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(54) **Writing implement**

Schreibgerät

Instrument d'écriture

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US-A- 5 626 430

Description

[0001] The present invention relates to a writing implement such as a ballpoint pen, a mechanical pencil, and a fountain pen. More particularly, the present invention relates to a writing implement that is suitable to be used by those with handicap in their hand and/or finger(s).

[0002] Writing implements that are generally used are rodlike. These conventional writing implements are to be held by three fingers, or the thumb, the index finger, and the middle finger, when used. However, the conventional writing implement will move above through the root between the thumb and the index finger when the pen point is pushed to the paper surface when the implement is used by a user with a weak grip. Therefore, the conventional writing implement is extremely difficult to use for those with handicap in their hand and/or finger(s).

[0003] It is an object of the present invention to provide a writing implement that is suitable to be used by those with handicap in their hand and/or finger(s).

[0004] The above object and others are accomplished by providing a writing implement which has a grip having a terminal end having a curved surface adapted to contact with the palm of a user, the grip being formed such that the grip is held with the fingers and the palm in such a way that the grip is wrapped by the hand, and a pen point extending from a front end of the grip with a given angle. The grip can optionally have one or more concave contours adapted to fit the finger(s) of the user, wherein each concave contour can fit one or more fingers.

[0005] Embodiments of the present invention will now be described with reference to the accompanying drawings, in which:

FIG. 1A shows a right side view of a writing implement of an embodiment of the present invention;

FIG. 1B shows a left side view of the writing implement of FIG. 1A;

FIG. 1C shows a front view of the writing implement of FIG. 1A;

FIG. 1D shows a bottom view of the writing implement of FIG. 1A;

FIG. 1E shows a plan view of the writing implement of FIG. 1A;

FIG. 2 shows the writing implement of FIG. 1A as held in a hand;

FIG. 3A shows a right side view of a writing implement of another embodiment of the present invention;

FIG. 3B shows a left side view of the writing implement of FIG. 3A;

FIG. 3C shows a front view of the writing implement of FIG. 3A;

FIG. 3D shows a rear elevation of the writing implement of FIG. 3A;

FIG. 3E shows a bottom view of the writing implement of FIG. 3A; and

FIG. 3F shows a plan view of the writing implement of FIG. 3A.

[0006] Referring now to FIGS. 1A - 1E, the writing implement of this embodiment has a grip 11 having a curved surface formed such that the grip 11 is held with the fingers and the palm in such a way that the grip 11 is wrapped by the hand. The grip 11 shows a pear-like shape in the plan view in FIG. 1E and the bottom view in FIG. 1D. The grip 11 shows a comb-like shape in the side views in FIGS. 1A and 1B. The grip 11 has an oval shape that extends in the direction from the front end 11a to the terminal end 11b wherein the grip 11 is formed such that the front end 11a is narrower than the terminal end 11b.

[0007] The terminal end 11b of the grip 11 has a curved bulbous surface adapted to contact with the palm. A pen point 12 extends out from a front end 11a of the grip with a given angle. The pen point 12 can be a pen point of, for example, a ballpoint pen, a mechanical pencil, and a fountain pen. The grip 11 houses a member 13 to store, for example, ink (in the case of a ballpoint pen or a fountain pen) or leads (in the case of mechanical pencil) as indicated by a dashed line in FIG. 1A.

[0008] When the writing implement described above is used, the implement is held in such a way that the terminal end 11b contacts with the palm, that the thumb and the index fingers pinches the front end 11a or an area near it, and that the middle finger, the ring finger, and the little finger wraps the bottom surface, as shown in FIG. 2. The implement is supported by not only fingers but also the palm when used. Therefore, in order to make the implement handy for those with handicap in their hand and/or finger(s), the pen point 12 should form a certain angle with the grip 11.

[0009] The writing implement described above is particularly suitable to be used by those with handicap in their hand and/or finger(s). The term "handicap" refers to any kind of problem that spoils dexterity at conventional writing implement. Therefore, the handicap can be congenital or acquired and the acquired handicap can be temporal or permanent. For example, those who has an injury to their fingers or those who has a congenital defect in their fingers can be called "those with handicap in their hand and/or finger(s)".

[0010] It will be appreciated by those skilled in the art that this implement can be used by those without one or more fingers because the implement is supported by not only fingers but also the palm. It will also be appreciated by those skilled in the art that this implement can be used by those children who do not yet have a strong grip enough to hold the conventional writing implement.

[0011] The grip 11 can optionally have one or more concave contours 14 adapted to fit the finger(s) of the user, wherein each concave contour can fit one or more

fingers. This will allow the user to hold the implement even more firmly and stably. FIGS. 1A - 1E show the grip 11 which has 4 concave contours, one adapted to fit the thumb, another adapted to fit the index finger, a third adapted to fit the middle finger, and the other adapted to fit both of the ring finger and the little finger. It will be appreciated by those skilled in the art that depending upon the particular application, the numbers of concave contours and the numbers of fingers each concave contour is to fit can be decided. For example, the grip can have only two concave contours adapted to fit the thumb and the index finger, respectively, or the grip can have five concave contours adapted to fit all the five fingers, respectively.

[0012] The grip can be colored in different colors such that those who also have bad eyesight can hold the grip with ease. For example, as shown in FIGS. 3A - 3F, by coloring in one color a surface of the grip on which the finger will touch the grip when the implement is used and by coloring in a different color the rest of the surface, those with a weak grip as well as bad eyesight can hold the grip with ease.

[0013] Thus, the present invention will accomplish the object to provide a writing implement that is suitable to be used by those with handicap in their hand and/or finger(s).

[0014] The terms and expressions which have been employed are used as terms and expressions of description and not of limitation, and there is no intention in the use of such terms and expressions of excluding any equivalent of the features shown and described, but it is recognized that various modifications are possible within the scope of the appended claims.

Claims

1. A writing implement comprising a pen point (12) and a grip (11),
the grip (11) having a smoothly curving surface as a whole; the grip (11) comprising a front surface (21), a rear surface (22), a bottom surface (23), and, first and second opposed side surfaces (24), the rear surface (22) extending rearward from the front surface (21), the side surfaces (24) extending upward from the bottom surface (23) and downward from the rear surface (22), the rear surface (22) having a terminal end (25) configured to fit the palm of a user, the bottom surface (23) configured to engage at least one of the middle finger and the ring finger of the user;
and the pen point (12) extending from the front surface (21);
wherein the first and the second opposed side surfaces (24) are provided with concave contours (14), the concave contours (14) being smoothly joined to the rest of the side surfaces (24),
wherein the first side surface (24) comprises a con-

cave contour (14) configured to engage the thumb of the user, and wherein the second side surface (24) comprises at least two separate concave contours (14) adapted to engage the index finger and the middle finger of the user;

characterized in that

the grip (11) is so configured that when the implement is in use, the portion of the implement which is farthest from the pen point (12) is within the palm of the user.

2. The writing implement of claim 1, wherein the second side surface comprises at least three separate concave contours adapted to engage the index finger, the middle finger, ring finger and little finger of the user.
3. The writing implement of claim 1, wherein the grip (11) is so configured that when the implement is in use, the thumb, the index finger, and the middle finger of the user are positioned closer to the pen point (12) than the ring finger and the little finger of the user.
4. The writing implement of any of claim 1-3, wherein a substantial portion of the side surfaces (24) and the bottom surface (23) is colored in one color and a substantial portion of the front surface (21) and the rear surface (22) is colored in another color.
5. The writing implement of any of claim 1-4, wherein the writing implement is configured such that, when in use, said terminal end (25) is positioned lower than a virtual extension line which is drawn from the pen point (12) so as to be perpendicular to the front surface (21).
6. The writing implement of any of claim 1-5, wherein the writing implement is configured such that, when in use, all five fingertips of a user come in contact with the writing implement.
7. The writing implement of any of claim 1-5, wherein the writing implement comprises on its bottom surface (23) two dents adapted to engage at least the middle finger and the ring finger of the user.
8. The writing implement of claim 7, wherein the dents smoothly join with two of the concave contours (14) of said second side surface (24).

Patentansprüche

1. Schreibgerät mit einer Federspitze (12) und einem Griff (11), der eine sich insgesamt glatt krümmende Oberfläche besitzt;
wobei der Griff (11) eine vordere Oberfläche

(21), eine hintere Oberfläche (22), eine Bodenoberfläche (23) und erste und zweite entgegengesetzt liegende Seitenoberflächen (24) aufweist, wobei die hintere Oberfläche (22) sich nach hinten von der vorderen Oberfläche (21) erstreckt und wobei die

Seitenoberflächen (24) sich nach oben von der Bodenoberfläche (23) und nach unten von der hinteren Oberfläche (22) erstrecken, wobei die hintere Oberfläche (22) ein Abschlußende (25) besitzt, und zwar derart konfiguriert, dass es in die Handfläche eines Benutzers passt, und wobei die Bodenoberfläche (23) derart konfiguriert ist, dass der Mittelfinger und/oder Ringfinger des Benutzers erfasst wird;

wobei die Federspitze (12) sich von der vorderen Oberfläche (21) weg erstreckt; wobei die ersten und zweiten entgegengesetzt liegenden Seitenoberflächen (24) mit konkaven Konturen (14) versehen sind, die sich glatt mit dem Rest der Seitenoberflächen (24) vereinigen, wobei die erste Seitenoberfläche (24) eine

konkave Kontur (14) aufweist, und zwar konfiguriert zum Erfassen des Daumens des Benutzers und wobei ferner die zweite Seitenoberfläche (24) mindestens zwei gesonderte, konkave Konturen (14) aufweist, und zwar geeignet zum Eingriff mit dem Zeigefinger und dem Mittelfinger des Benutzers;

dadurch gekennzeichnet, dass der Griff (11) so konfiguriert ist, dass dann, wenn das Gerät verwendet wird, der Teil des Gerätes, der am weitesten von der Federspitze (12) weg liegt, innerhalb der Handfläche des Benutzers liegt.

2. Schreibgerät nach Anspruch 1, wobei die zweite Seitenoberfläche mindestens drei gesonderte konkave Konturen aufweist, und zwar geeignet zum Eingriff mit dem Zeigefinger, dem Mittelfinger, dem Ringfinger und dem kleinen Finger des Benutzers.
3. Schreibgerät nach Anspruch 1, wobei der Griff (11) derart konfiguriert ist, dass dann, wenn das Gerät benutzt wird, der Daumen, der Zeigefinger und der Mittelfinger des Benutzers näher an der Federspitze (12) positioniert sind, als der Ringfinger und der kleine Finger des Benutzers.
4. Schreibgerät nach einem der Ansprüche 1 bis 3, wobei ein beträchtlicher Teil der Seitenoberflächen (24) und der Bodenoberfläche (23) in einer Farbe eingefärbt sind und ein wesentlicher Teil der vorderen Oberfläche (21) und der hinteren Oberfläche (22) in einer anderen Farbe eingefärbt sind.
5. Schreibgerät nach einem der Ansprüche 1 bis 4, wobei das Schreibgerät derart konfiguriert ist, dass dann, wenn es im Gebrauch ist, das Abschlußende (25) niedriger positioniert ist als eine virtuelle Verlängerungslinie, die von der Federspitze (12) senkrecht zur vorderen Oberfläche (21) gezogen wird.

6. Schreibgerät nach einem der Ansprüche 1 bis 5, wobei das Schreibgerät derart konfiguriert ist, dass dann, wenn es im Gebrauch ist, alle fünf Fingerspitzen eines Benutzers in Kontakt mit dem Schreibgerät kommen.

7. Schreibgerät nach einem der Ansprüche 1 bis 5, wobei das Schreibgerät an seiner Bodenoberfläche (23) zwei Vertiefungen besitzt, und zwar geeignet zum Eingriff mit mindestens dem Mittelfinger und dem Ringfinger des Benutzers.

8. Schreibgerät nach Anspruch 7, wobei die Vertiefungen sich glatt mit den zwei konkaven Konturen (14) der zweiten Seitenoberfläche (24) vereinigen.

Revendications

1. Instrument d'écriture comprenant un point (12) scripteur et un manche (11), le manche (11) ayant une surface en courbe douce dans son ensemble ; le manche (11) comprenant une surface (21) avant, une surface (22) arrière, une surface (23) de fond et des première et deuxième surfaces (24) latérales opposées, la surface (22) arrière s'étendant vers l'arrière à partir de la surface (21) avant, les surfaces (24) latérales s'étendant vers le haut à partir de la surface (23) de fond et vers le bas à partir de la surface (22) arrière, la surface (22) arrière ayant une extrémité (25) configurée de manière à s'adapter à la paume d'un utilisateur, la surface (23) de fond étant configurée pour coopérer avec au moins l'un du doigt majeur et annulaire de l'utilisateur ; le point (12) scripteur s'étendant à partir de la surface (21) avant ; les première et deuxième surfaces (24) latérales opposées étant munies de contours (14) concaves, les contours (14) concaves étant réunis de manière douce au reste des surfaces (24) latérales, la première surface (24) latérale comprenant un contour (14) concave configuré pour coopérer avec le pouce de l'utilisateur, et la deuxième surface (24) latérale comprenant au moins deux contours (14) concaves distincts conçus pour coopérer avec l'index et le majeur de l'utilisateur, **caractérisé en ce que**

le manche (11) est configuré de façon à ce que, lorsque l'instrument est en utilisation, la partie de l'instrument qui est la plus éloignée du point (12) scripteur est dans la paume de l'utilisateur.

2. Instrument d'écriture suivant la revendication 1, dans lequel la surface latérale comprend au moins trois contours concaves distincts conçus pour coopérer avec l'index, le majeur, l'annulaire et le petit doigt de l'utilisateur.

3. Instrument d'écriture suivant la revendication 1,

dans lequel le manche (11) est configuré de façon à ce que, lorsque l'instrument est en utilisation, le pouce, l'index et le majeur de l'utilisateur sont placés plus près du point (12) scripteur que l'annulaire et le petit doigt de l'utilisateur

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4. Instrument d'écriture suivant l'une quelconque des revendications 1 à 3, dans lequel une partie substantielle des surfaces (24) latérales et de la surface (23) de fond est colorée en une couleur et une partie substantielle de la surface (21) avant et de la surface (22) arrière est colorée en une autre couleur. 10
5. Instrument d'écriture suivant l'une quelconque des revendications 1 à 4, dans lequel l'instrument d'écriture est configuré de façon à ce que, lorsqu'il est en utilisation, l'extrémité (25) est placée plus bas qu'une ligne imaginaire de prolongement qui est tirée depuis le point (12) scripteur de façon à être perpendiculaire à la surface (21) avant. 15 20
6. Instrument d'écriture suivant l'une quelconque des revendications 1 à 5, dans lequel l'instrument d'écriture est configuré de façon à ce que, lorsqu'il est en utilisation, toute les cinq pointes de doigt d'un utilisateur viennent en contact avec l'instrument d'écriture. 25
7. Instrument d'écriture suivant l'une quelconque des revendications 1 à 5, dans lequel l'instrument d'écriture comprend sur sa surface (23) deux bossages conçus pour coopérer avec au moins le majeur et l'annulaire de l'utilisateur. 30
8. Instrument suivant la revendication 7, dans lequel les bossages se réunissent en douceur avec deux des contours (14) concaves de la deuxième surface (24) latérale. 35

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FIG.1A

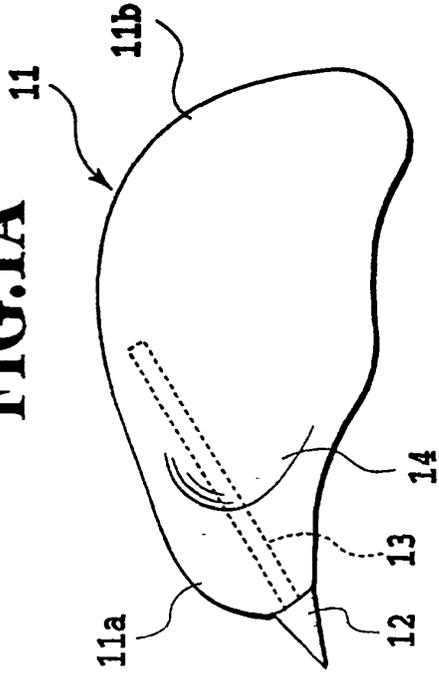


FIG.1B

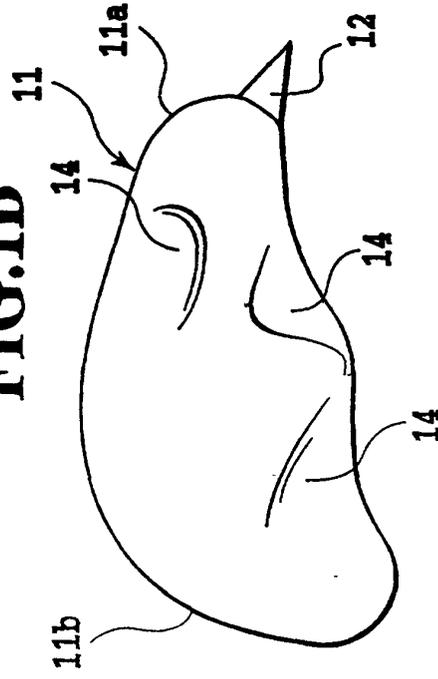


FIG.1C

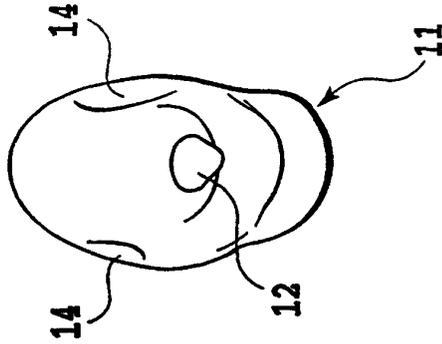


FIG.1D

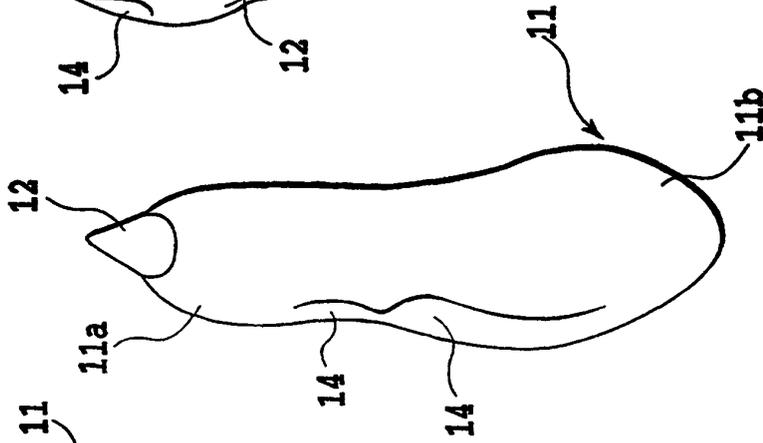


FIG.1E

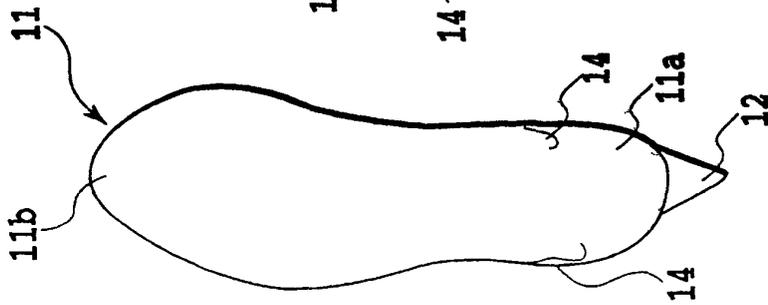
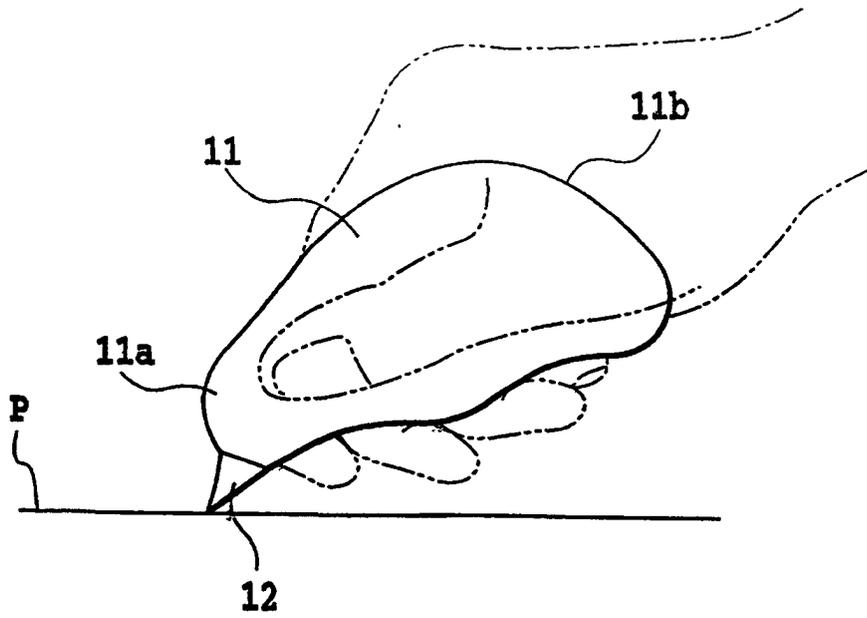


FIG.2



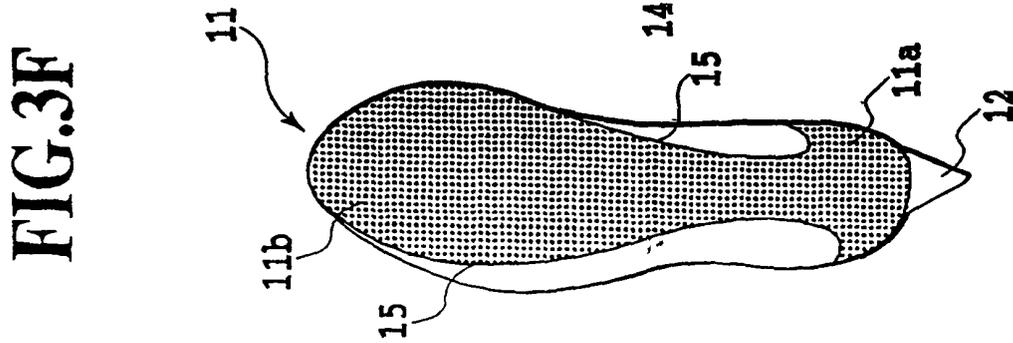
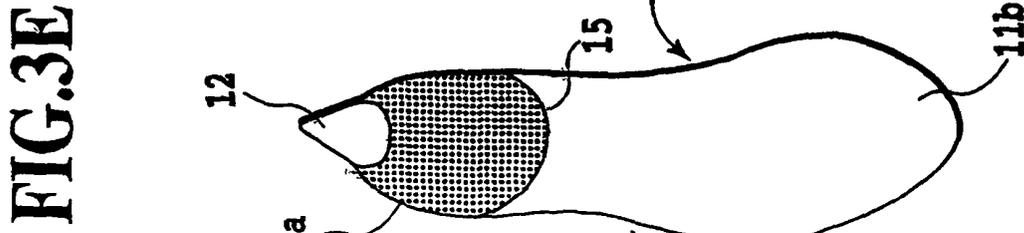
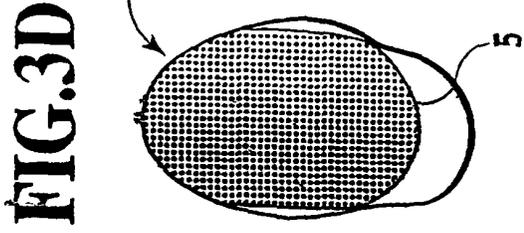
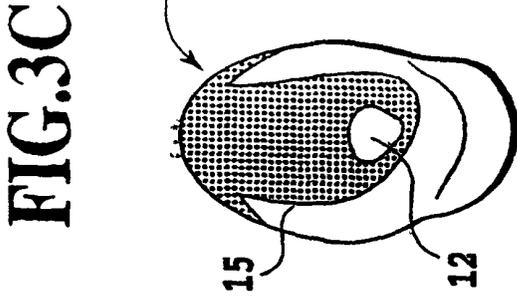
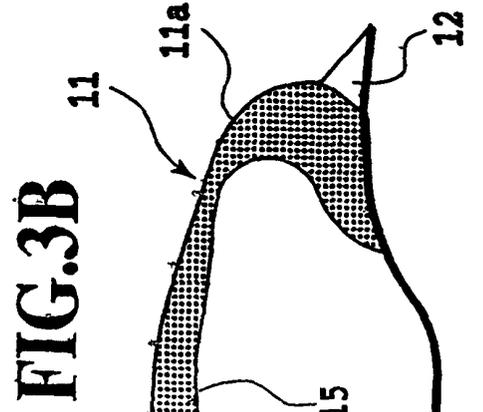
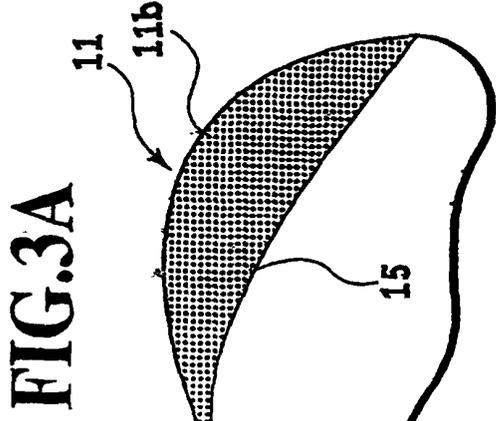


FIG.1A

