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(54) **FOLDABLE DISPLAY SYSTEM**

ZUSAMMENKLAPPBARES ANZEIGESYSTEM

SYSTÈME D'ÉCRAN PLIABLE

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## Description

**[0001]** The present description refers to an application for a patent of invention for a display receiving a series of assembly units, or assembly parts, each one basically composed by two foldable walls formed by a wrinkle, also in agreement by means of wrinkles with two adjacent walls, separated from each other by their free edges, being moved by a system of tweezers, being said assembly part liable to receive an elastic band through which it will be fixed to especially made grooves at pre-determined spots of the juxtaposed rims from both parts forming the display body.

**[0002]** Thus, the assembly part rests its foldable walls over the internal faces of the parts forming the display body and, by action of the elastic band, jointly with the effect of tweezers provided by the separate walls, said display is automatically opened, also allowing it to close if required.

## STATE OF THE ART

**[0003]** Varieties of devices acting to form self-supporting displays are already known in the market and may be seen in documents such as BR 0,303,694-4, filed on August 14, 2003, BR 0,303,693-6, filed on August 14, 2003, BR 0,502,306-8, filed on June 21, 2006, BR 0,505,915-1, filed on December 27, 2005, FR A1 0106569, filed on May 18, 2001, and BR 0,007,143-9A, filed on July 11, 2000. The latter one also mentions French documents such as FR-A-2680030, FR-A-2650907 and FR-A-2210317, while the document BR 0,201,711-3, filed on May 10, 2002, also mentions other two French documents, namely FR 2,760,880 and FR 2,795,217.

**[0004]** In the case of document FR A1 0106569, a device formed by carton parts with various fitting and elastic elements is disclosed, including a set of details in the form of grooves, folds, wrinkles and others, working to allow the set to be practically automatically assembled, so to obtain a prismatic vertical structure with means to receive general advertising.

**[0005]** Generally speaking, documents present devices having means to offer displays with self-supporting characteristics, i. e. to be automatically opened, working by means of a generally diagonal complementary internal structure, some of them elastically or telescopically, liable to be extended or retracted to assemble the set.

**[0006]** Concerning other documents, some of them with no internal complementary structure, we can see that all of them show devices obtained by means of semi-rigid parts of carton, projected with grooves, fittings, wrinkles, folds and other details allowing to assemble the set.

**[0007]** Therefore, each one of the above devices presents constructive and functional details characterizing different solutions to overcome one or another disadvantage over the existing state of the art.

**[0008]** Thus, known devices present appropriate

means to meet different purposes, mainly to form a self-supporting advertising display which is substantially vertically elongated, and also to allow to be sold (ex factory) fully disassembled or folded, substantially facilitating its transport, stocking and storing while not in use.

**[0009]** Despite accomplishing, in a way, proposed objects, such conventional devices present complex constructivity, also generating a range of equally complex assembly details, resulting in products with really very high cost and many of them also have an internally located complementary structural part to obtain the self-supporting condition, i. e. the condition for its automatic assembly.

## 15 OBJECT OF THE PATENT

**[0010]** A defined embodiment for the device to be able to have a really simplified construction over conventional devices is proposed in the present patent application by an assembling part made of a square tubular body, formed by two walls which may be folded by a wrinkle which, from other wrinkles, agree with two separate walls by their juxtaposed free edges. Said foldable walls receive a pair of aligned higher and lower grooves each, into which an elastic ring band is fitted.

**[0011]** On the other hand, the display has junction rims for the two parts composing its body, folded and juxtaposed, both receiving identical grooves forming higher and lower hooks, through which the ends of the elastic ring band will be fitted as already fixed to the grooves of foldable walls of the assembly part.

**[0012]** Therefore, the already fixed assembly part rests by means of its foldable walls to the internal faces of both parts composing the body of the display, being tensioned by the action of the elastic band. Separate walls of the assembly part, on the other hand, embrace each side of the juxtaposed rims of said parts composing the display, acting as tweezers, jointly to the action of the elastic band.

**[0013]** Therefore, when both parts composing the display are pressed against each other, i. e. in the case of a closed display folded by its sections, the assembly part, by operation of the tweezers, also has its walls - both foldable and separate, extended but tensioned by the action of the elastic band.

**[0014]** After unfolding and vertically positioning the display, its two parts get slightly apart, just enough for the elastic band, tensioned between the grooves of juxtaposed rims, to open foldable walls of the assembly part. When opened, foldable walls, jointly to the separate walls acting as tweezers, naturally force both parts composing the body of the display to get apart, thus obtaining their automatic assembly.

**[0015]** Assembly parts will be applied to as many units as required, always in pairs and opposed to the juxtaposed rims of the parts composing the body of the display.

**[0016]** Apart from quadrangular configuration, the assembly part may have triangular configuration, as we will

see below, so to allow quadrangular (rectangular or even square) displays to be formed, besides elliptical ones. Thanks to the system of tweezers, the wrinkling itself of juxtaposed rims of the parts composing the display may vary, so to allow other automatic assembly options for displays, both elliptical and quadrangular.

**[0017]** Having been superficially explained, the display with its assembly part and the involved system are now better detailed by means of the attached figures.

**[0018]** Figures as listed below, from 1 to 8, refer to an ellipsoidal display, where juxtaposed rims of both parts composing its body are formed from a wrinkle, receiving the assembly part having, in this case, quadrangular configuration:

Figura 1 - Perspective view of the display showing, from its higher edge, juxtaposed rims from both parts composing its body;

Figure 2 - Higher part of the display, with one of the parts composing its body being cut, showing juxtaposed rims with their higher and lower hook-shaped grooves, so to receive the elastic ring band to fix and tension the assembly part;

Figure 3 - Perspective view of a part of juxtaposed rims, which grooves receive the elastic ring band to fix and tension the assembly part. On its side, enlarged detail A of the assembly part with its foldable walls open, in a position to keep the display as assembled;

Figure 4 - Plain view of the closed display. Under this condition, the walls of the assembly part extend jointly with both parts composing the body of the display;

Figure 5 - View as per previous figure, with both parts composing the body of the display being opened, when the foldable walls of the assembly part get apart thanks to the action of the elastic band and the effect of tweezers of its separate walls;

Figure 6 - View of the display as already assembled. Below, enlarged detail B;

Figure 7 - Illustrative view showing the display in perspective being closed;

Figure 8 - View of the previous figure, showing the display as already closed;

Figures as listed below, from 9 to 14, refer to a quadrangular (rectangular) display, where the two parts composing its body receive two wrinkles each made shortly from the juxtaposition rims. In this case, the rims project from an intermediate point in the display after being assembled and receive the assembly part, which has, in this case, a triangular configuration;

Figura 9 - Perspective view of the display showing, from its higher edge, juxtaposed rims from both parts composing its body, also formed from an intermediate point, receiving the assembly part, with triangular configuration;

Figure 10 - Higher part of the display, with one of the

parts composing its body, showing juxtaposed rims with their higher and lower hook-shaped grooves, so to receive the elastic ring band to fix and tension the assembly part, in this case in triangular configuration;

Figure 11 - Perspective view of the two parts composing the body of the display, separately, showing hook-shaped grooves of juxtaposed rims, through which the elastic ring band will be fitted to fix and tension the triangular assembly part. On its side, enlarged detail C of the assembly part with its foldable walls open, in a position to keep the display as assembled;

Figure 12 - View of the closed display. The walls of the assembly part extend jointly with both parts composing the body of the display;

Figure 13 - View as per previous figure, with both parts composing the body of the display being kept apart through the opening of the foldable walls of the assembly part, thanks to the action of the elastic band and the effect of tweezers of its separate walls; Below, enlarged detail D;

Figure 14 - View of the display as already assembled;

Figures as listed below, from 15 to 21, refer to a quadrangular (rectangular) display, where the two parts composing its body receive just one wrinkle, at a point near just one of the folds of its juxtaposition rims. The parts thus composed should be glued so that their only wrinkles remain inverted and juxtaposition rims are consequently projected in opposition, one at each opposed vertex from the quadrangular display;

Figure 15 - Perspective view of the two parts composing the body of the display, each one provided with one single wrinkle from just one of its juxtaposition rims. When parts are assembled, wrinkles position themselves, consequently in inverted position, at opposed vertexes, thus obtaining another kind of assembly;

Figure 16 - Perspective view of the display showing, from its higher edge, the pairs of juxtaposed rims from both parts composing its body, each one receiving its corresponding assembly part;

Figures 17 to 19 - Perspective sequence showing the opening of foldable parts from the assembly part, by action of the tensioned elastic band between the grooves of juxtaposed rims, combined to the effect of tweezers as provided by separate walls. Said opening will naturally make both parts composing the body of the display come apart, automatically opening it;

Figure 20 - View of the closed display. The walls of the assembly part extend jointly with both parts composing the body of the display;

Figure 21 - View as per previous figure, with both parts composing the body of the display being opened, when the foldable walls of the assembly part also open thanks to the action of the elastic band

and the effect of tweezers of its separate walls; Below, enlarged detail E;

Figure 22 - View of the display as already assembled. In this view, we can see inverted rims thanks to the formation of the wrinkle, as effected at the cutting and wrinkling step as per the project.

**[0019]** In agreement with the attached drawings, the "IMPROVEMENT IN DISPLAY FOR AUTOMATIC ASSEMBLY SYSTEM" object of the present application for a patent of invention is constituted by a display (1) of carton or another appropriate material, presenting elliptical crosswise section, formed by a front (2) and end (3) part, both provided with crosswise wrinkles (4) forming sections (5) for folding, being said parts liable to receive advertising printing and furthermore folded lengthwise at their ends, so to form, on part (2), rims (4), (5) and, on part (3), rims (6), (7).

**[0020]** For the intended system, rims (4), (5) and (6), (7) receive, at the cutting and wrinkling step, at pre-determined spots, preferably at each section (5), a higher hook-shaped groove (8) which, after a short free path (9), is invertedly repeated into a lower groove (10).

**[0021]** Parts (2) and (3), after being assembled by means of juxtaposition of their rims (4), (5) with rims (6), (7), already containing their grooves (8) and (10) receive, at their sections (5), at least one assembly part (11) in a tubular body in quadrangular section, formed by two foldable walls (12) by a central wrinkle (13) which, after new wrinkles (14), project two adjacent walls (15), apart from each other, at their free edges (16).

**[0022]** The walls (12) receive a pair of grooves each, projected from their higher and lower edges, being therefore a higher vertical groove (17) and a lower vertical groove (18), both aligned and made in juxtaposition, receiving the introduction of an elastic ring band (19). As especially shown by detail A of Figure 3, the ring band (19) involves, through grooves (17) and (18), foldable walls (12).

**[0023]** Being thus the set constituted, the assembly part (11) installed in pairs has its elastic band (19) introduced, from its edges, between higher (8) and lower (10) grooves of the juxtaposed rims (4), (5) and (6), (7), so to rest their foldable walls (12) to the internal faces of both parts (2) and (3) composing the body of the display (1). On the other hand, separate walls (15) are anchored by their free edges (16) to the foldings of the rims (4), (5) and (6), (7), so to embrace them in the form of tweezers.

**[0024]** Therefore, when both parts (2) and (3) get close to close the display (1), separate walls (15), due to the effect of tweezers, allow the whole assembly part (11) to extend, taking plain condition but remaining strongly tensioned by the action of the elastic band (19).

**[0025]** To open it, when the display (1) is positioned vertically, after slightly taking apart both parts (2) and (3), foldable walls (12) then tensioned, jointly to the effect of tweezers from separate walls (15), open, causing both parts (2) and (3) to naturally get apart, thus automatically

assembling the display (1), as especially shown by Figures 4, 5 and 6.

**[0026]** The above description refers to an ellipsoidal display (1), when wrinkles are made from folding juxtaposition rims (4), (5) and (6), (7) themselves.

**[0027]** In the case of forming quadrangular or rectangular displays (1a), their two parts (2a) and (3a) receive a wrinkle (20) after each one of the rims (4a), (5a) and (6a), (7a), keeping the same system, to fix and tension assembly parts (11a). In this case, the parts (2a) and (3a), after being joined, form juxtaposed rims (4a), (5a) and (6a), (7a) projected from an intermediate point in the body of the sides (21) of the display (1a). Assembly parts (11), on the other hand, after the wrinkles (14), project coplanar walls (22), equally separated by their free edges (16).

**[0028]** With such constitution, the part (11a) takes triangular shape and rests their coplanar walls (22) to the sides (21) of the body of the display (1), with free edges (16) equally involving, under the same system of tweezers, rims (4a), (5a) and (6a), (7a).

**[0029]** Finally, in another version, by using the same self-assembling system, both parts (2b) and (3b) composing the body of the display (1b) receive just one wrinkle (23), at a point just near one of the folds of its juxtaposition rims. Both parts (2b) and (3b) thus composed should be glued so that their only wrinkles (23) remain inverted, as shown by Figure 15, and juxtaposition rims (4b), (5b) and (6b), (7b) are consequently joined, projected in opposition, one at each opposed vertex of the display (1b), causing its quadrangular shape.

**[0030]** According to the longer distance from the wrinkle (23) over juxtaposition rims (4b), (5b) and (6b), (7b), display (1b) may progress from a rectangular shape to square shape.

## Claims

1. Display with automatic assembly system comprised by a front part (2) and end part (3), both provided with crosswise wrinkles forming foldable sections (G), said parts being able to receive advertising printing and to be folded lengthwise at its ends, so as to form, on front part (2), rims (4) and (5), and on end part (3), juxtaposing rims (6) and (7), **characterised in that** said rims (4), (5), (6) and (7) are provided at pre-determined points with a hook-shaped higher groove (8) which, after a short free path (9), is repeated in an inverted manner as a lower groove (10), said parts (2) and (3), after being assembled by the juxtaposition of rims (4) and (5) with rims (6) and (7), which rims already contain their respective grooves (8) and (10), are configured to receive in-between said grooves an assembly part (11, 11a) with a tubular body having either:

a quadrangular section (11) formed by two walls

- (12) foldable by a central wrinkle (13) and two adjacent walls (15) with additional wrinkles (14), the walls (15) being separated from each other by their free edges (16),  
or  
a triangular section (11a) having coplanar walls (22) next to wrinkles (14), which coplanar walls are separated by their free edges (16), wherein each of said walls (12) is provided with an additional pair of grooves, projecting from the higher and lower edges of the walls as a higher vertical groove (17) and a lower vertical groove (18), both grooves being aligned and juxtaposed to receive an elastic band (19) which engages also the higher/lower groove of the rims (4,5,6,7) thus maintaining the assembly tensioned.
2. Display according to claim 1 wherein, upon fitting the elastic band (19) between the higher (17) and lower (18) grooves of the walls (12) and the juxtaposed rims (4), (5), (6) and (7), the foldable walls (12) of the assembly part (11) rest towards the internal faces of parts (2) and (3) of the display (1), and the adjacent walls (15) of the assembly part (11) are anchored by their free edges (16) to the folds of rims (4), (5), (6) and (7), thus conforming a tweezers system which embrace the rims (4), (5), (6) and (7).
  3. Display according to claims 1 or 2 wherein, when both parts (2) and (3) are moved to each other to close the display (1), the assembly part (11) becomes flat due to the tweezers effect of the separate walls (15), the assembly remaining strongly tensioned by the action of the elastic band (19).
  4. Display according to any one of claims 1 to 3 wherein, when the display (1) is positioned vertically, after slightly taking apart both parts (2) and (3), said parts (2) and (3) become separated due to the opening of the foldable walls (12) jointly with the separate walls (15), thus assembling the display (1).
  5. Display according to previous claims 1-4 wherein each one of front part (2a) and end part (3a) comprises a wrinkle (20) next to each one of the rims (4a), (5a), (6a) and (7a), which rims are juxtaposed and projected from an intermediate point at the sides of the display (1a) and configured to receive the triangular assembly part (11a).
  6. Display according to claim 5, wherein the coplanar walls (22) of the triangular assembly part (11a) rest towards the sides (21) of the display (1) and the free edges (16) of the said walls (22) embrace the rims (4a), (5a), (6a) and (7a).
  7. Display according to previous claims 1-4, wherein each one of front part (2b) and end part (3b) includes

just one wrinkle (23) at a point next to one of the folds of the juxtaposing rims (4b), (5b), (6b), (7b).

8. Display according to claim 7, wherein parts (2b) and (3b) are glued, their sole wrinkle (23) remaining inverted so that the juxtaposing rims (4b), (5b) and (6b), (7b) are consequently projected in opposition, so that each one is projected from each opposed vertex of the display (1) in order to receive the assembly part (11).
9. Display according to claims 1-4, wherein the display (1) has an elliptical crosswise section.

#### Patentansprüche

1. Anzeige mit automatischem Montagesystem, umfassend einen Vorderabschnitt (2) und einen Endabschnitt (3), die bei mit quer verlaufenden Falten versehen sind, die faltbare Abschnitte (G) ausbilden, wobei die Abschnitte in der Lage sind einen Werbeaufdruck zu erhalten und an ihren Enden längs gefaltet zu werden, um an dem Vorderabschnitt (2) Krempe (4) und (5) und an dem Endabschnitt (3) danebenliegende Krempe (6) und (7) auszubilden, **dadurch gekennzeichnet, dass** die Krempe (4), (5), (6) und (7) an vorgegebenen Punkten mit einer hakenförmigen höheren Nut (8), die sich nach einer kurzen freien Bahn (9) auf eine umgekehrte Weine in Form einer unteren Nut (10) wiederholt, versehen sind, wobei die Abschnitte (2) und (3) ausgebildet sind, um, nachdem sie durch das nebeneinanderlegen der Krempe (4) und (5) mit den Krempe (6) und (7) zusammengebaut wurden, wobei die Krempe bereits ihre jeweiligen Nuten (8) und (10) aufweisen, zwischen den Nuten einen Montageabschnitt (11, 11a) mit einem röhrenförmigen Körper aufzunehmen mit entweder:  
einem viereckigen Querschnitt (11), der durch zwei Wände (12), die um eine zentrale Falte (13) faltbar sind, und zwei nebeneinander liegenden Wände (15) mit zwei zusätzlichen Falten (14), wobei die Wände voneinander durch ihre freien Ränder (16) getrennt worden,  
oder  
einem dreieckigen Querschnitt (11a) mit koplanaren Wänden (22) neben den Falten (14), wobei die koplanaren Wände durch ihre freien Ränder (16) getrennt werden, ausgebindet wird, wobei jede der Wände (12) mit einem zusätzlichen Paar an Nuten versehen ist, das sich von dem höheren und niederen Rand der Wände als eine höhere vertikale Nut (17) und eine niedere vertikale Nut (18) erstreckt, wobei beide Nuten ausgerichtet sind und nebeneinander liegend sind, um ein elastisches Band (19) aufzu-

- nehmen, das auch mit der höheren/niederen Nut der Krempe (4, 5, 6, 7) in Eingriff steht und folglich die Anordnung unter Spannung hält.
2. Anzeige nach Anspruch 1, bei der sowie das elastische Band (19) zwischen der höheren (17) und der niedrigeren (18) Nut der Wände (12) und den gegenüberliegenden Krempe (4), (5), (6) und (7) eingepasst ist, die faltbaren Wände (12) des Montageabschnittes (11) in Richtung der inneren Flächen der Abschnitte (2) und (3) oder Anzeige (1) verbleiben und die anliegenden Wände (15) des Montageabschnittes (11) an ihren freien Rändern (16) an den Falzen der Krempe (4), (5), (6) und (7) verankert werden, wodurch sie sich zu einem Pinzettensystem fügen, das die Krempe (4), (5), (6) und (7) umschließt.
3. Anzeige nach Anspruch 1 oder 2, bei der, wenn beide Abschnitte (2) und (3) aufeinander zu bewegt werden, um die Anzeige (1) zu schließen, der Montageabschnitt (11) aufgrund des Pinzetteneffektes der getrennten Wände (15) flach wird, wobei die Anordnung aufgrund der Wirkung des elastischen Bandes (19) stark gespannt bleibt.
4. Anzeige nach einem der Ansprüche 1 bis 3, bei der, wenn die Anzeige (1), nachdem beide Abschnitte (2) und (3) leicht voneinander entfernt wurden, vertikal angeordnet wird, die Abschnitte (2) und (3) aufgrund des Öffnens der faltbaren Wände (12), die mit den getrennten Wänden (15) verbunden sind, getrennt werden, wodurch die Anzeige (1) montiert wird.
5. Anzeige nach den vorhergehenden Ansprüchen 1 bis 4, bei der sowohl der Vorderabschnitt (2a) als auch der Endabschnitt (3a) eine Falte (20) benachbart zu jeder der Krempe (4a), (5a), (6a) und (7a) umfasst, wobei die Krempe nebeneinander liegen und von einem Zwischenpunkt an den Seiten des Displays (1a) hervorstehen und ausgebildet sind, um den dreieckigen Montageabschnitt (11a) aufzunehmen.
6. Anzeige nach Anspruch 5, bei der die koplanaren Wände (22) des dreieckigen Montageabschnittes (11a) in Richtung der Seiten (21) der Anzeige (1) verbleiben und die freien Ränder (16) der Wände (22) die Krempe (4a), (5a), (6a) und (7a) umfassen.
7. Anzeige nach den vorhergehenden Ansprüchen 1 bis 4, bei der sowohl der Vorderabschnitt (2b) als auch der Endabschnitt (3b) nur eine Falte (23) an einem Punkt neben einer der Fallstellen der nebeneinander liegenden Krempe (4b), (5b), (6b) und (7b) umfasst.
8. Anzeige nach Anspruch 7, bei der die Abschnitte (2b)

und (3b) beklebt sind, wobei ihre einzige Falte (23) umgekehrt verbleibt, so dass die nebeneinander liegenden Krempe (4b), (5b), (6b) und (7b) folglich gegenüberliegend hervorstehen, so dass jede von jeder gegenüberliegenden Ecke der Anzeige (1) hervorsteht, um den Montageabschnitt (11) aufzunehmen.

9. Anzeige nach den Ansprüchen 1 bis 4, bei der die Anzeige (1) einen elliptischen Querschnitt aufweist.

## Revendications

1. Écran muni d'un système d'assemblage automatique constitué d'une partie avant (2) et d'une partie d'extrémité (3), toutes deux pourvues de sillons croisés formant des sections pliables (G), lesdites parties étant aptes à recevoir une impression publicitaire et à être pliées dans le sens de la longueur à leurs extrémités, afin de former, sur la partie avant (2), des rebords (4) et (5), et sur la partie d'extrémité (3), des rebords juxtaposés (6) et (7), **caractérisé en ce que** lesdits rebords (4), (5), (6) et (7) sont pourvus en des points prédéterminés d'une rainure supérieure en forme de crochet (8) qui, après un chemin libre court (9), est répétée de manière inversée pour former une rainure inférieure (10), lesdites parties (2) et (3), après avoir été assemblées par la juxtaposition des rebords (4) et (5) avec les rebords (6) et (7), lesquels rebords contiennent déjà leurs rainures respectives (8) et (10), sont configurées pour recevoir entre lesdites rainures une partie d'assemblage (11, 11a) comportant un corps tubulaire ayant :

soit une section quadrangulaire (11) formée par deux parois (12) pliables au moyen d'un sillon central (13) et deux parois adjacentes (15) comportant des sillons supplémentaires (14), les parois (15) étant séparées l'une de l'autre par leurs bords libres (16),

soit une section triangulaire (11a) comportant des parois coplanaires (22) près de sillons (14), lesquelles parois coplanaires sont séparées par leurs bords libres (16),

dans lequel chacune desdites parois (12) est pourvue d'une paire de rainures supplémentaires, faisant saillie depuis les bords supérieur et inférieur des parois pour former une rainure verticale supérieure (17) et une rainure verticale inférieure (18), les deux rainures étant alignées et juxtaposées de façon à recevoir une bande élastique (19) qui s'engage aussi dans la rainure supérieure/inférieure des rebords (4, 5, 6, 7), maintenant ainsi l'assemblage tendu.

2. Écran selon la revendication 1, dans lequel, après le montage de la bande élastique (19) entre les rai-

- nuces supérieure (17) et inférieure (18) des parois (12) et les rebords juxtaposés (4), (5), (6) et (7), les parois pliables (12) de la partie d'assemblage (11) reposent vers les faces internes des parties (2) et (3) de l'écran (1), et les parois adjacentes (15) de la partie d'assemblage (11) sont accrochées par leurs bords libres (16) aux plis des rebords (4), (5), (6) et (7), formant ainsi un système de pinces qui embrassent les rebords (4), (5), (6) et (7). 5
- 10
3. Écran selon la revendication 1 ou 2, dans lequel, quand on rapproche les deux parties (2) et (3) pour fermer l'écran (1), la partie d'assemblage (11) s'aplatit en raison de l'effet de pinces des parois séparées (15), l'ensemble restant fermement sous tension par l'action de la bande élastique (19). 15
4. Écran selon l'une quelconque des revendications 1 à 3, dans lequel, quand l'écran (1) est positionné verticalement, après avoir légèrement écarté les parties (2) et (3) l'une de l'autre, lesdites parties (2) et (3) se séparent en raison de l'ouverture des parois pliables (12) conjointement avec les parois séparées (15), assemblant ainsi l'écran (1). 20
- 25
5. Écran selon les précédentes revendications 1 à 4, dans lequel chacune des partie avant (2a) et partie d'extrémité (3a) comprend un sillon (20) près de chacun des rebords (4a), (5a), (6a) et (7a), lesquels rebords sont juxtaposés et saillants depuis un point intermédiaire sur les côtés de l'écran (1a) et configurés pour recevoir la partie d'assemblage triangulaire (11a). 30
6. Écran selon la revendication 5, dans lequel les parois coplanaires (22) de la partie d'assemblage triangulaire (11a) reposent vers les côtés (21) de l'écran (1) et les bords libres (16) desdites parois (22) embrassent les rebords (4a), (5a), (6a) et (7a). 35
- 40
7. Écran selon les précédentes revendications 1 à 4, dans lequel chacune des partie avant (2b) et partie d'extrémité (3b) comprend un seul sillon (23) en un point situé près de l'un des plis des rebords juxtaposés (4b), (5b), (6b), (7b). 45
8. Écran selon la revendication 7, dans lequel les parties (2b) et (3b) sont collées, leur seul sillon (23) restant inversé, de sorte que les rebords juxtaposés (4b), (5b) et (6b), (7b) font en conséquence saillie en opposition, de telle manière que chacun fait saillie depuis chaque sommet opposé de l'écran (1) afin de recevoir la partie d'assemblage (11). 50
9. Écran selon les revendications 1 à 4, dans lequel l'écran (1) présente une section transversale elliptique. 55

FIG. 1

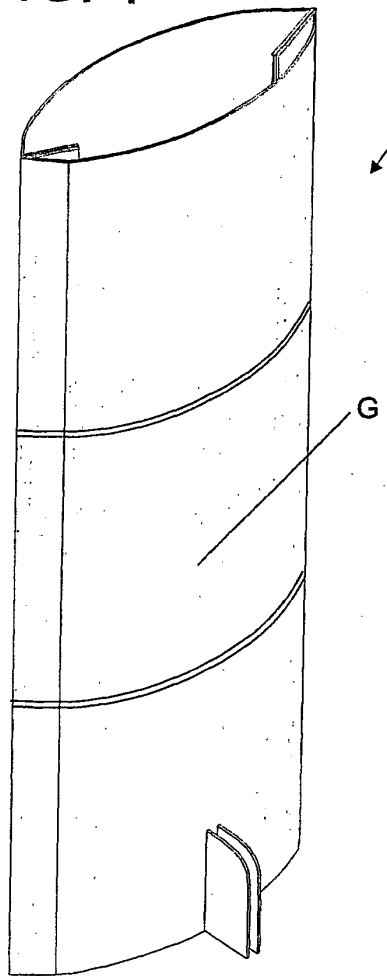


FIG. 2

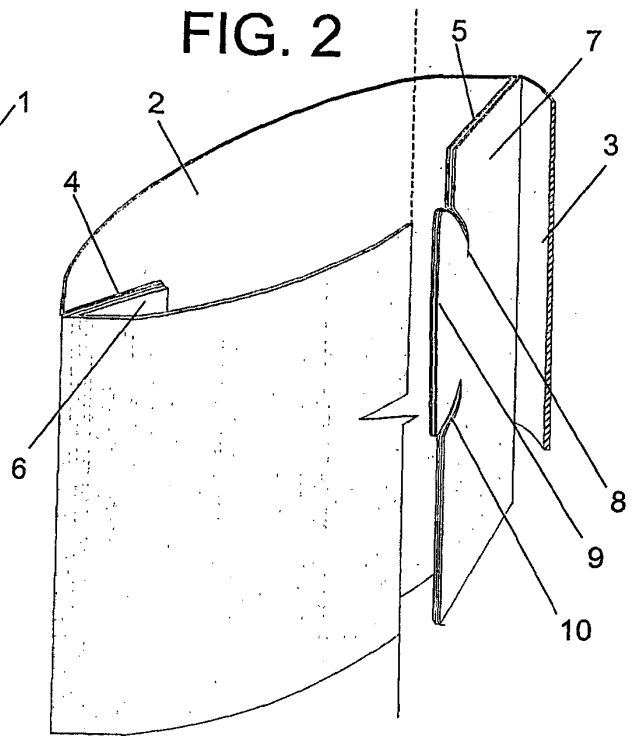


FIG. 3

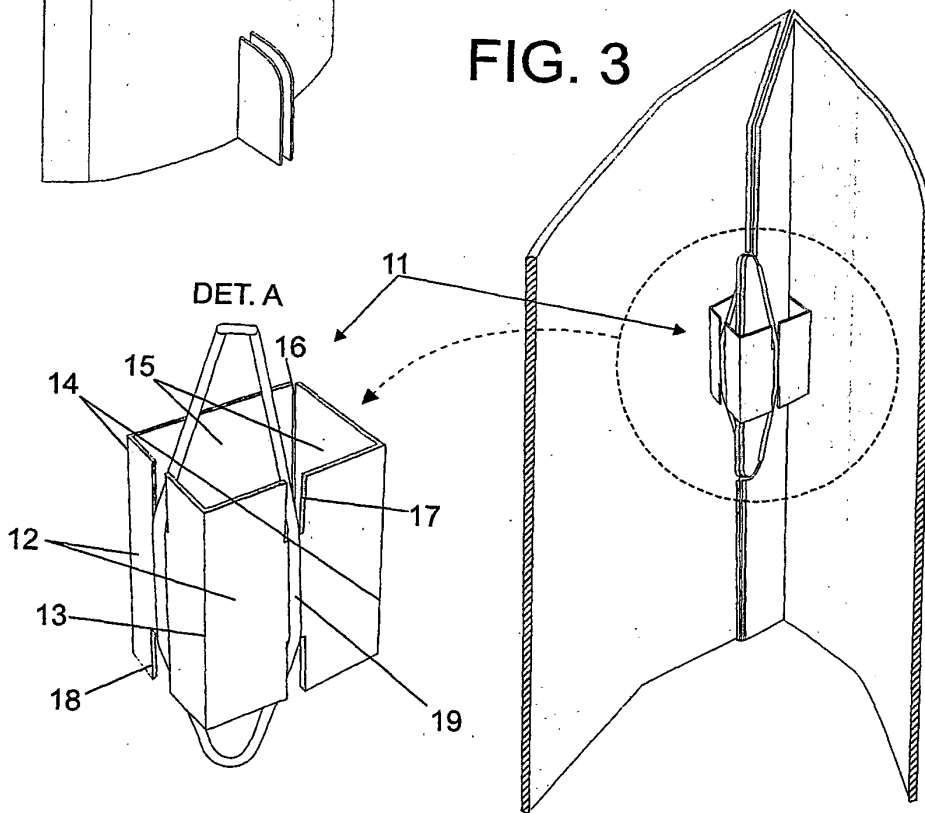


FIG. 4

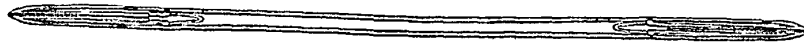


FIG. 5

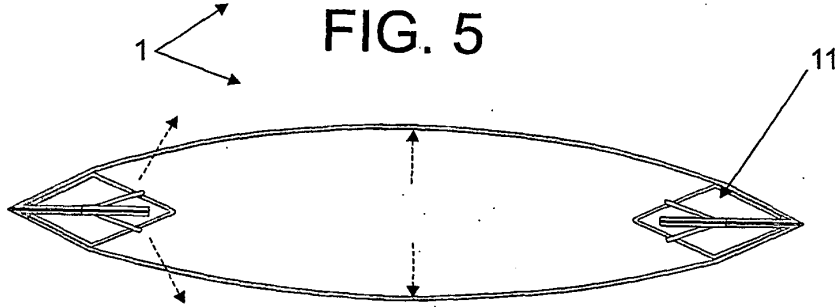


FIG. 6

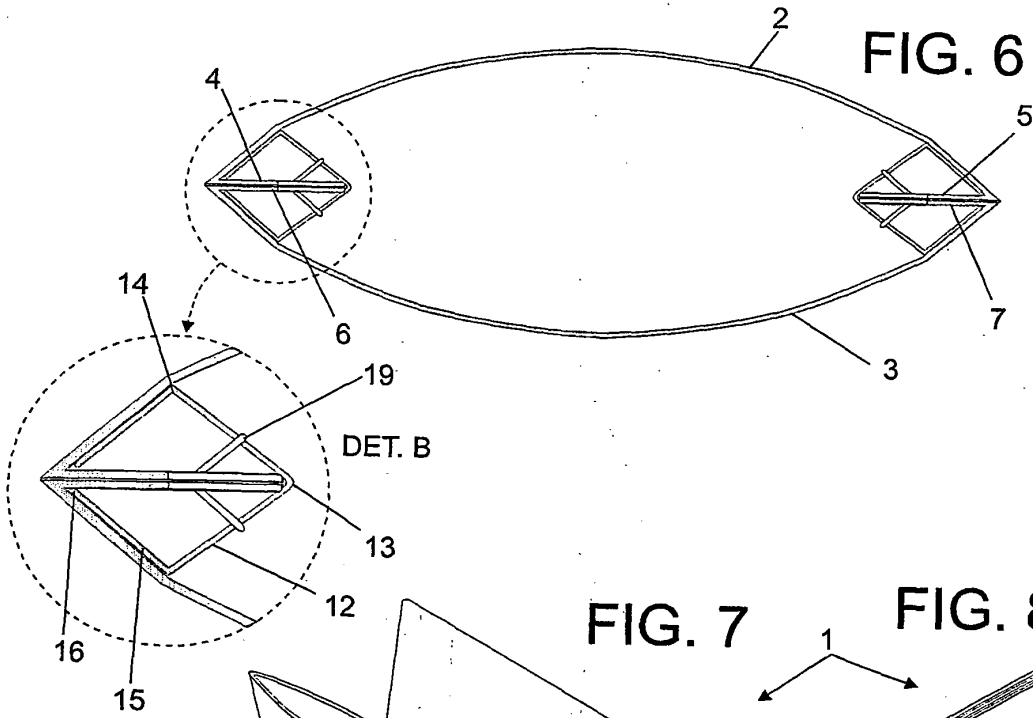
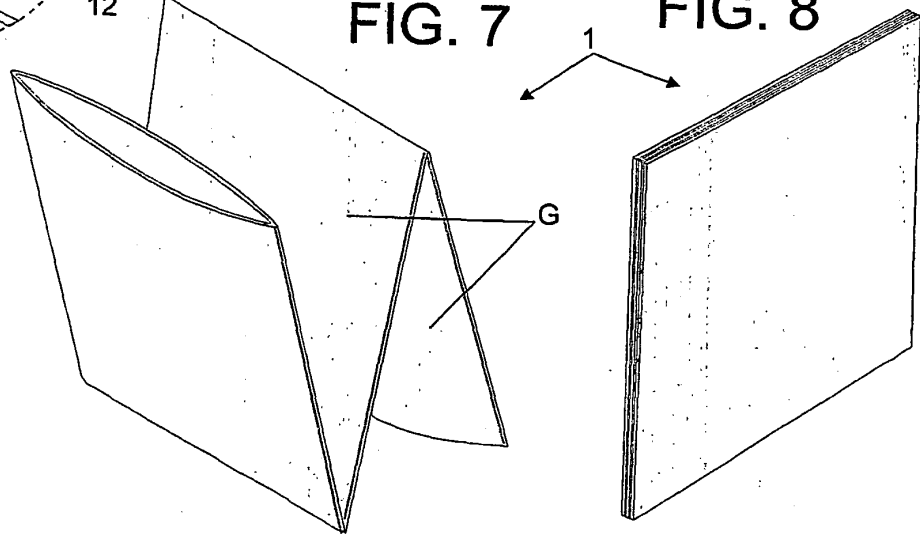


FIG. 7

FIG. 8



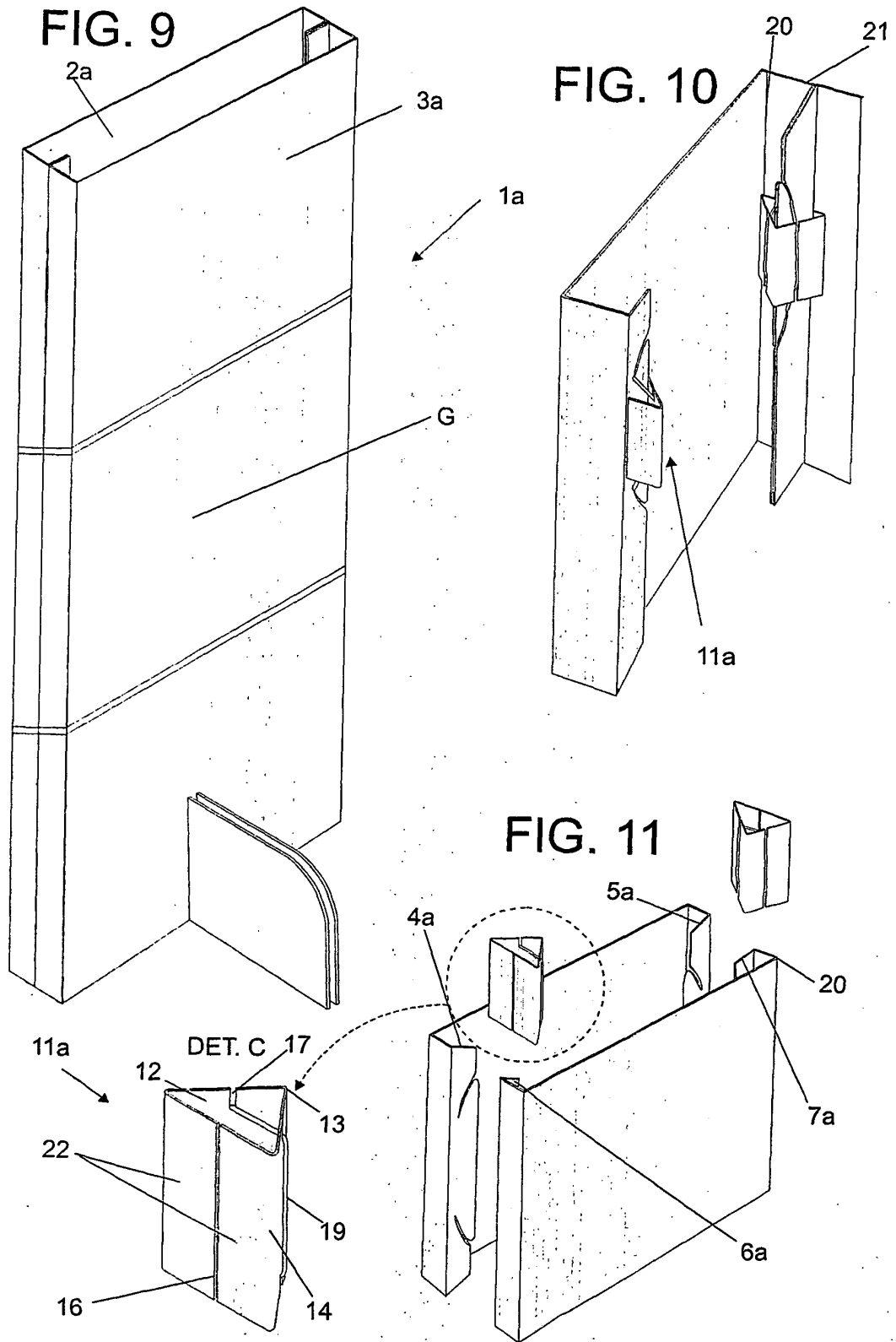


FIG. 12

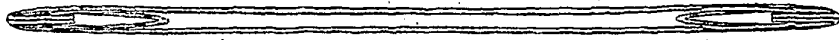


FIG. 13

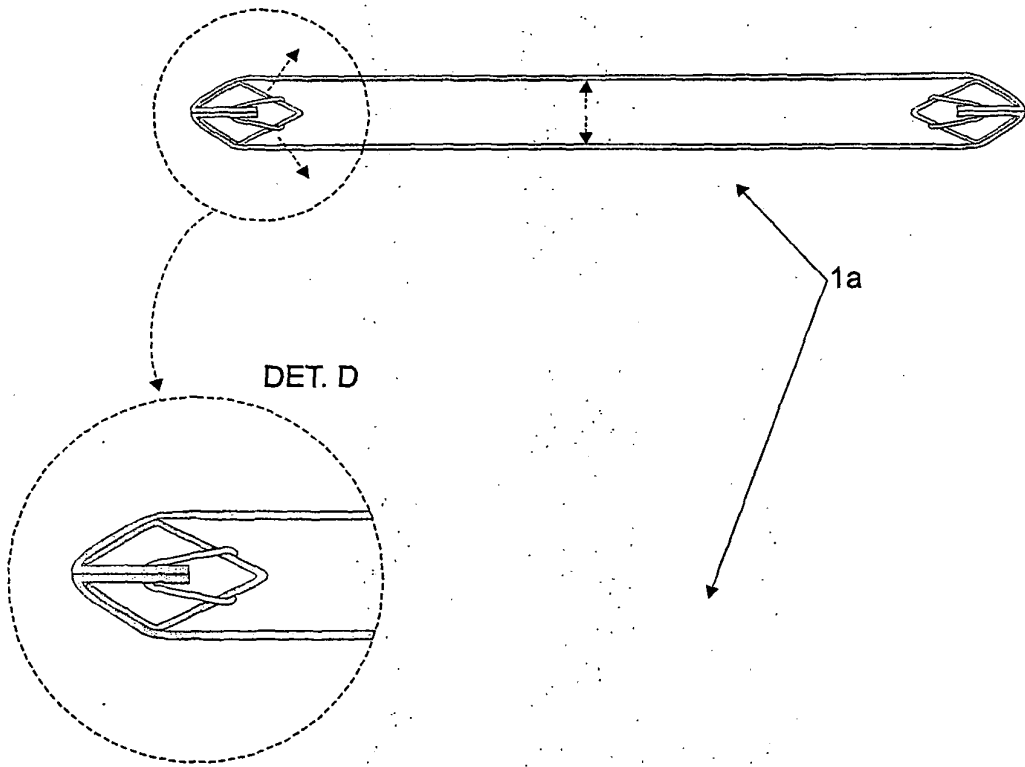


FIG. 14

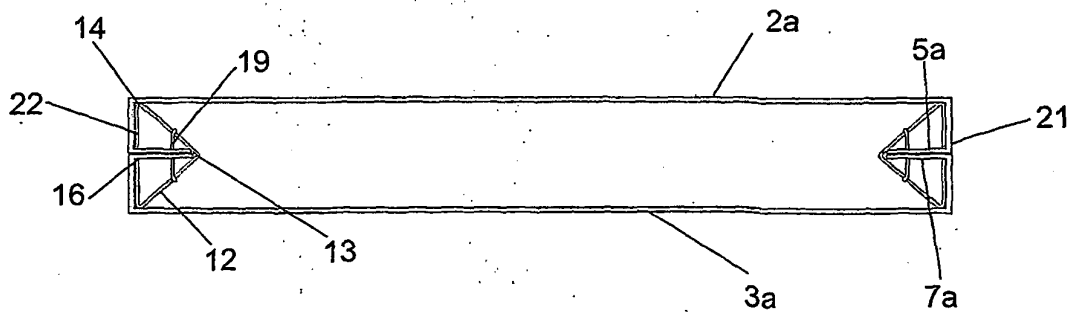


FIG. 15

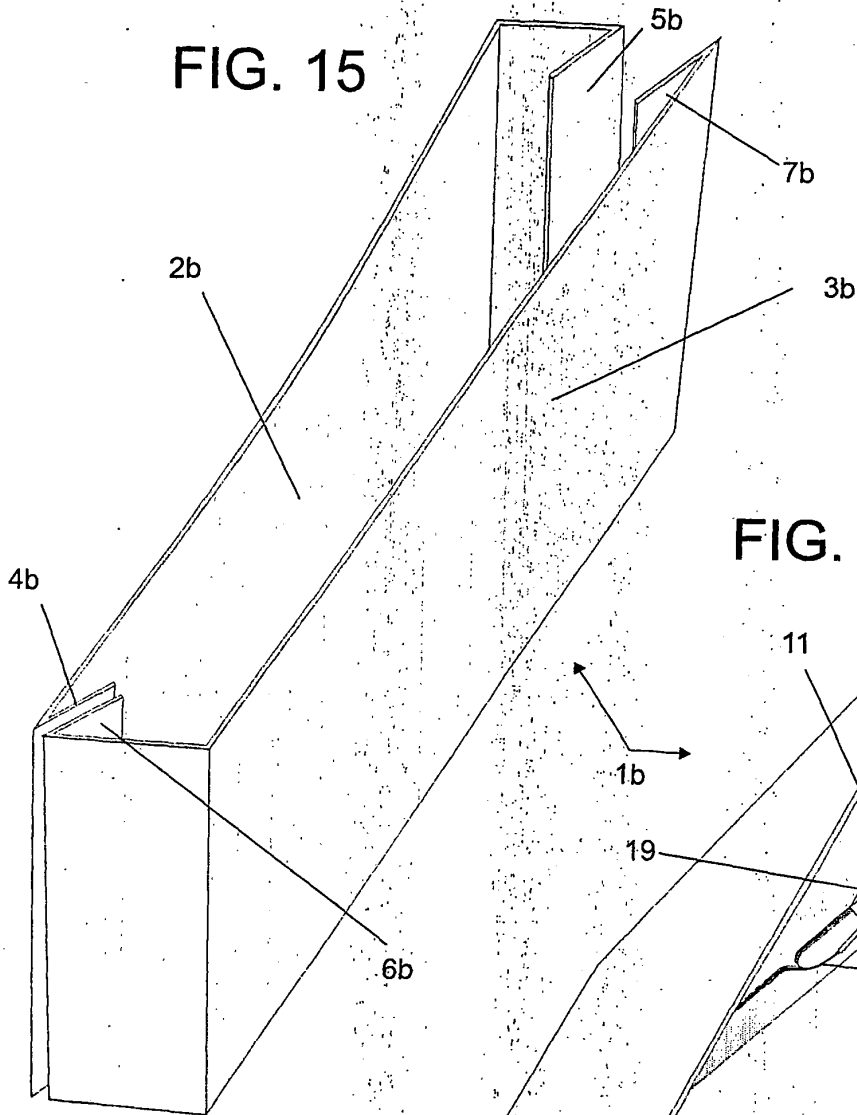
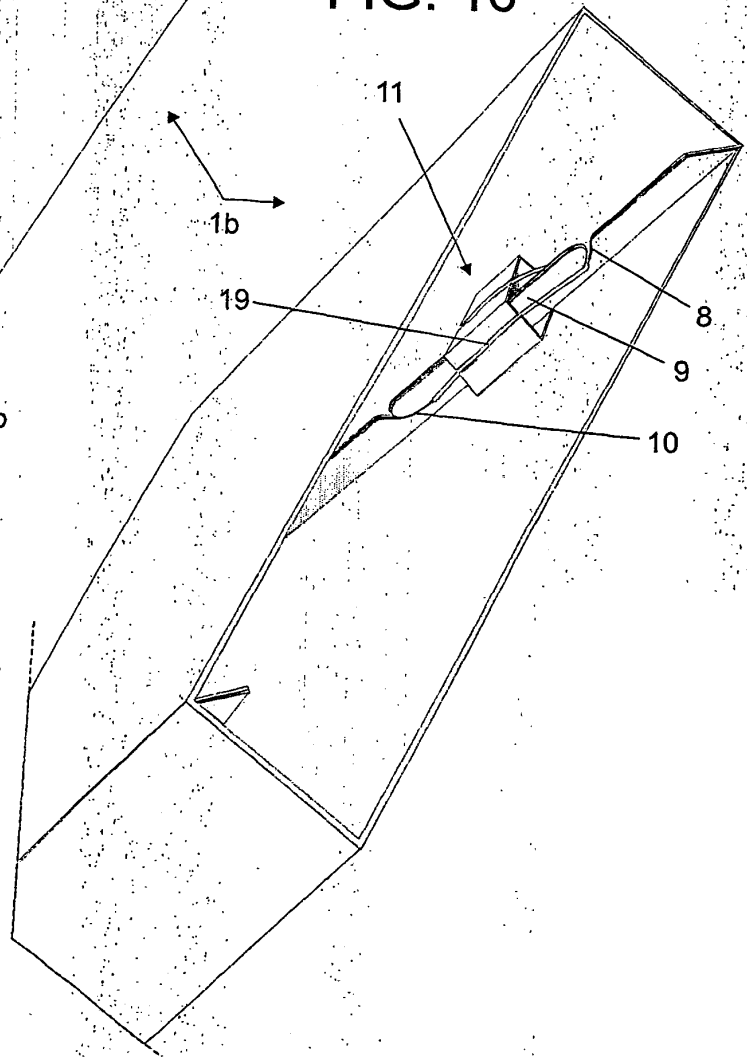


FIG. 16



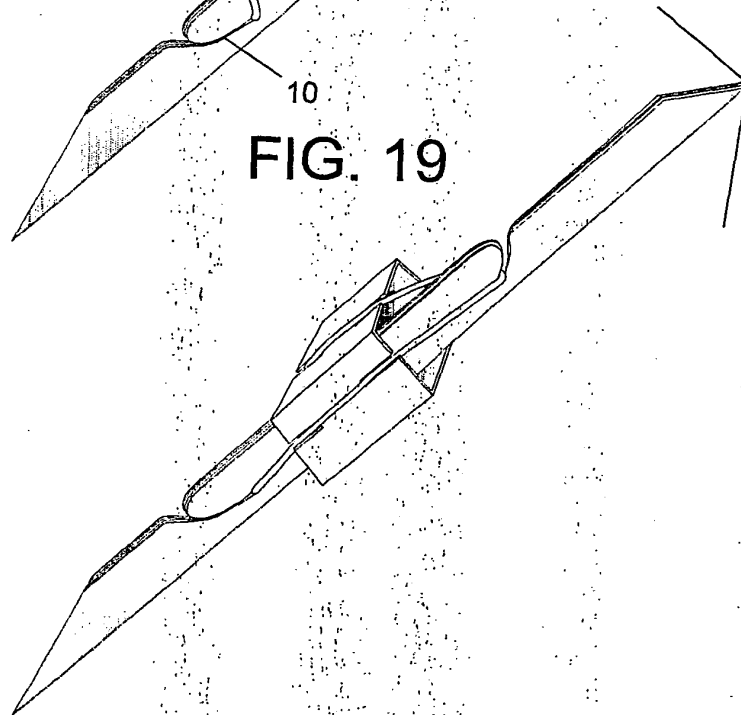
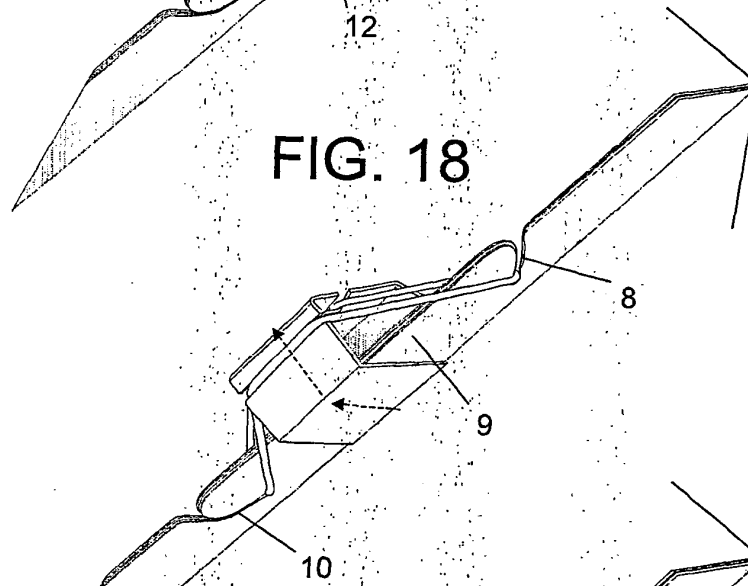
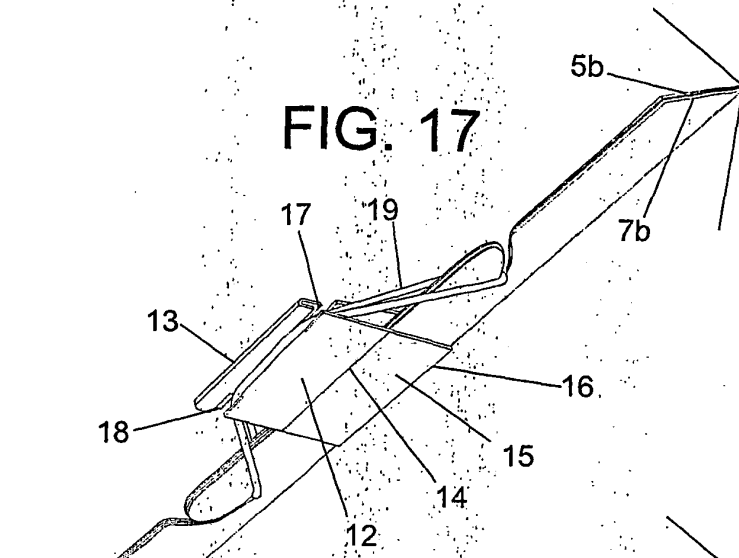


FIG. 20

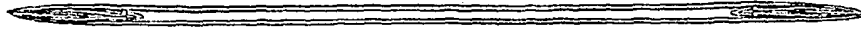


FIG. 21

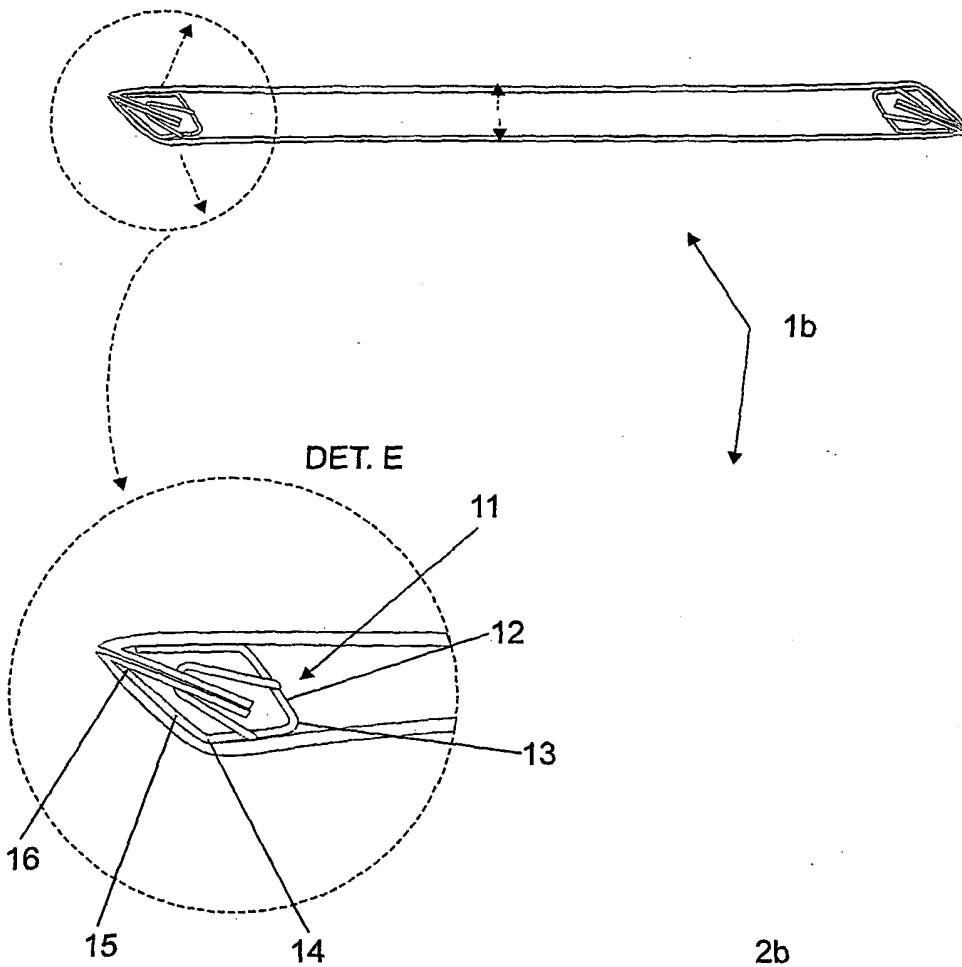
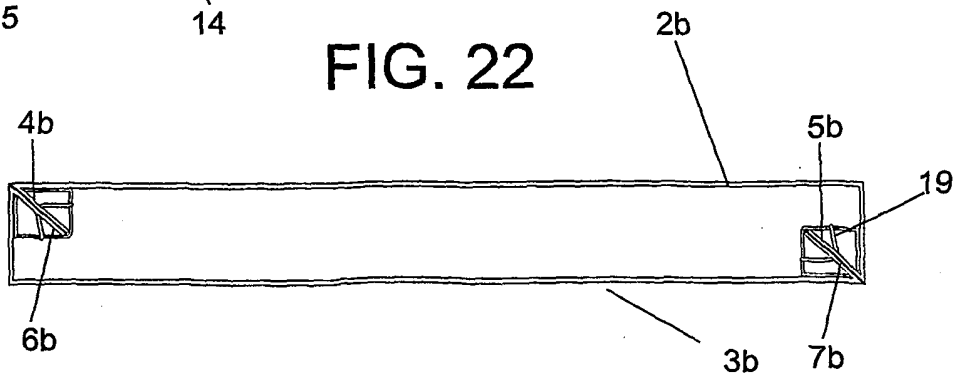


FIG. 22



**REFERENCES CITED IN THE DESCRIPTION**

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