for transportation and storage. This causes the layers of adhesive to be pressed into close engagement and can cause the bonding between the adjacent layers of adhesive to be too strong leading to the napkins becoming damaged on opening. This is not the case when the Re-Mount Spray
30 is applied.

In a second example the first and second adhesive portions 102, 104 may together form a strip of adhesive extending along the first surface 106 perpendicular to the first fold 108, as shown in figure 4. This strip may be right on the edge of the napkin 100 or simply adjacent to the edge.

5

Referring to figure 5 in which parts in common with those in figure 1 have been labelled with like reference numerals increased by 100, a napkin 200 will now be described. In this example instead of simply applying a body of adhesive onto a napkin 200 the use of first and second double sided sticky tape portions 202, 204 is required. Such portions will hereon in be referred to as first and second tape portions 202, 204.

The tape portions 202, 204, illustrated in figure 5A, are made up of a layer of tape 205 to which adhesive has been applied to both sides, one side of which is adhered to the surface of a napkin 200. The other side of the tape 205 has a removable cover 207 partially adhered to it. The part of the cover 207 which is not adhered to the tape 205 is referred to as the tab 211. The tab 211 is adapted to be grasped by a user and pulled in order to remove the cover 207 from the tape 205 so as to expose the adhesive thereby enabling the napkin 200 to be used, that is enabling the napkin to be adhered to a person, a person's clothing, or any other object.

With reference to figure 6 typically the tab portion 214 of the tape portions 202, 204 are located away from the respective opposing edges 218, 220 of the napkin 200 towards which the tabs 211 are intended to be pulled by applying forces along directions 213, 215 so as to peel the covers 207 from the napkin 100.

In another example the first and second tape portions 202, 204 may together form a strip extending along the first surface 206 of a napkin 200 perpendicular to the first fold 208, the strip being made up of two elongate tape portions 202, 204 which engage each other adjacent their respective tabs 211, see figures 7

30

and 8. Figure 8A shows the covers 207 being peeled away from the napkin 200 in figure 7 by a person.

5 It will be appreciated by persons skilled in the art that the above embodiments have been described by way of example only and not in any limitative sense, and that various alterations and modifications are possible.

10 For example, the napkin 100, 200 may comprise a sheet of paper, card, cloth or any other material. Furthermore, in accordance with the claimed invention a napkin 100, 200 is folded before adhesive portions 102, 104, 202, 204 are sprayed onto it. By folding the napkin in half first, then applying a line of adhesive to the napkin parallel to the fold before folding the napkin for a second time, perpendicular to the first fold, the advantage is provided that when the adhesive portions have been separated, the napkin can be attached to the
15 clothes, for example at chest height. The weight of the napkin then causes the first fold to open. It should also be noted that the present invention can be applied any form of napkin including paper napkins of one or multiply plies and woven fabric napkins.

20 Furthermore, it will be apparent that the apparatus for applying adhesive can be part of a napkin manufacturing machine. The device that applies the adhesive may be a retro-fit to an existing napkin making machine or may be formed as part of a napkin making device. The napkins are formed from a larger sheet of material and the adhesive may be applied either before or after the sheet is cut
25 into individual napkins.

CLAIMS

1. A napkin comprising:
a sheet having a first surface; and
5 first and second adhesive portions sprayed onto said first surface;
wherein the sheet is folded along a first fold before said first and second
adhesive portions are sprayed onto the first surface of the sheet; and
wherein said first and second adhesive portions are adapted to engage each
other when said sheet is folded along a second fold perpendicular to the first fold, and
10 said adhesive is of a type that will allow said first and second adhesive portions to
separate and allow said sheet to be adhered to an object.

2. A napkin according to claim 1, wherein said first and said second adhesive
portions together form a strip of adhesive, said strip of adhesive extending along said
15 first surface parallel to said first fold.

3. A napkin according to claim 2, wherein said strip of adhesive extends along an
edge of said napkin parallel to said first fold.

- 20 4. A napkin substantially as hereinbefore described with reference to the
accompanying drawings.

5. A method of applying adhesive to a napkin, the method comprising the steps
25 of:
folding the napkin along a first fold;
spraying first and second adhesive portions onto a first surface of the napkin;
and
folding said napkin along a second fold perpendicular to the first fold such that
30 said first and said second adhesive portions are brought into engagement with each
other;
wherein said adhesive is of a type that will allow said first and said second
adhesive portions to separate and allow said napkin to be adhered to an object.

6. A method according to claim 5, said first and said second adhesive portions together form a strip of adhesive, said strip of adhesive extending along said first surface parallel to said first fold.

5 7. A method substantially as hereinbefore described with reference to the accompanying drawings in figures 1 to 4.

8. An apparatus for applying adhesive to a napkin, the apparatus comprising:
a first folding means for folding a napkin along a first fold;
10 adhesive applying means operable to spray first and second adhesive portions onto a first surface of said napkin; and
a second folding means for folding said napkin along a second fold perpendicular to the first fold such that said first and said second adhesive portions are brought into engagement with each other;
15 wherein said adhesive is of a type that will allow said first and said second adhesive portions to separate and allow said napkin to be adhered to an object.

9. An apparatus according to claim 8, wherein said adhesive applying means applies said first and said second adhesive portions together to form a strip of
20 adhesive, said strip of adhesive extending along said first surface parallel to said first fold.

10. An apparatus for applying adhesive to a napkin substantially as hereinbefore described with reference to the accompanying drawings.

25 11. A napkin manufacturing apparatus comprising sheet material forming apparatus for forming at least one sheet material;
cutting means for cutting said sheet into napkins; and
adhesive applying apparatus according to claims 8 or 9.

30 12. An apparatus according to claim 11 where said adhesive is applied to said sheet material before said sheet material is cut into napkins.

35 13. A napkin manufacturing apparatus substantially as hereinbefore described with reference to the accompanying drawings.

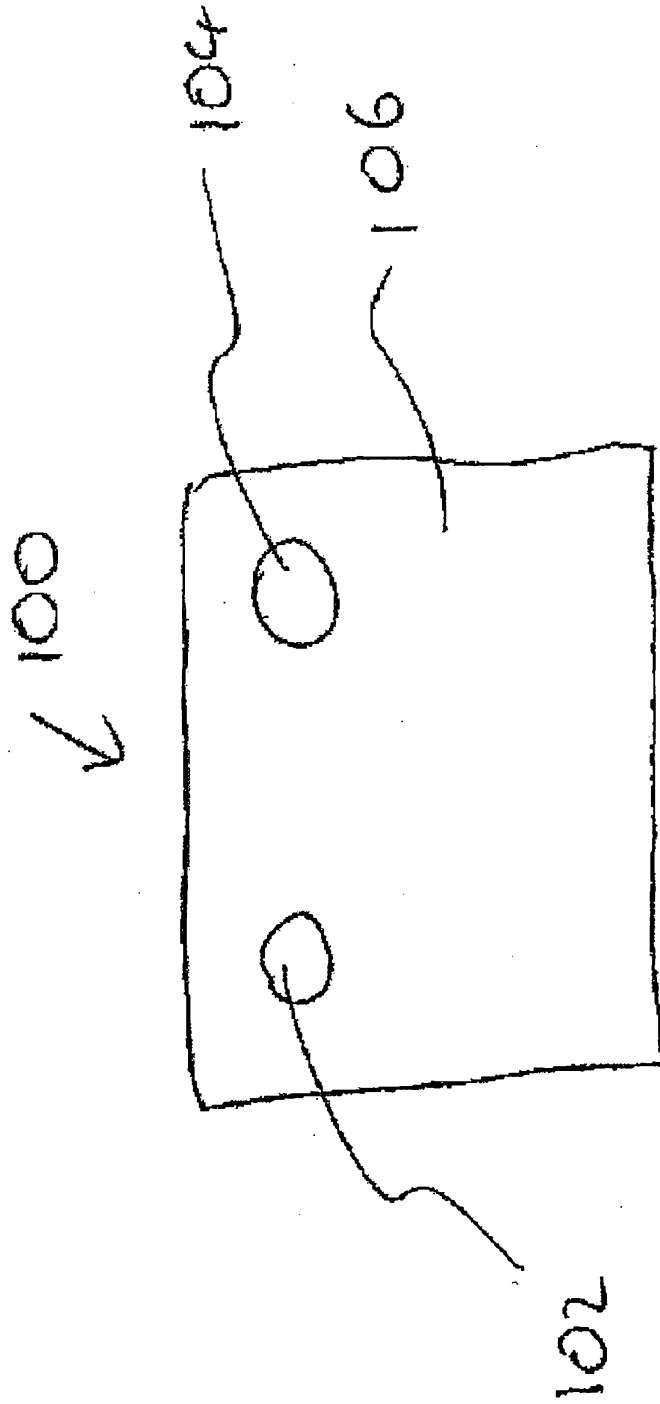


FIGURE 1

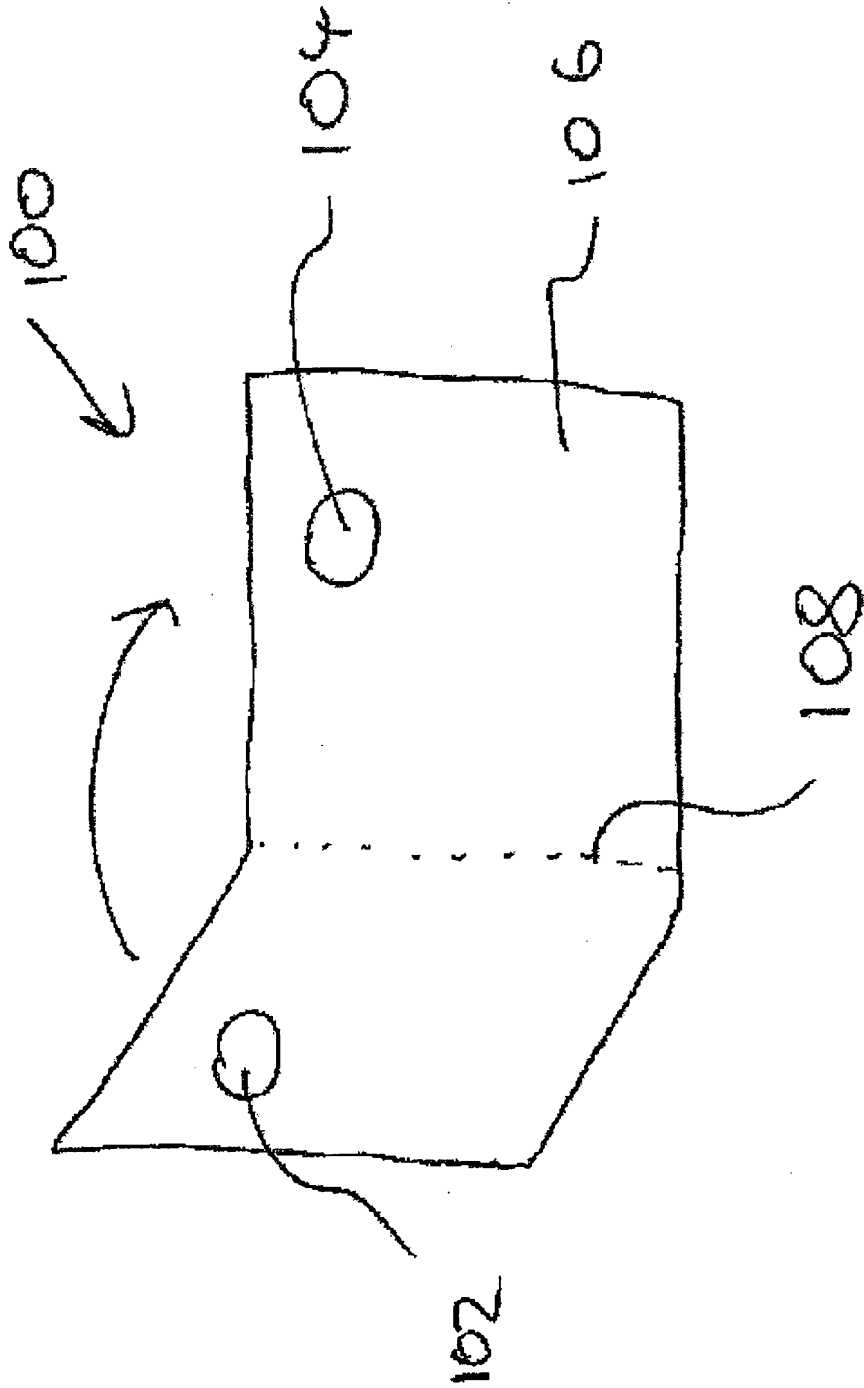


FIGURE 2

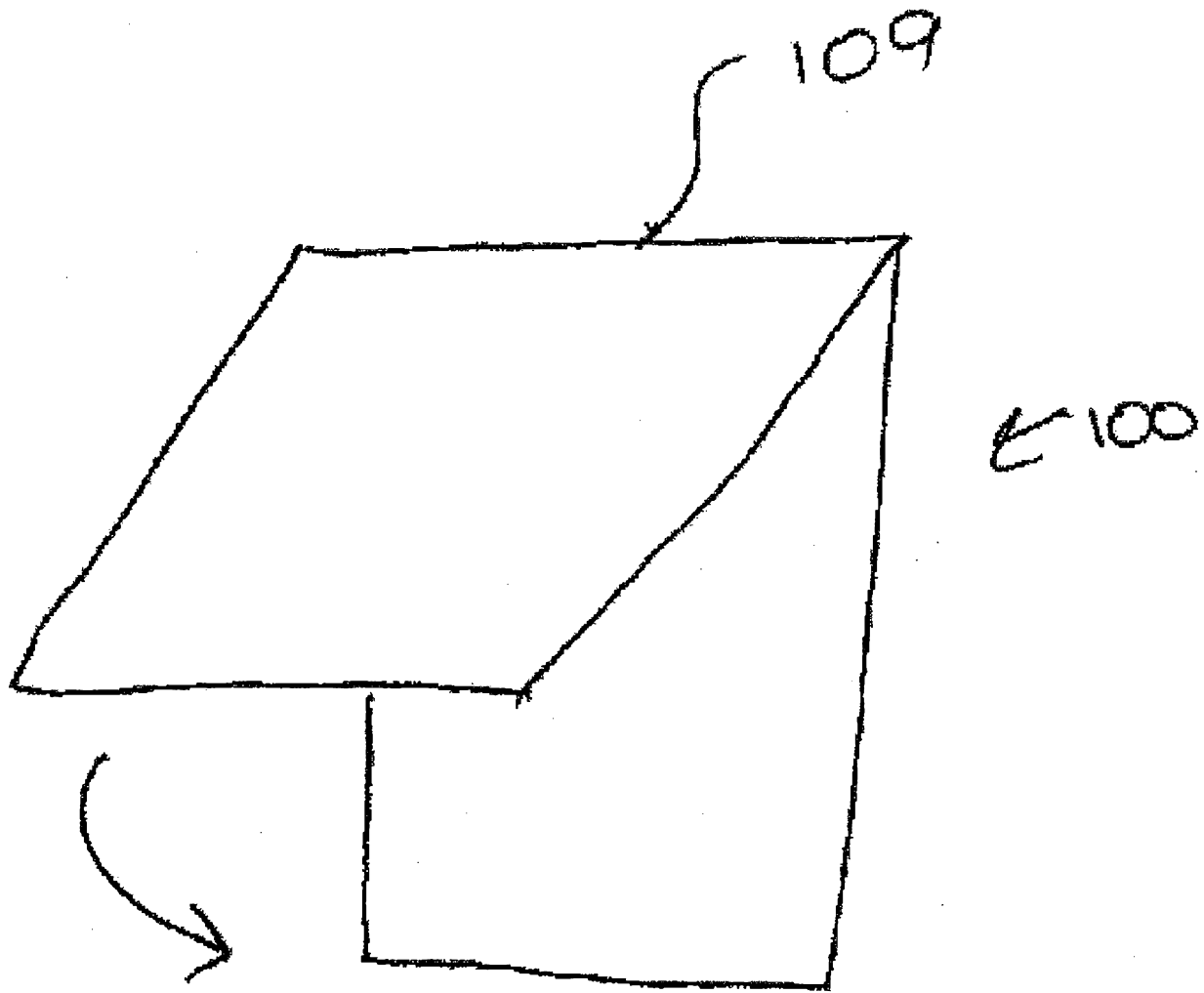


FIGURE 3

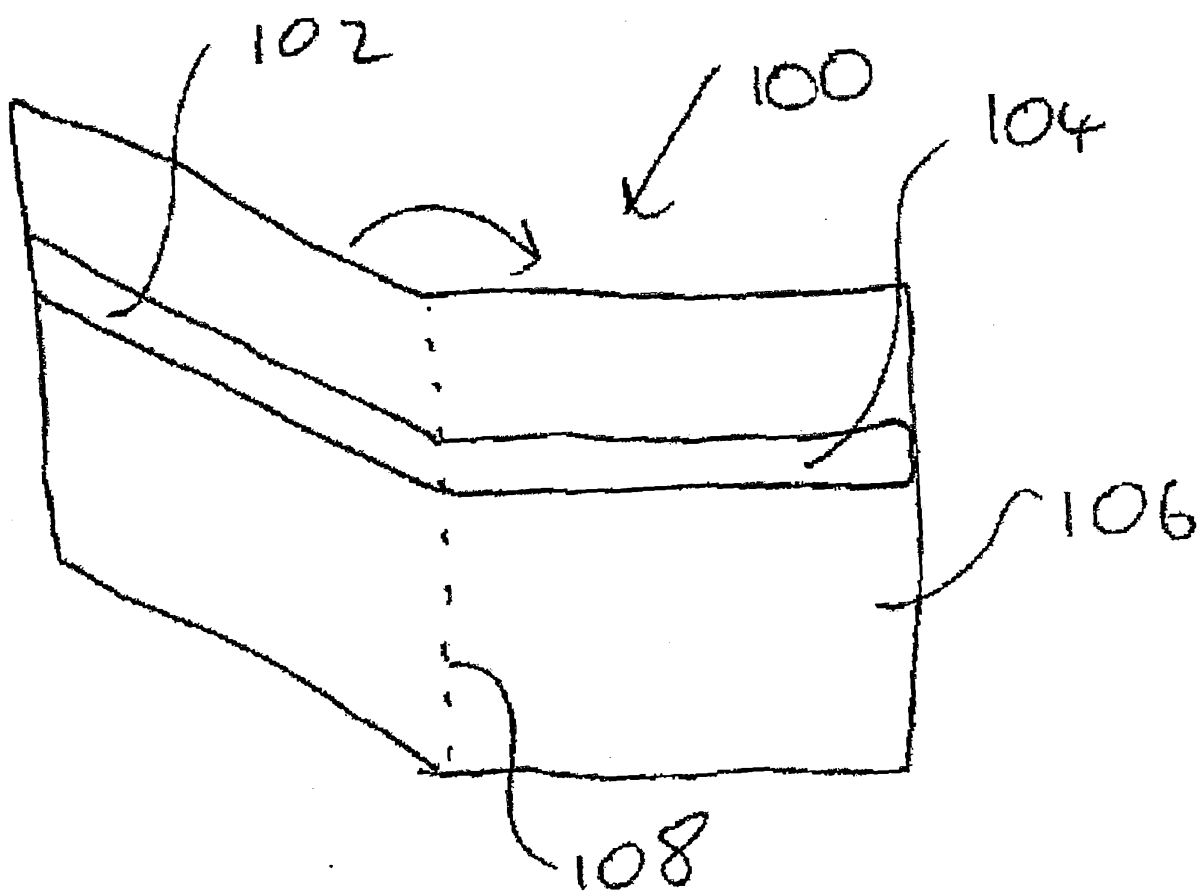


FIGURE 4

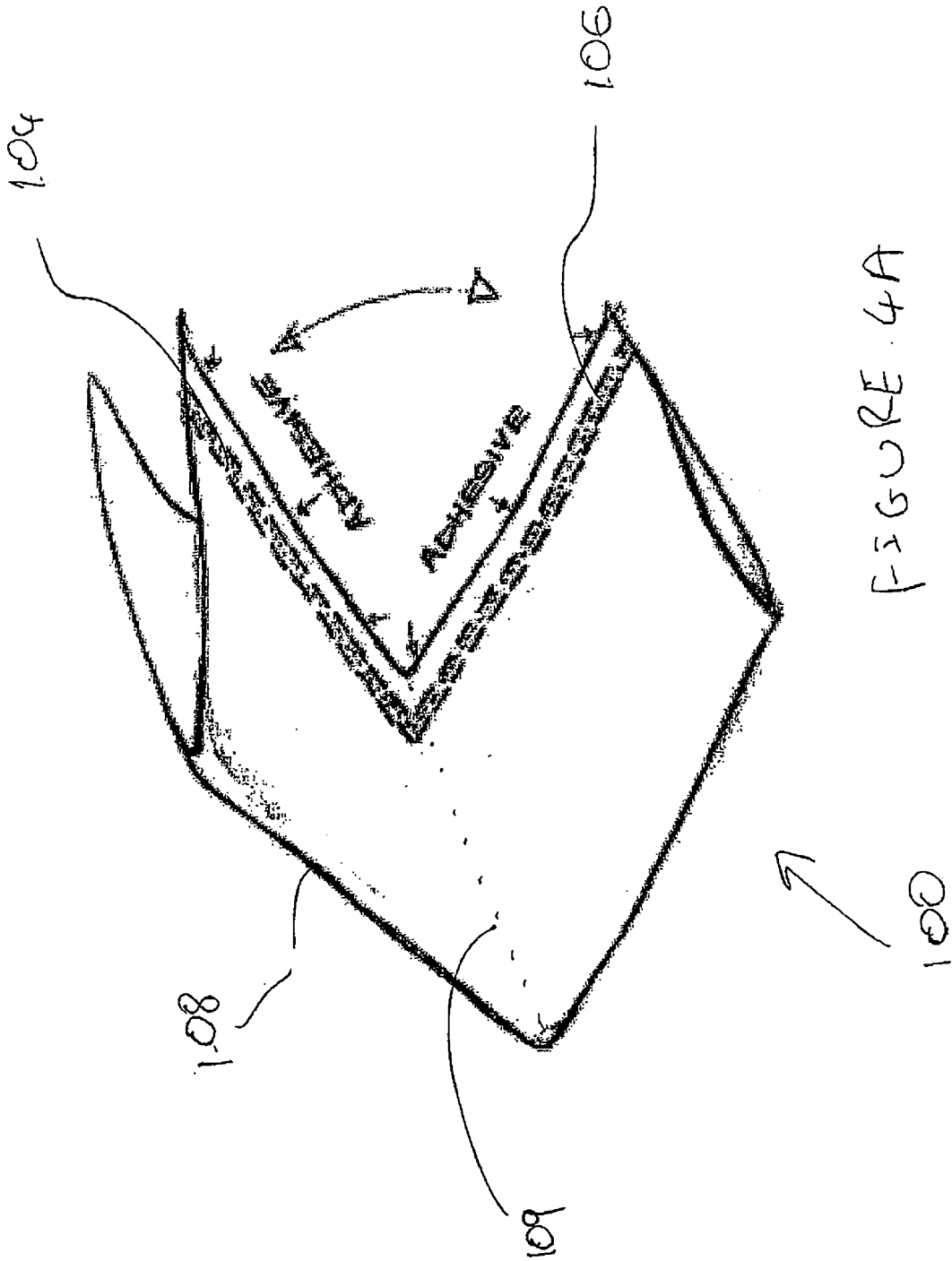


FIGURE 4A

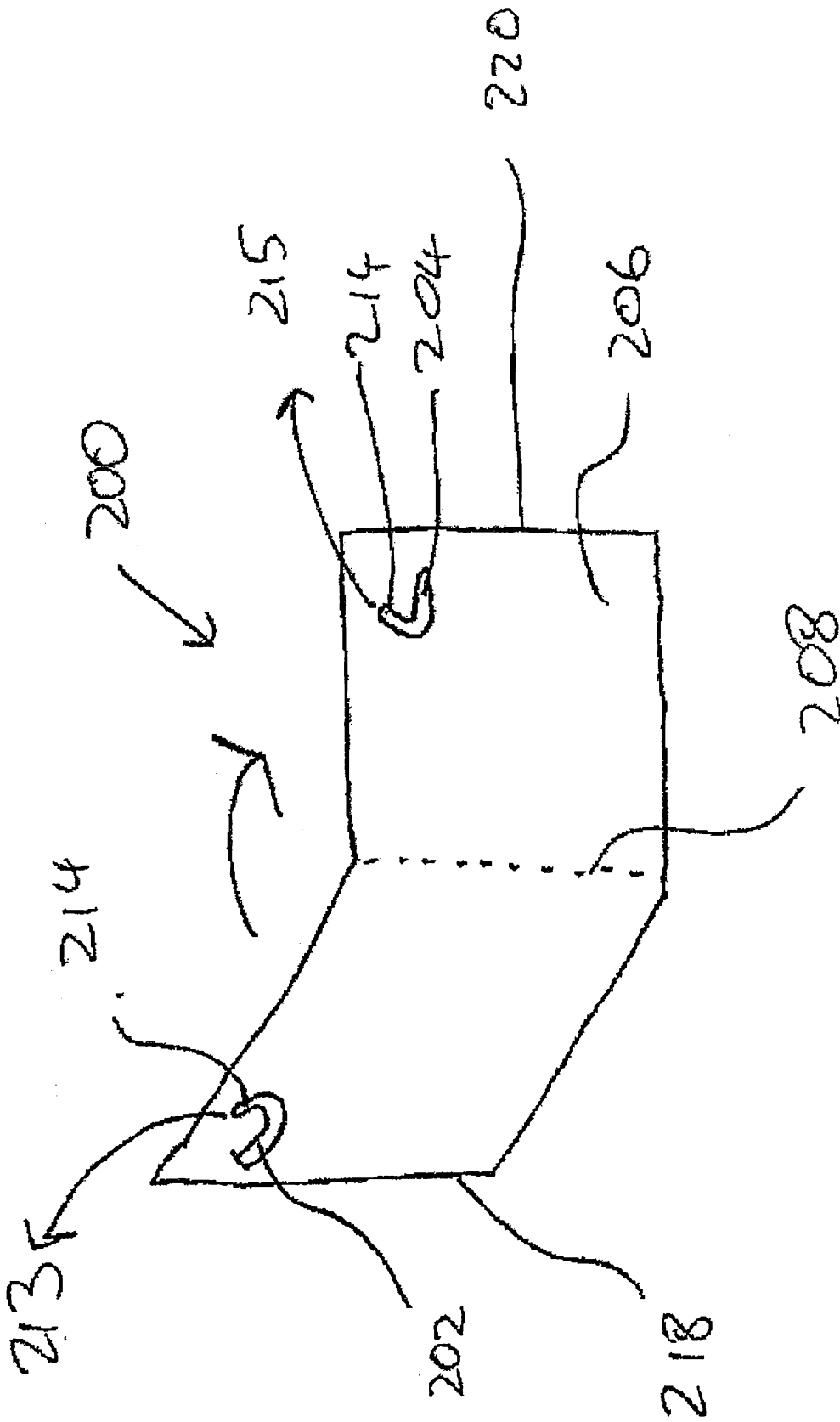
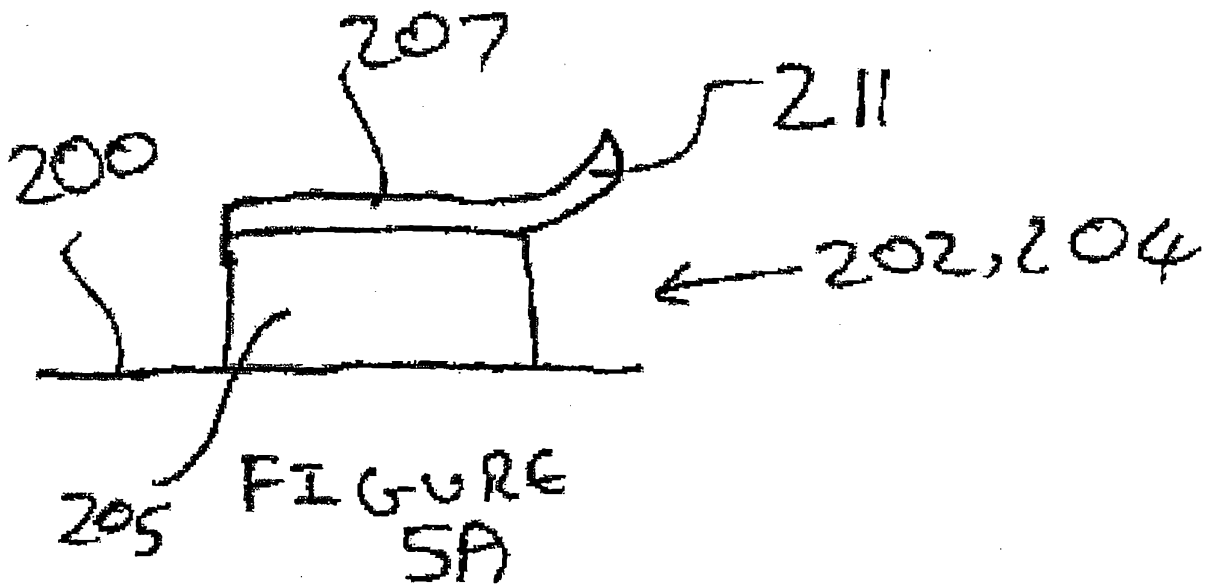


FIGURE 5



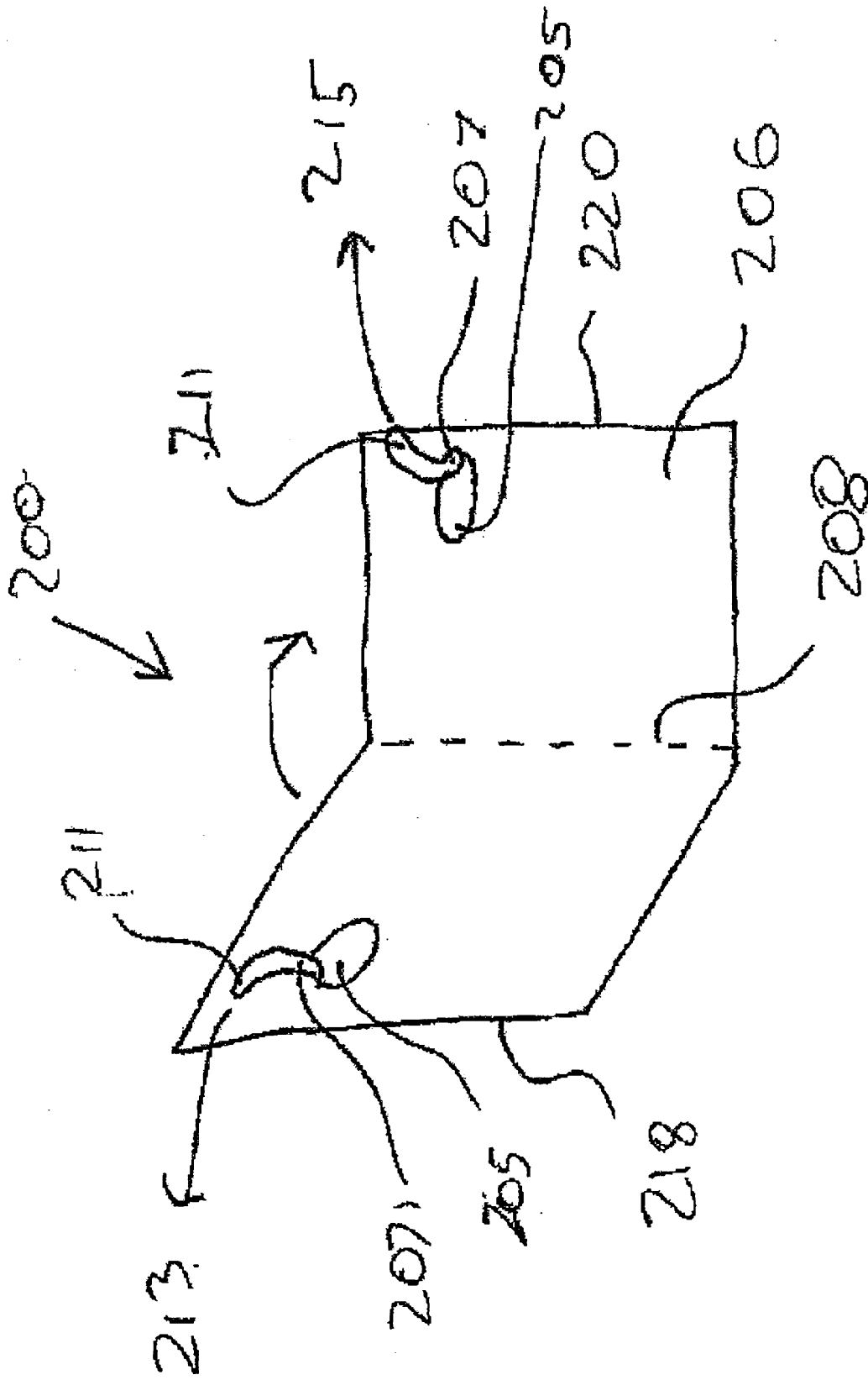


FIGURE 6

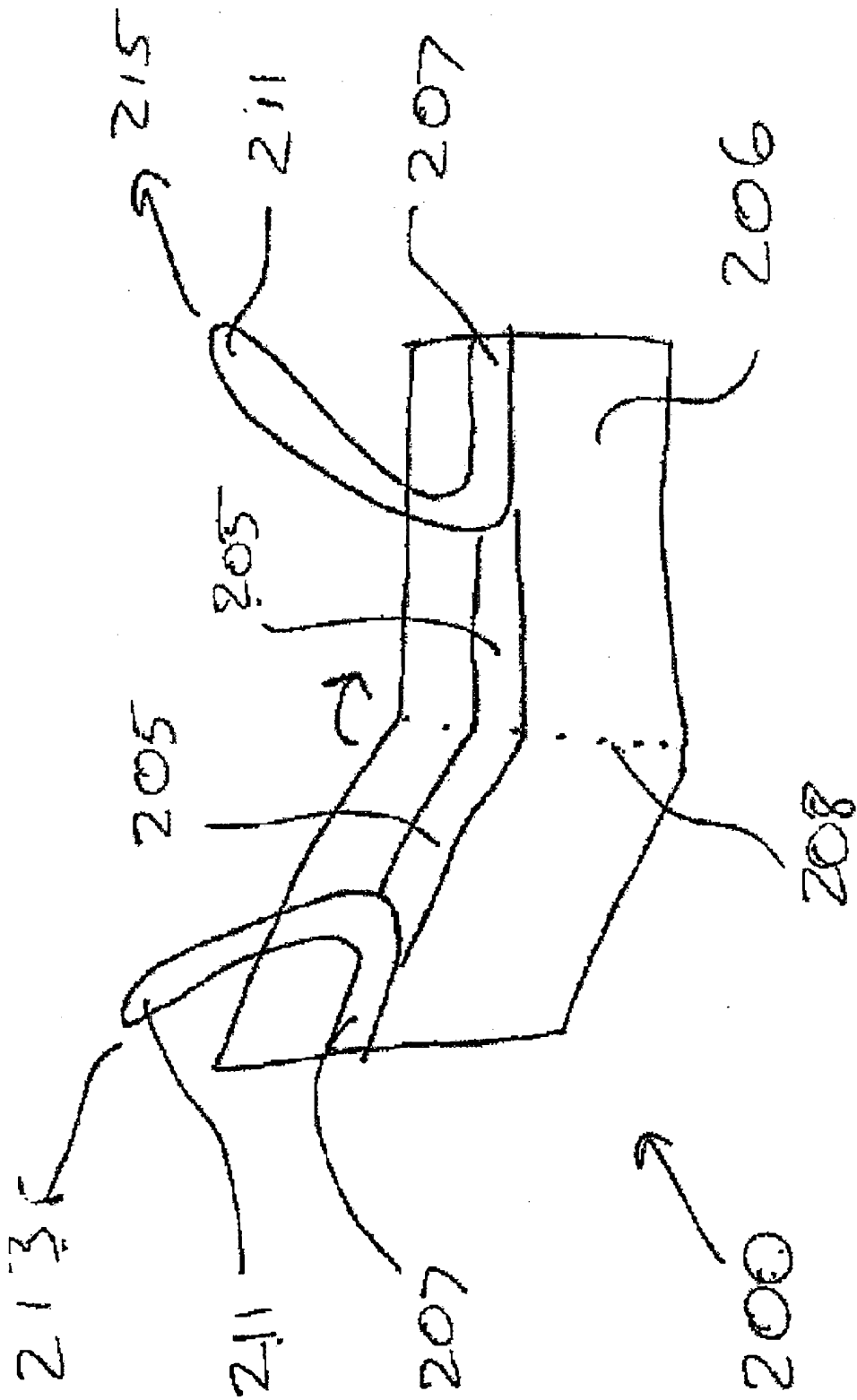


FIGURE 8.

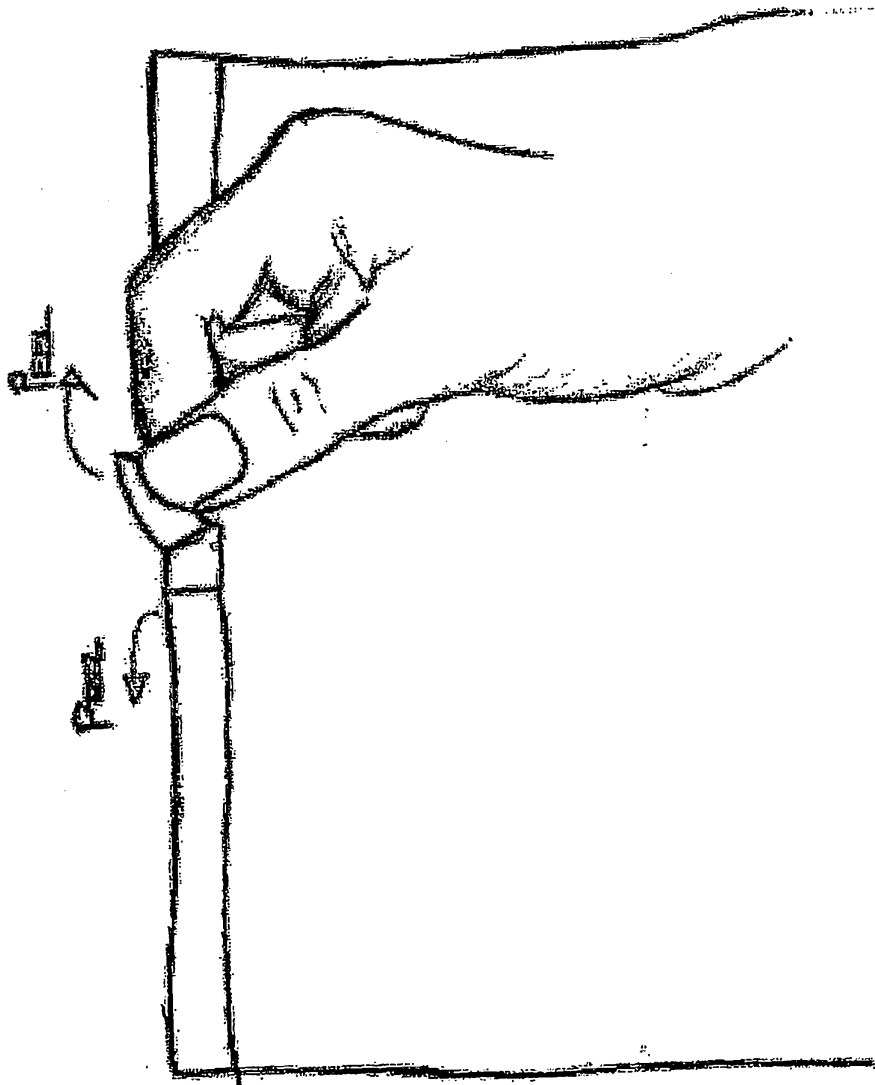


FIGURE 8A