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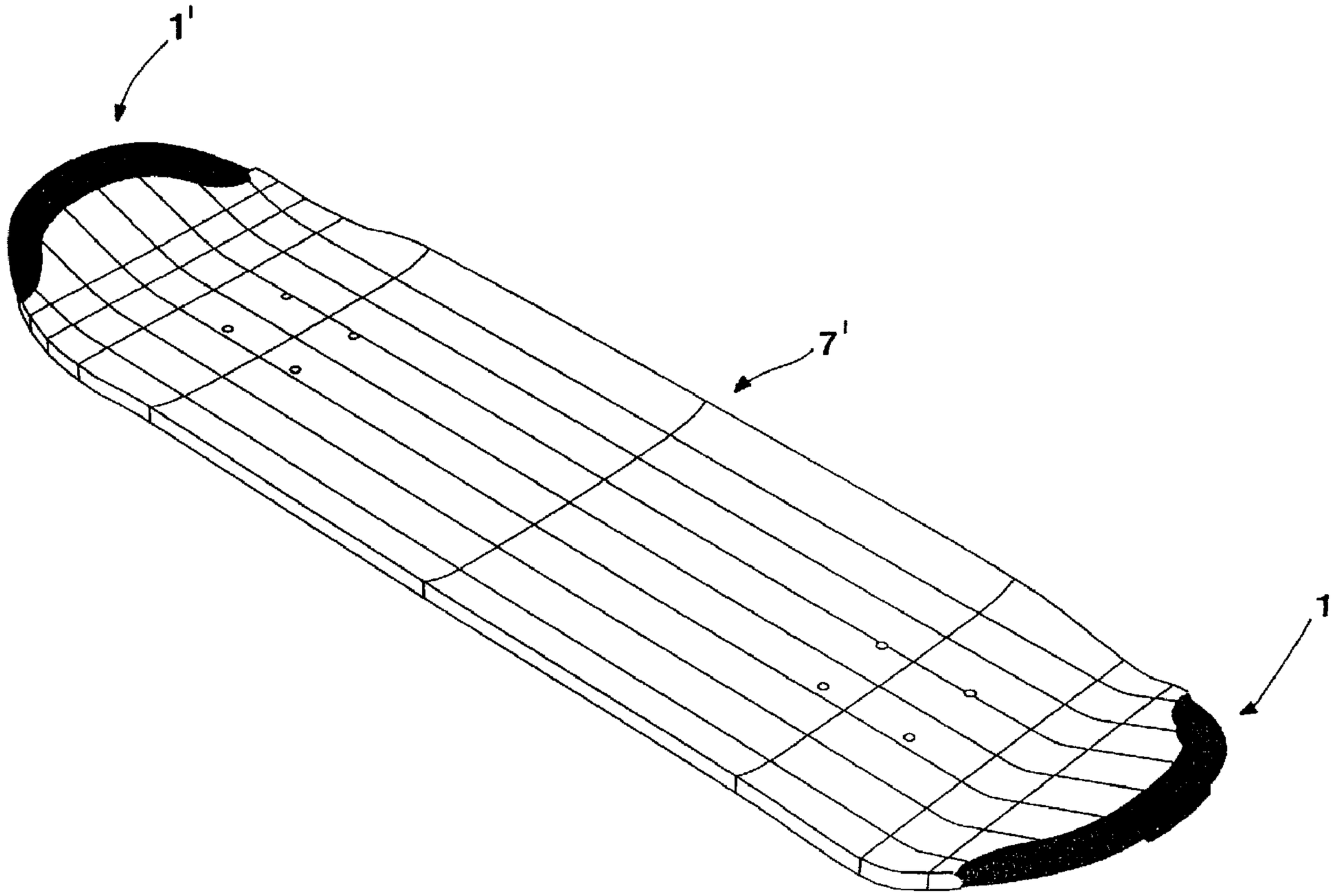


(57) Abrégé/Abstract:
The present invention refers to a kicktail concave skateboard (7), which in the area of at least one of its end portions (8) is equipped with an element (1) of a different material than the rest of the skateboard (7). The invention also refers to said element (1) per se, to a blank for a skateboard and also to a method for manufacturing a blank for a skateboard (7). The skateboard (7) according to the present invention is characterized in that the element (1) has a side that in the position of use of the skateboard (7) faces towards

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(57) Abrégé(suite)/Abstract(continued):
the ground for the skateboard (7), that the element (1) has a shape that is adapted to the shape of the end portion (8) of the skateboard (7), and that the element (1) is manufactured of a material that has a lower mechanical damping capacity and a higher modulus of elasticity than the rest of the material of the skateboard (7).

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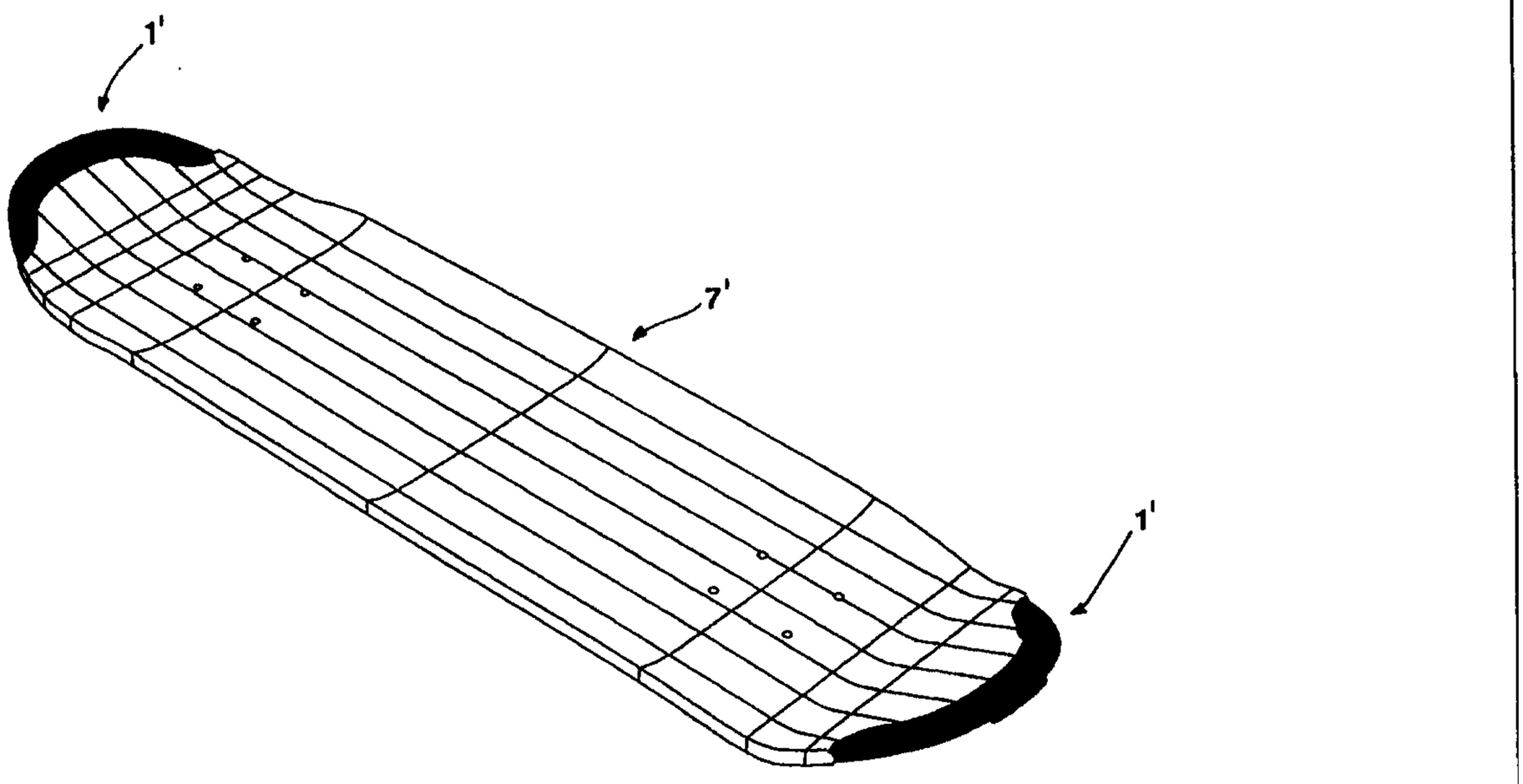



(57) Abstract

The present invention refers to a kicktail concave skateboard (7), which in the area of at least one of its end portions (8) is equipped with an element (1) of a different material than the rest of the skateboard (7). The invention also refers to said element (1) per se, to a blank for a skateboard and also to a method for manufacturing a blank for a skateboard (7). The skateboard (7) according to the present invention is characterized in that the element (1) has a side that in the position of use of the skateboard (7) faces towards the ground for the skateboard (7), that the element (1) has a shape that is adapted to the shape of the end portion (8) of the skateboard (7), and that the element (1) is manufactured of a material that has a lower mechanical damping capacity and a higher modulus of elasticity than the rest of the material of the skateboard (7).

# SKATEBOARD

## Technical Field of the Invention

The present invention refers to a kicktail concave skateboard, which in the area of at least one of its end portions is equipped with an element of a different material than the rest of the skateboard, said element having a side that in the position of use of the skateboard faces towards the ground for the skateboard, and that the element is manufactured of a material that has a lower mechanical damping capacity and a higher modulus of elasticity than the rest of the material of the skateboard. In addition, the invention also refers to the element itself, to a blank for a skateboard and to a method for manufacturing a blank for a skateboard according to the present invention. A definition of a kicktail concave skateboard is given below in the detailed description of the invention.

## Prior Art

Skateboarding has changed dramatically in the past decade. In the late 80s the maneuver known as an "ollie" was invented and has evolved to become the foundation of the modern sport. Every skateboard maneuver today is initiated with an ollie. An ollie enables the rider (and board) to become airborne to execute acrobatic maneuvers or clear obstacles. To perform an ollie the tip of the board is slammed against the riding surface and the skateboard "pops" in the air. While in the air the board is skillfully manipulated with the rider's feet in order to execute the desired trick or maneuver. The degree of energy transfer is central to the successful execution of the ollie. Execution of ollies causes severe wear to the tips of traditional skateboards. The wear compromises the structural integrity of the skateboard's tips and reduces the energy transfer rate between the tip and the riding surface. A new board has intact tips, maximizing the energy transfer (pop). As the tips wear, board performance diminishes due to a weaker structure and increased friction. The more significant the wear the poorer the board's performance.

Modern skateboards are made of laminated maple, a material with poor mechanical properties (not especially hard and/or wear resistant, prone to humidity). The tips of the boards wear quickly. Ridden daily the board has a functional life of 2-3 weeks. Worn tips not only require more frequent board replacement, but also affect the learning curve. Execution of modern-day tricks depends on predictable and reliable board performance. Professional skateboarders realize this and change their equipment regularly in some instances as often as every 2-3 days.

Every time an "ollie" is executed a part of the nose or tail of the skateboard is worn off. The larger wear upon the nose and the tail (i.e. the portions that come in contact with the ground when an "ollie" is executed) the worse the performance of the skateboard when executing an "ollie". The reason is that a new skateboard has a well-defined nose and tail, which means that the contact area against the ground is well-defined and relatively seen small. This concentrates the power transfer and provides a high degree of energy exchange, i.e. the energy that is transferred from the ground to the skateboard. As the nose and tail of the skateboard wear, i.e. the contact surface grows in size and becomes structurally less well defined, a loss of performance is experienced when executing an "ollie". When the energy is spread over a larger area, a lower degree of energy exchange is experienced which results in less height and power in the "ollie". Significant wear of the nose and tail of the skateboard makes it impossible to execute an "ollie". For an advanced rider this means that the skateboard must be disposed of.

There have been skateboards, which have been equipped with fittings or the like in the area of the nose and tail. These fittings have not been constructed of a material, which has stimulated the energy transfer between the ground and the skateboard. Said fittings have primarily been intended to function as break pads or as protection devices for the nose and tail. Said fittings have neither been structurally integrated into the skateboard and have therefore impaired nose and tailslide performance nor have they been intended to improve the performance of the skateboard.

From U.S.-A-4,140,326 a modified kicktail skateboard is previously known. At least at one end of said skateboard a wedge member is mounted as an external element. However, the purpose of said wedge member is primarily to "convert a 1970's style flat skateboard to a kicktail board" as well as preventing wear of the end portions of the skateboard. A wedge member of the kind disclosed in US-A-4,140,326 will note function if the rider wants to perform an "ollie". This 1970's-era skateboard lacks a concave riding surface necessary to perform the different types of rotational ollie maneuvers as well as the fundamental deformation zone located in the beginning of the kicktail areas of the board. In addition the wedge member considerably reduces the distance between the end portion and the ground. This particular design impairs nose and tailslide performance and does not allow the board to attain a sufficient contact angle necessary to "pop" the board in the air. The wedge design also significantly affects the amount of accumulated rotational energy attained when the end portion of the board makes contact with the ground. This subsequently reduces the amount of energy entering the board compared to a modern skateboard having built in kicktail design.

From US-A-4,040,639 a kicktail skateboard is previously known, said skateboard being equipped with a braking pad at its lower side. A portion of said brake pad is recessed in the skateboard while a major portion of said brake pad projects beyond the skateboard. A skateboard equipped with such a brakepad is not suitable for performing "ollie" maneuvers for the same reasons as set out above in connection with US-A-4,140,326.

**Summary of the Invention**

In accordance with an embodiment of the present invention there is provided a kicktail concave skateboard

comprising: a blank having opposite end sections and top and bottom surfaces, the end sections being inclined upwardly from a center region of the blank and terminating in first and second convex end edges, respectively, each end section forming a section of the bottom surface of the blank, which bottom surface section is inclined upwardly toward the respective end edge, at least one of the end edges being of reduced thickness to define a recess in at least the respective bottom surface section; and an element mounted in the recess and being of generally U-shaped cross section with an upwardly facing side and a downwardly facing side, wherein an inner portion of the downwardly facing side adjoins the bottom surface section of the respective end section and has a thickness substantially equal to a depth of the recess, whereby the inner portion of the downwardly facing side being substantially flush with the adjoining bottom surface section, the element formed of a material having a lower mechanical damping capacity and a higher modulus of elasticity than the blank, the downwardly facing side and the adjoining bottom surface section being unobstructed in the downward direction of the skateboard and exposed for directly contacting a skateboard-supporting surface during the performance of ollie maneuvers and sliding maneuvers of the skateboard, wherein the upwardly facing side includes a plurality of first through-holes formed therein, and the downwardly facing side includes a plurality of second through-holes formed therein and aligned with respective ones of the first through-holes to define pairs of aligned first and second through-holes, a first fastening member disposed in one of the first and second through-holes of each pair; and a second fastening member extending into the blank through the other of the first and second through-holes of each pair and being secured in a

respective first fastening member.

Yet another embodiment of the present invention provides an element adapted to be mounted on an end portion of a blank of a skateboard, the element being of U-shaped cross section including opposite top and bottom sides interconnected by an integral bridging element, wherein the top and bottom sides are generally flat, mutually parallel and spaced apart to form a space therebetween, the element being curved as seen in a direction perpendicular to the top and bottom sides wherein an outer surface of the bridging element is convexly curved, and an inner surface of the bridging element is concavely curved and forms a wall of the space, each of the top and bottom sides including an inner edge facing away from the bridging element and being of concave configuration as viewed in said direction, the element including opposite ends defined by junctions where the respective inner edges of the top and bottom sides intersect the bridging element, the element formed of a hard non-elastomeric material having low mechanical damping capacity and high modulus of elasticity, wherein the top side includes a plurality first through-holes formed therein, and the bottom side includes a plurality of second through-holes formed therein and aligned with respective ones of the first through-holes, the first and second through-holes adapted to receive interengageable fastening elements.

A still further embodiment of the present invention provides a kicktail concave skateboard comprising: a blank having opposite end sections and top and bottom surfaces, the end sections being inclined upwardly from a center region of the blank and terminating in first and second convex end edges, respectively, each end section forming a section of the bottom surface of the blank, which bottom

surface section is inclined upwardly toward the respective end edge, at least one of the end edges being of reduced thickness to define a recess in at least the respective bottom surface section; and an element mounted in the recess and including a downwardly facing side, wherein an inner portion of the downwardly facing side adjoins the bottom surface section of the respective end section and has a thickness substantially equal to a depth of the recess, whereby the inner portion of the downwardly facing side being substantially flush with the adjoining bottom surface section, the element formed of a material having a lower mechanical damping capacity and a higher modulus of elasticity than the blank, the downwardly facing side and the adjoining bottom surface section being unobstructed in the downward direction of the skateboard and exposed for directly contacting a skateboard-supporting surface during the performance of ollie maneuvers and sliding maneuvers of the skateboard, and removable fasteners extending into the blank and the element for removably securing the element to the blank; wherein the recessed end of the blank includes a curved wall having a horizontal projection, the element including a curved edge engaging the wall, the curved edge having a notch which receives the horizontal projection.

**Brief Description of the Drawings**

Below embodiments of a skateboard/an element according to the present invention will be described, reference being made to the accompanying drawings, where:

Figure 1 shows a perspective view of an element according to the present invention, said element being used to provide a modification of the nose and tail of the skateboard;

Figure 2 shows a side view of the element according to figure 1;

Figure 3A shows a top view of the element according to figure 1;

Figure 3B shows a section along B-B in figure 3A;

Figure 3C shows an end view of the element according to figure 3A;

Figure 4 shows in perspective an exploded view of a skateboard prepared for mounting of an element, also shown, at an end portion of said skateboard;

Figure 5 shows a section through an end portion of the skateboard according to the present invention;

Figure 6A shows a top view of a mounting element that in certain cases may be used for fastening of the element;

Figure 6B shows in a larger scale a section along B-B in figure 6A;

Figure 7 shows a side view of the mounting element according to figure 6A;

Figure 8 shows the section through an end portion of the skateboard according to the present invention, said skateboard being provided with a mounting element according to the present invention;

Figure 9 shows a perspective view of an alternative embodiment of an element according to the present invention;

Figure 10 shows a view from behind of the element according to figure 9;

Figure 11 shows a side view of a blank for a kicktail concave skateboard;

Figure 12 shows in detail a side view of an end portion of the blank according to figure 11;

Figure 13 shows in detail a side view of an end portion of a kicktail concave skateboard that is equipped with an element according to the present invention;

Figure 14 shows a side view of a kicktail concave skateboard that at both ends is equipped with elements according to the present invention; and

Figure 15 shows a perspective view of a skateboard according to figure 14.

**Detailed Description of Preferred Embodiments of the Invention**

The present invention relates to a kicktail concave skateboard, i.e. a skateboard having upwardly inclined end portions and a concave riding surface. The basic shape of such a skateboard is disclosed in figures 14 and 15 below.

The element 1 disclosed in figures 1-3 constitutes generally a planar, curved plate having a relatively smaller width in comparison to its length. The element 1 has a generally uniform thickness. The shape of the element 1 is adapted to the skateboard that the element is mounted upon.

As is evident from figures, 1-3 the element 1 is at one longitudinal edge provided with a first portion 3 projecting from the plane of the element 1, said portion extending along only of part of the entire curved length of the element. Preferably said first projecting portion has a longitudinal extension along 10%-35% of the total curved length of the element 1. Said first projecting portion 3 covers a surface that constitutes only a smaller part of the side of the element 1 that receives the projecting portion 3. Said first projecting portion 3 has an extension in a direction perpendicular to the main plane of the element 1, said extension preferably constituting 50%-100% of the thickness of the element 1 next to said first projecting portion 3. Said first projecting portion 3 has generally a rounded shape at its free end.

At the opposite longitudinal edge of the element 1, in relation to the longitudinal edge where said first projecting portion 3 is located, a notch 4 is provided, see especially figures 3B and 3C. The function of said notch 4 will be explained more in detail below in connection with the description of the mounting of the element 1 on the blank 7 for a skateboard.

As is evident from figures 1-3 the element 1 is provided with a number of, in the shown embodiment three, first through-going holes 5 that are adapted for fastening means by which the element 1 is fastened to a blank 7 for a skateboard, see below. Said first holes 5 are preferably effected by means of drilling and they are recessed at the side of the element 1 that faces outwards in mounted position of said element 1.

The material of the element 1 should generally have a low mechanical damping capacity, a high impact strength and should also be durable/wear resistant. The material should also have a modulus of elasticity that is higher than the modulus of elasticity for the rest of the material of the skateboard. According to a preferred embodiment, the element 1 is manufactured from polyamide plastic (nylon) but within the scope of invention other materials are also feasible that have low mechanical damping, high modulus of elasticity, high

impact strength and high wear resistance. In exemplifying and non-restricting purpose the plastic materials PEHD, PUR, POM, PETP and hard wood may be mentioned.

The end portion 8 of a blank 7 for a skateboard shown in figure 4 has a recess 9 at one side of the blank 7. Said recess 9 has a shape that is adapted to the shape of the element 1 that, as pointed out above, in its turn is adapted to the shape of the blank 7. Especially, the curvature of the element 1 is adapted to the radius of curvature of the adherent end portion of the blank 7. Generally, it can be said that the dimensions of the element 1 corresponds to the dimensions of the recess 9. The recess 9 is also provided with a projection 6 that is intended to cooperate with the notch 4 of the element 1. This will be illuminated more in detail below in connection with the description of the mounting of the element 1 upon the blank for a skateboard. Normally, the recess 9 is effected as a step in the manufacturing of the blank 7 for a skateboard. It should the mentioned in this connection that when manufacturing the actual blank for a skateboard, said blank is usually built up by crosswise lamination of layers of pressed maple. When this blank is ready for machining the recess 9 is effected in the blank.

As is evident from figure 4 the recess 9 is provided with a number of, in the shown embodiment three, second holes 10 that are located in such a way that when the element 1 is mounted in the recess 9 the first holes 5 are aligned with the respective second holes 10. Normally the second holes 10 are effected by means of drilling and they are normally not through-going but terminate inside the blank for a skateboard.

In connection with mounting of the element 1, said element 1 is placed in the recess 9 and fastened by means of suitable fastening means, preferably tubular screws 11, see figure 5, that are received in the first and second holes 5 and 10 respectively, said holes 5, 10 being through going in the shown embodiment. In the holes 10, at the side of the blank 7 facing away from the recess 9, tubular sleeves 12 are inserted, said tubular screws 11 being received in said tubular sleeves 12. The recess of the holes 5 results in that the heads of the screws normally do not protrude outside of

the element 1. Since in connection with said mounting the projection 6 of the blank 7 is received in the notch 4 of the element 1 there is a cooperation between the element 1 and the blank 7, said cooperation effecting a reinforcement of the edge portion 8. This is extremely beneficial in connection with absorbing and transferring of the forces that are generated in connection with an "ollie"-maneuver. Generally, it can be said that the element 1 fills out the recess 9, i.e. the volume of the material taken away in connection with creating the recess 9 in principle corresponds to the volume of the element 1. This means that a flush connection of the element 1 to adjacent portions of the blank 7 is effected.

As a complement to the fastening means/tubular screws it is feasible within the scope of the invention that an adhesive or the like is provided between the element 1 and the recess 9. The skateboard according to the present invention is thus provided with an element 1 at least at one end portion 8 but preferably at both end portions. This means that in an analogue way as has been described above an element 1 is mounted in a recess 9 also at the other end portion of the skateboard 7. At least one element 1 thus constitutes at least a part of the edge portion of the skateboard according to the present invention.

It is realized by viewing figures 1-4 that when a rider is about to perform an "ollie" and the end portion 8 of the skateboard that is equipped with the element 1 is pushed down towards the ground, the free end of the first projecting portion 3 comes into contact with the ground and an energy transfer may take place between the ground and said first projecting portion 3. Generally, the element 1 and consequently also the first projecting portion 3 are manufactured from a hard, wear resistant material, preferably reinforced polyamide plastic. This means that the wear of the first projecting portion 3 proceeds extremely slowly. Despite this, a gradual wear of the first projecting portion 3 takes place. However, in this connection it should be noticed that even if said first projecting portion 3 is worn the contact surface against the ground does not increase until the entire first projecting portion 3 has been worn away. However the

skateboard may still be used when said first projecting portion 3 has been worn flat although a deteriorated diminishing performance is achieved when executing "ollies".

When the first projecting portion 3 has been worn flat the skateboard may, in a simple way, be equipped with a new element 1. The existing element 1 is dismounted by removing the fastening means/tubular screws. By replacing the worn out element 1 the skateboard has been renovated in a simple and functional way as it is the nose and tail that are subjected to the most wear.

In figures 6A, 6B and 7 a mounting element 13 is shown, said element may be used in order to further improve the reliability of the mounting of the element 1. The mounting element 13 is generally in the shape of a plate and has elongated, curved shape. The mounting element 13 has preferably a basic shape that in principle corresponds to the basic shape of the element 1. The mounting element 13 is provided with a number of internally threaded tubular pieces 14, said pieces 14 in the shown embodiment being integral with the mounting element 13, see especially figure 6B. The number of tubular pieces are three in the shown embodiment, i.e. they correspond to the number of holes 10 in the blank 7 for a skateboard. The mounting element 13 is provided with a second projecting portion 15, said portion 15 extending along the major part of the length of the mounting element 13. However the height of the projecting portion 15 declines in direction towards the free ends of the mounting element 13.

In Fig 8 it is shown how the mounting of the element 1 is effected by means of the mounting element 13. Thereby, the element 1 is in a usual way received in the recess of the blank 7 and the tubular pieces 14 of the mounting element 13 are received in through going holes in the blank 7. Tubular screws 11 extend through the element 1 and are received in said tubular pieces 14. Thereby, a durable and reliable fastening of the element 1 is achieved in the recess of the blank 7 for a skateboard.

In connection with the description above the importance of the first projecting portion 3 has been emphasized. Said portion 3 is extremely important when the rider executes non-

rotational "ollie"-maneuvers and other street related maneuvers. However, there are also riders that primarily execute rotational ollies or ride ramps and therefore said first projecting portion 3 is of less importance for them. Despite this it is preferable to have a similar type of element, that possibly may be void of said first projecting portion 3, since it is in principle always the nose and tail of the skateboard, regardless of the type of riding, that are subjected to the most wear. As examples of maneuvers where an element without a first projecting portion is of importance nose and tail slides may be mentioned, i.e. when the rider slides sideways on the front and rear end portions 8 of the skateboard as well as rotational ollies i.e. when the rider kicks down on the side portions of the tail (immediately to the left or right of portion 3).

An alternative embodiment of an element 1′ according to the present invention, said element 1′ being shown in figures 9 and 10, has generally curved shaped and is intended to be mounted at an end portion of a skateboard. Unlike the element 1, the element 1′ is in the shape of a cover/cap, i.e. it has a U-shaped cross section. Thus, said element 1′ has a first side wall 16′ and a second side wall 17′ said side walls 16′ and 17′ preferably being parallel to each other and connected with each other by means of a bridging element 18′, see figure 10. The side walls 17′ and 18′ constitute planar, plate-like elements of generally uniform thickness. In mounted position of the element 1′ the side walls 16′, 17′ surround the end portion of the blank for a skateboard, both on its upper side and its lower side. The bridging element 18′ will cover the edge portion of the blank, said edge portion extending between the upper side and the lower side of the blank.

As is evident from figure 10 the element 1' is equipped with a projecting portion 3' at its second side wall 17', said projecting portion 3′ having the corresponding function as the portion 3 in connection with the embodiment according to figures 1-4.

The element 1' is mounted upon a blank 7′ for a skateboard according to figure 11, said blank 7′ being equipped with end portions where material has been taken away,

i.e. recesses are created at both the upper and lower side of the blank 7'. Said recesses 9'a and 9'b are shown more in detail in figure 12. The recesses 9'a and 9'b corresponds to the recess 9 in the blank 7 for a skateboard according to figure 4.

In a corresponding way as in connection with the element 1 according to figures 1-4 the element 1' is provided with first holes 5' in order to fasten the element 1' to the blank 7' for a skateboard by means of for instance screws.

Figure 13 shows in detail a kicktail of a skateboard that has been equipped with the element 1' according to the present invention. From figure 13 it can be seen that the element 1' is flush with adjoining portions of the blank 7', i.e. the volume of the element 1' corresponds to the material taken away in connection with creating of the recesses 9'a and 9'b. Thus, it is disclosed in figure 13 that the element 1' constitutes the edge portion of a skateboard according to the present invention.

In figure 14 and 15 a complete kicktail concave skateboard is shown, said skateboard being equipped with elements 1' according to the present invention at both ends. By a kicktail skateboard it should be understood a skateboard having at least one upwardly inclined end portion, preferably both end portions are inclined upwardly.

The skateboard according to figures 14 and 15 is concave seen from above, i.e. the longitudinal edges are located at a higher level than the longitudinal intermediate portion of the skateboard.

**Feasible Modifications of the Invention**

Although it has been mentioned above that the blank for a skateboard is manufactured from a wooden material, preferably pressed maple, it is feasible within the scope of the invention that the blank constitutes a plastic composite material. In such a case the recesses are created in connection with injection molding of the blank.

In connection with the embodiment described in figures 1-4 one or more recesses are provided, as steps of the manufacturing process of a skateboard, in a blank for said

skateboard. However, within the scope of the present invention it is feasible that the element or the elements that are mounted at the end portions of a blank for a skateboard are integrated in the manufacturing process, i.e. they are laminated in the skateboard simultaneously as the wooden, preferably laminated, material or the plastic composite material in the rest of the skateboard is manufactured. As pointed out above a rectangular blank is normally received, said blank being machined to the desired shape. Thereby, also the reinforcing element will simultaneously be machined to its final shape, especially as regards the curvature of the outwardly facing free edge of said element.

Within the scope of the invention it is feasible that the element is fastened to the skateboard only by means of an adhesive. This is especially valid if the element is integrated in the skateboard in connection with its lamination.

One of the independent claims refers to a blank for a skateboard. Whether said blank is equipped with wheels or not must be of no importance in connection with interpreting the scope of protection for said independent claim. However, what is generally valid is that the blank is not equipped with an element 1 according to the present invention.

**CLAIMS**:

1. A kicktail concave skateboard comprising: a blank having opposite end sections and top and bottom surfaces, the end sections being inclined upwardly from a center region of the blank and terminating in first and second convex end edges, respectively, each end section forming a section of the bottom surface of the blank, which bottom surface section is inclined upwardly toward the respective end edge, at least one of the end edges being of reduced thickness to define a recess in at least the respective bottom surface section; and an element mounted in the recess and being of generally U-shaped cross section with an upwardly facing side and a downwardly facing side, wherein an inner portion of the downwardly facing side adjoins the bottom surface section of the respective end section and has a thickness substantially equal to a depth of the recess, whereby the inner portion of the downwardly facing side being substantially flush with the adjoining bottom surface section, the element formed of a material having a lower mechanical damping capacity and a higher modulus of elasticity than the blank, the downwardly facing side and the adjoining bottom surface section being unobstructed in the downward direction of the skateboard and exposed for directly contacting a skateboard-supporting surface during the performance of ollie maneuvers and sliding maneuvers of the skateboard, wherein the upwardly facing side includes a plurality of first through-holes formed therein, and the downwardly facing side includes a plurality of second through-holes formed therein and aligned with respective ones of the first through-holes to define pairs of aligned first and second through-holes, a first fastening member disposed in one of the first and second through-holes of each pair; and a second fastening member

extending into the blank through the other of the first and second through-holes of each pair and being secured in a respective first fastening member.

2. The skateboard according to claim 1, wherein the element is formed of a material having a higher wear resistance/ durability and a higher impact strength than the blank.

3. The skateboard according to claim 1 or 2, wherein the element includes a downward projection disposed on an outer portion of the downwardly facing side and spaced from the inner portion thereof.

4. The skateboard according to any one of claims 1 to 3, wherein the blank has a recess in the top surface disposed over the recess in the bottom surface, the upwardly facing side and the downwardly facing side situated in the respective recesses formed in the top and bottom surfaces of the blank.

5. The skateboard according to any one of claims 1 to 4, wherein the second fastening elements comprise screws.

6. An element adapted to be mounted on an end portion of a blank of a skateboard, the element being of U-shaped cross section including opposite top and bottom sides interconnected by an integral bridging element, wherein the top and bottom sides are generally flat, mutually parallel and spaced apart to form a space therebetween, the element being curved as seen in a direction perpendicular to the top and bottom sides wherein an outer surface of the bridging element is convexly curved, and an inner surface of the bridging element is concavely curved and forms a wall of the

bridging element is concavely curved and forms a wall of the space, each of the top and bottom sides including an inner edge facing away from the bridging element and being of concave configuration as viewed in said direction, the element including opposite ends defined by junctions where the respective inner edges of the top and bottom sides intersect the bridging element, the element formed of a hard non-elastomeric material having low mechanical damping capacity and high modulus of elasticity, wherein the top side includes a plurality first through-holes formed therein, and the bottom side includes a plurality of second through-holes formed therein and aligned with respective ones of the first through-holes, the first and second through-holes adapted to receive interengageable fastening elements.

7. The element according to claim 6 further including a projection on the bottom side and spaced from the inner edge.

8. A kicktail concave skateboard comprising: a blank having opposite end sections and top and bottom surfaces, the end sections being inclined upwardly from a center region of the blank and terminating in first and second convex end edges, respectively, each end section forming a section of the bottom surface of the blank, which bottom surface section is inclined upwardly toward the respective end edge, at least one of the end edges being of reduced thickness to define a recess in at least the respective bottom surface section; and an element mounted in the recess and including a downwardly facing side, wherein an inner portion of the downwardly facing side adjoins the bottom surface section of the respective end section and has a thickness substantially equal to a depth of the recess, and wherein the volume of

the recess in the bottom surface section corresponds to the volume of the downwardly facing side of the element, whereby the inner portion of the downwardly facing side being substantially flush with the adjoining bottom surface section, the element formed of a material having a lower mechanical damping capacity and a higher modulus of elasticity than the blank, the downwardly facing side and the adjoining bottom surface section being unobstructed in the downward direction of the skateboard and exposed for directly contacting a skateboard-supporting surface during the performance of ollie maneuvers and sliding maneuvers of the skateboard, and removable fasteners extending into the blank and the element for removably securing the element to the blank; wherein the recessed end of the blank includes a curved wall having a horizontal projection, the element including a curved edge engaging the wall, the curved edge having a notch which receives the horizontal projection.

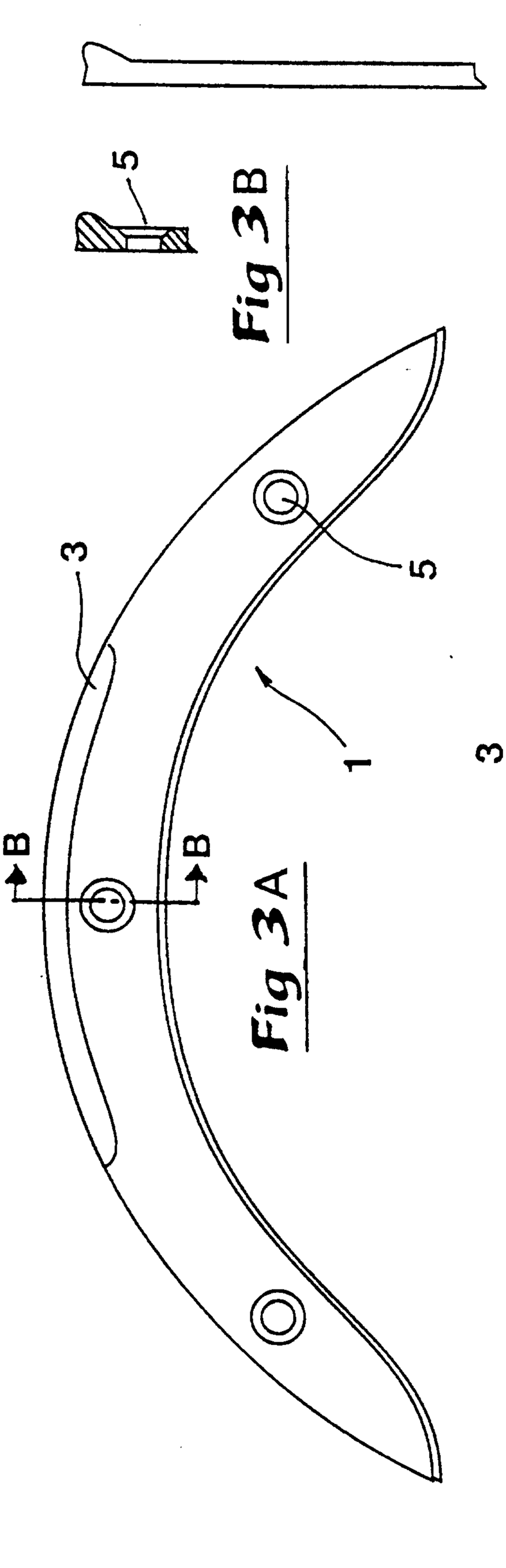



Fig 3A




Fig 3B




Fig 3C

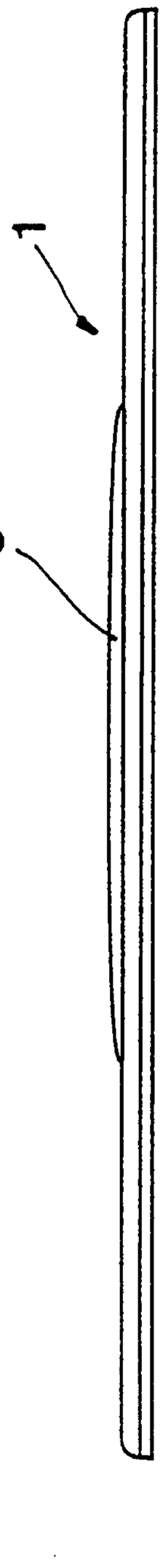



Fig 2

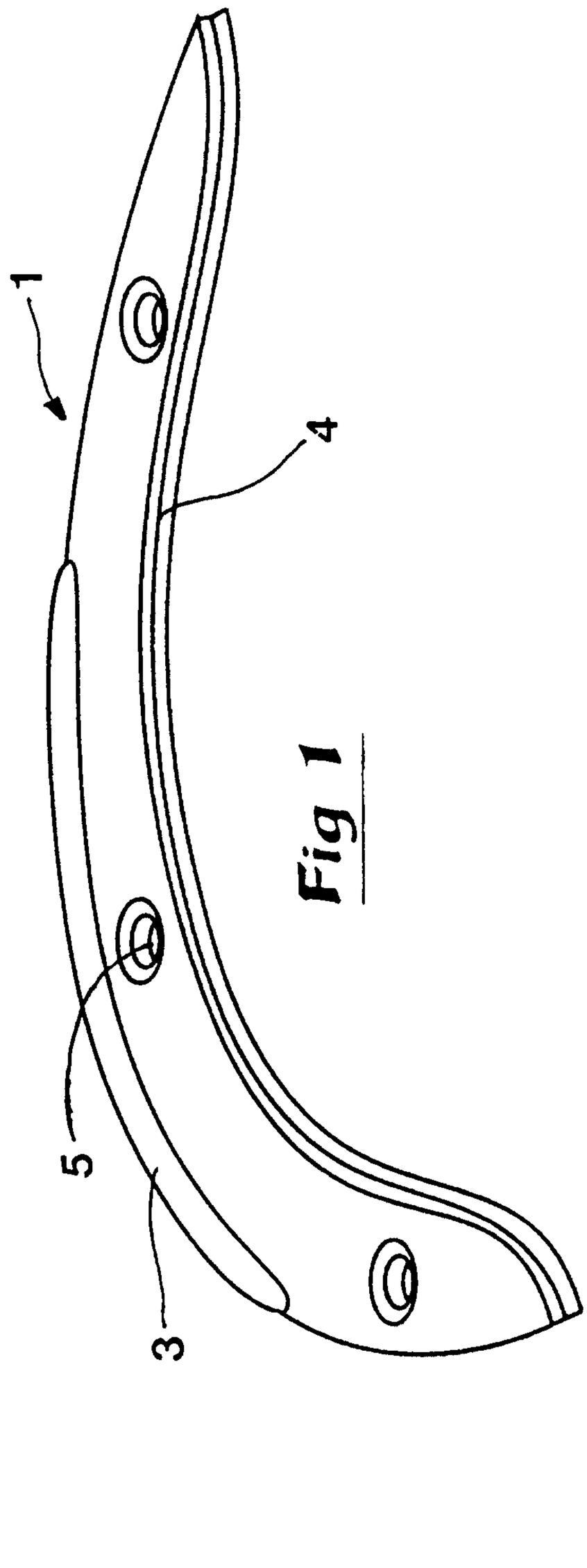



Fig 1

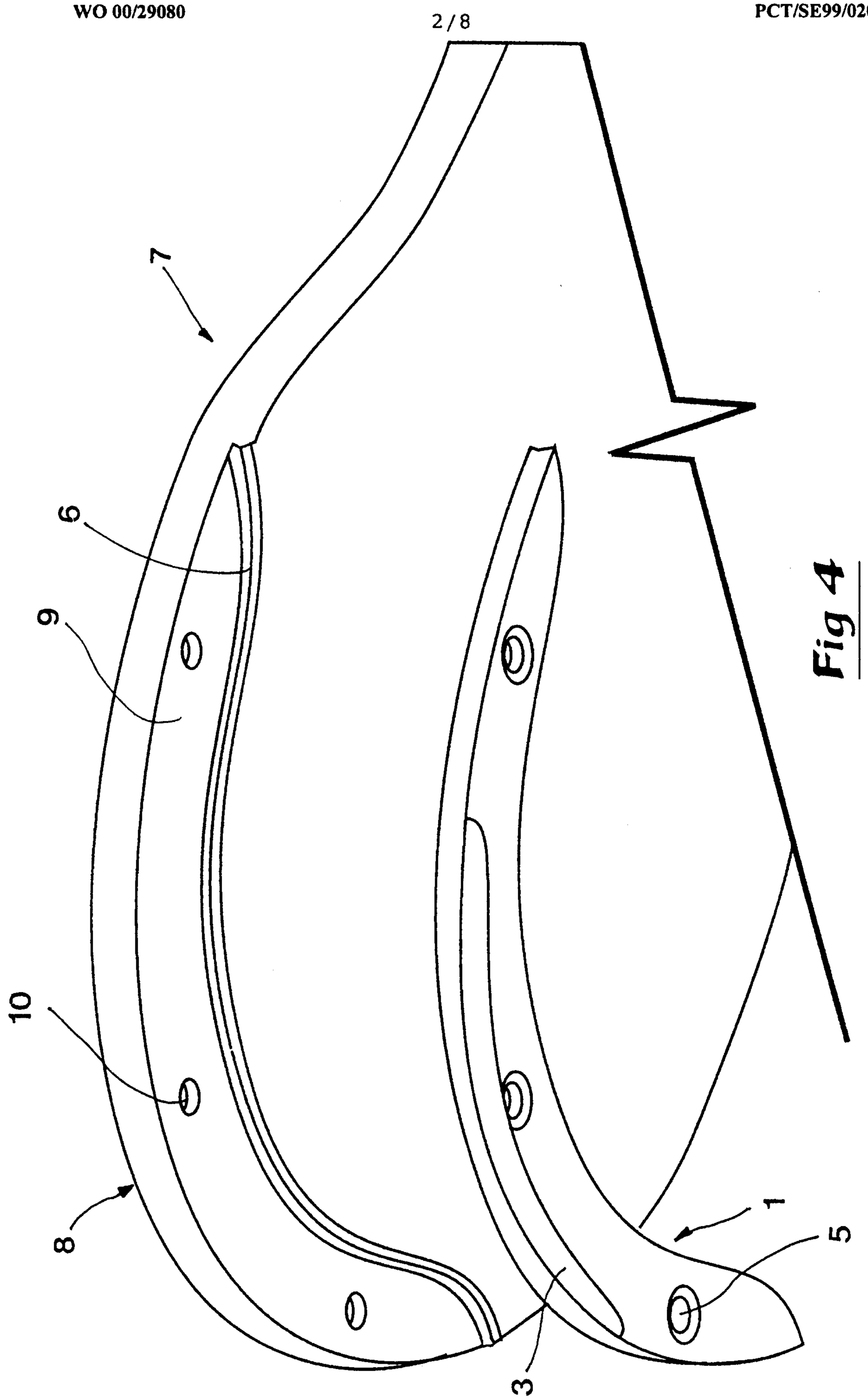



Fig 4

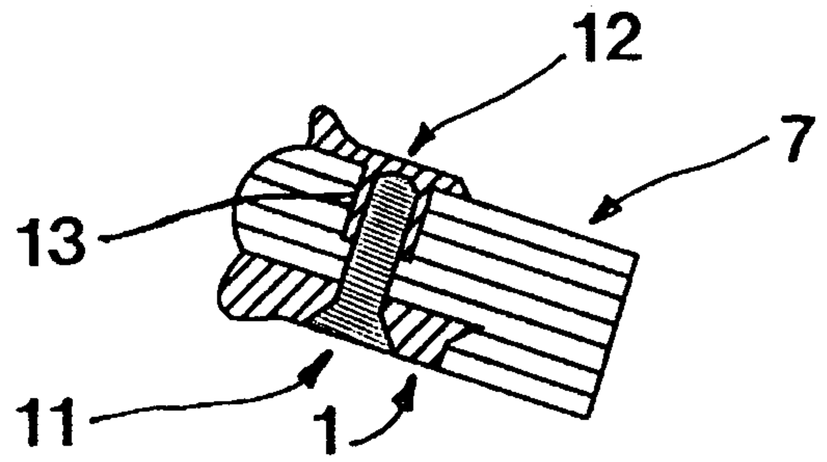



Fig 8

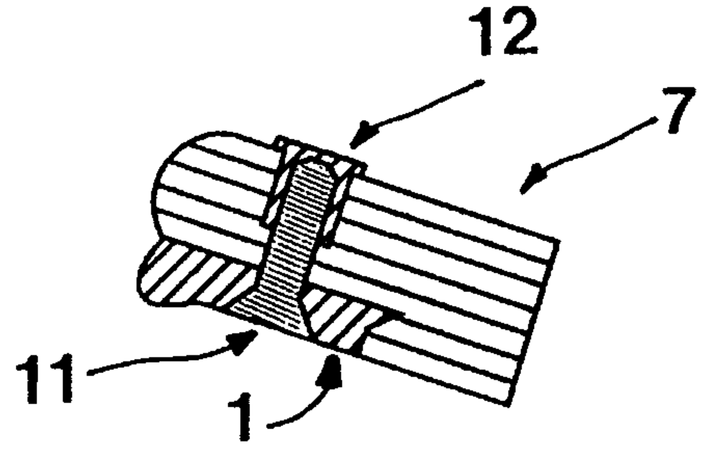



Fig 5

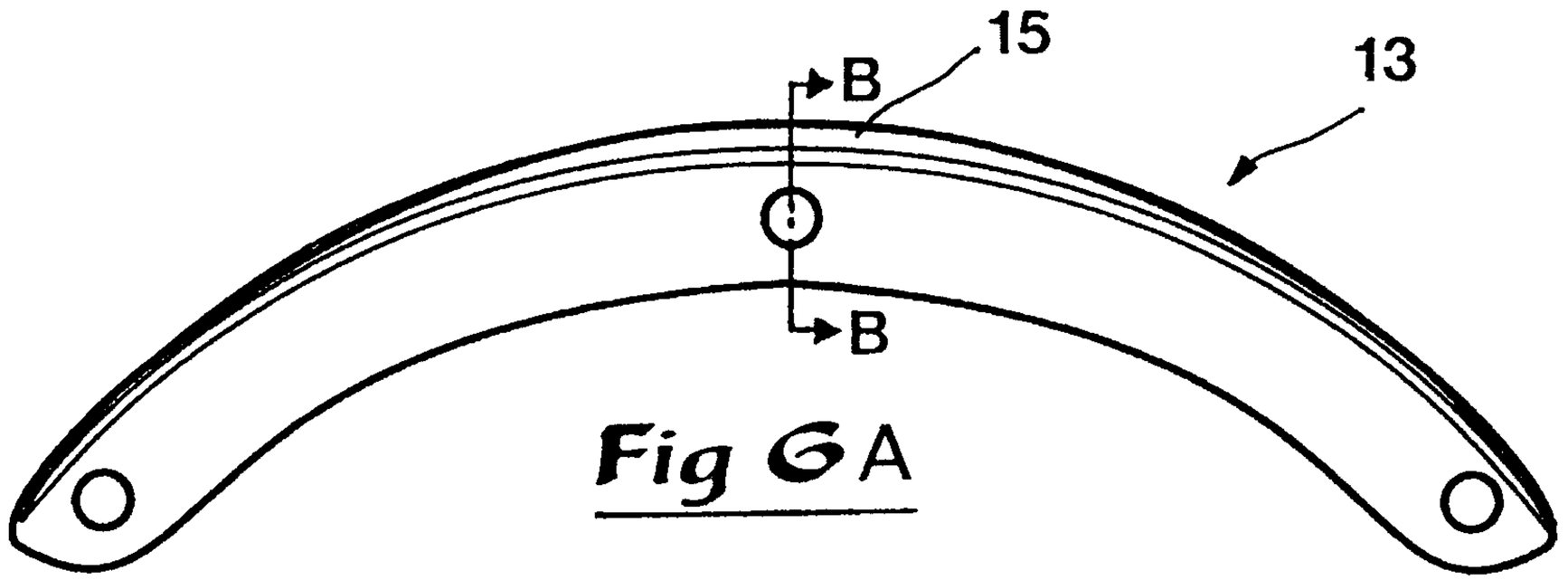



Fig 6A

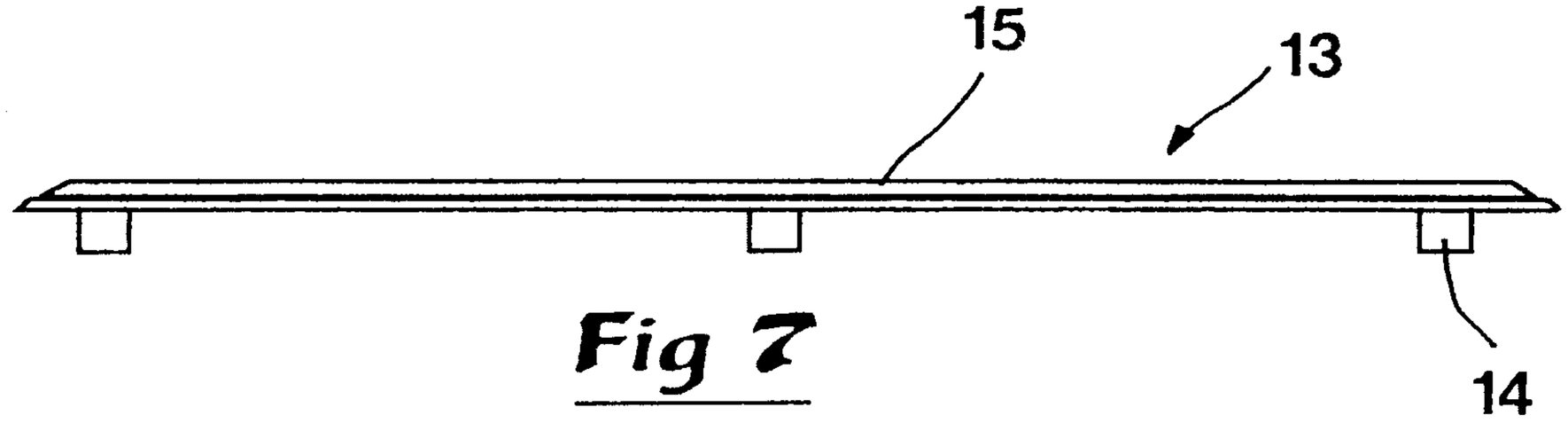



Fig 7

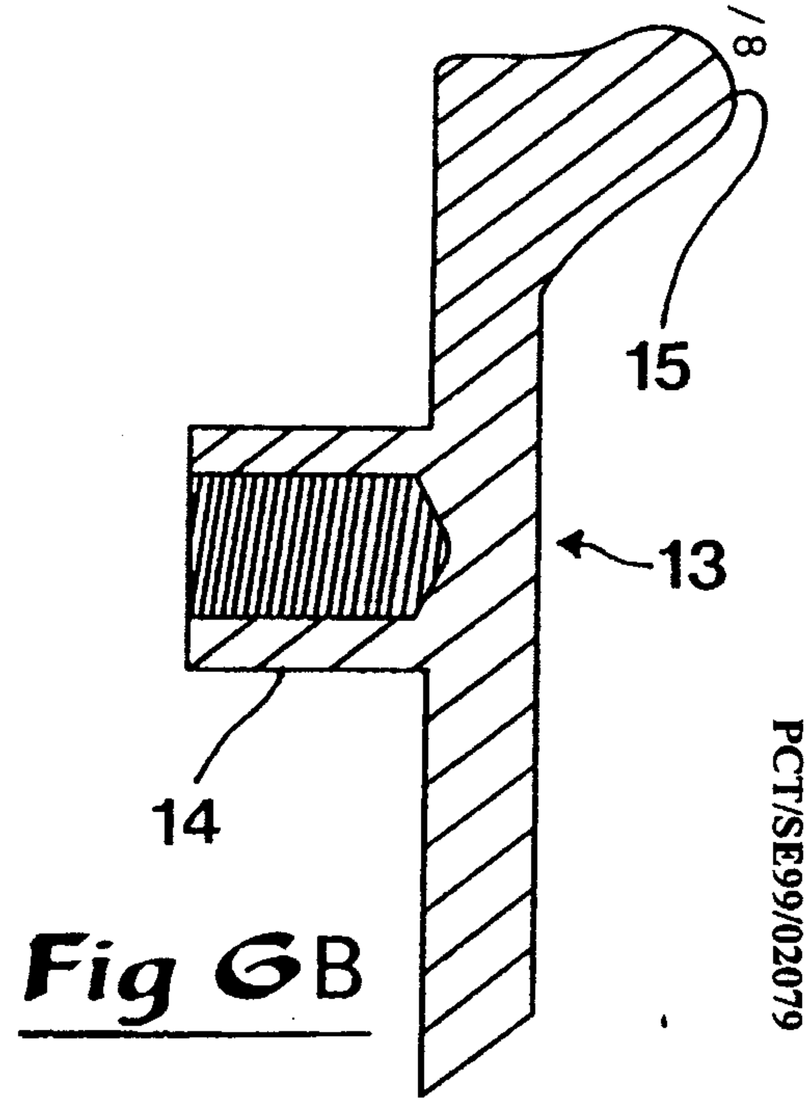
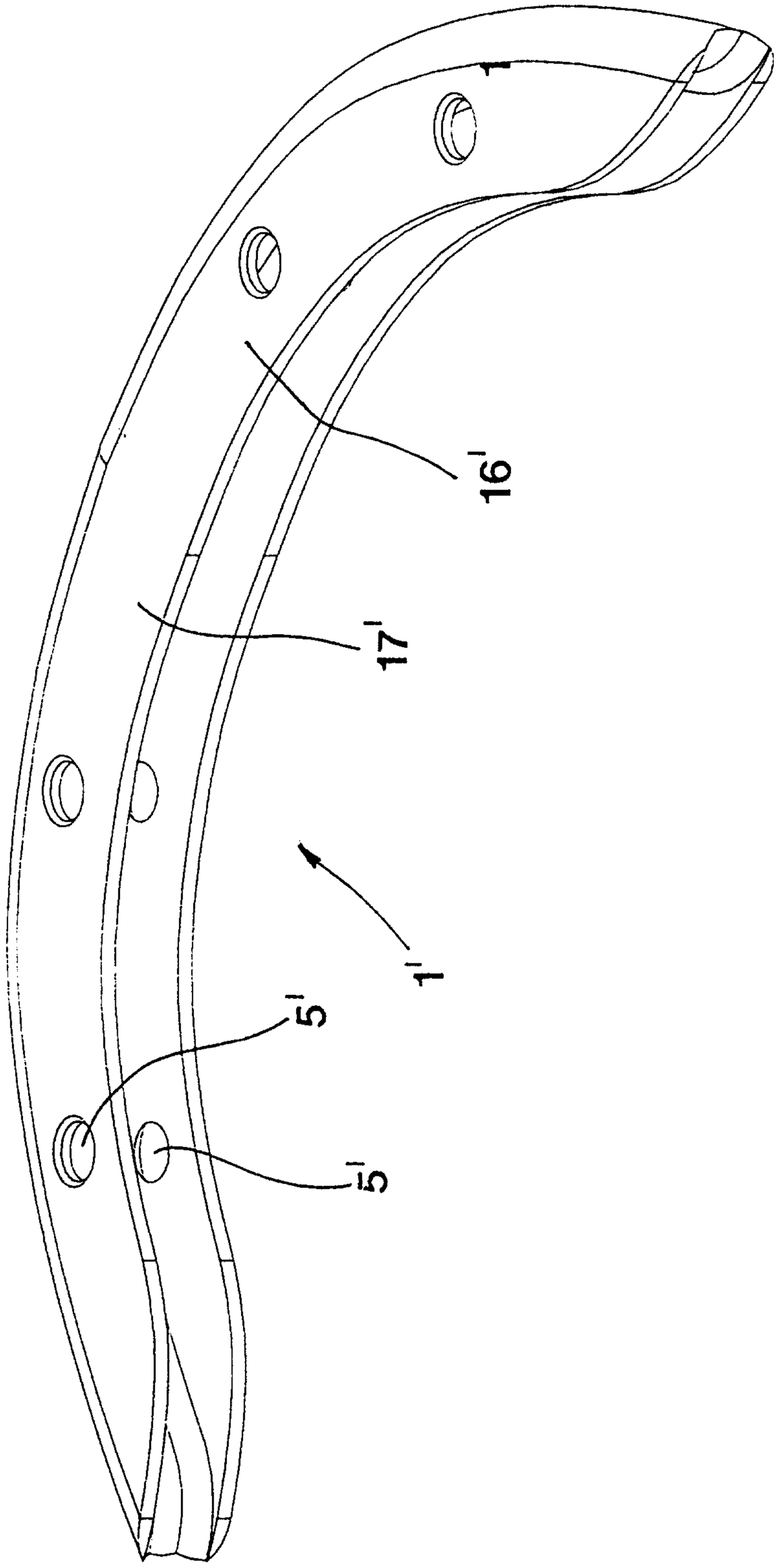



Fig 6B

Fig 9



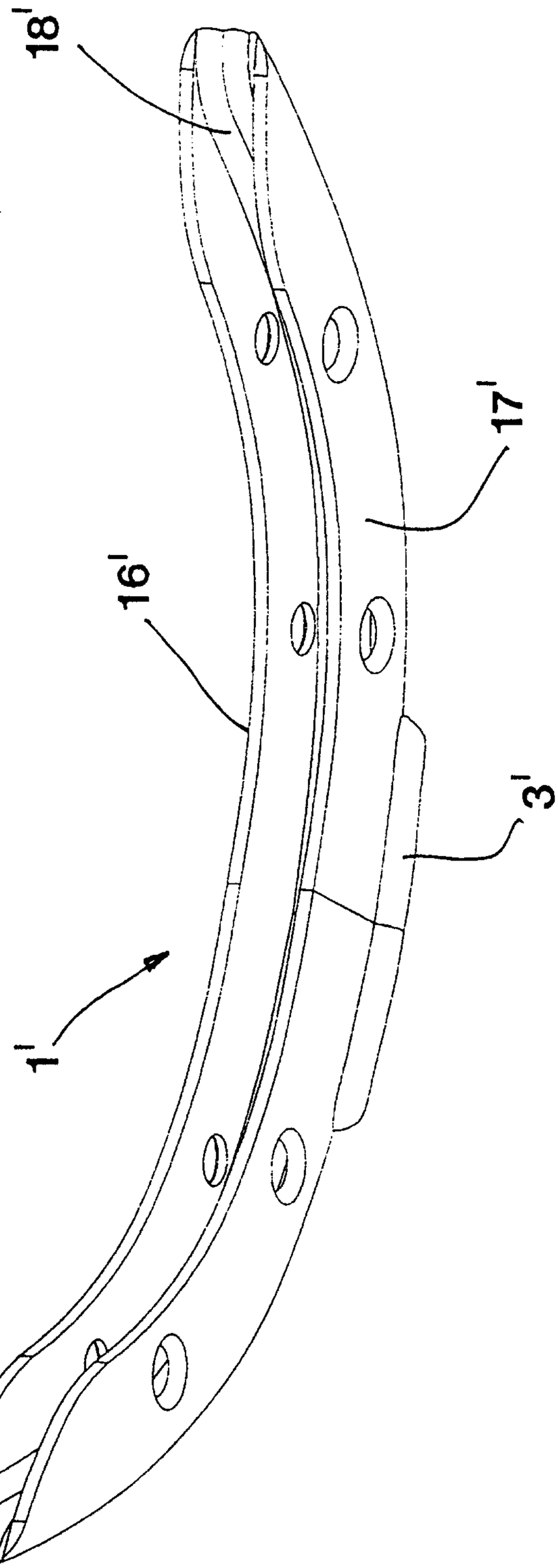



Fig 10


Fig 11

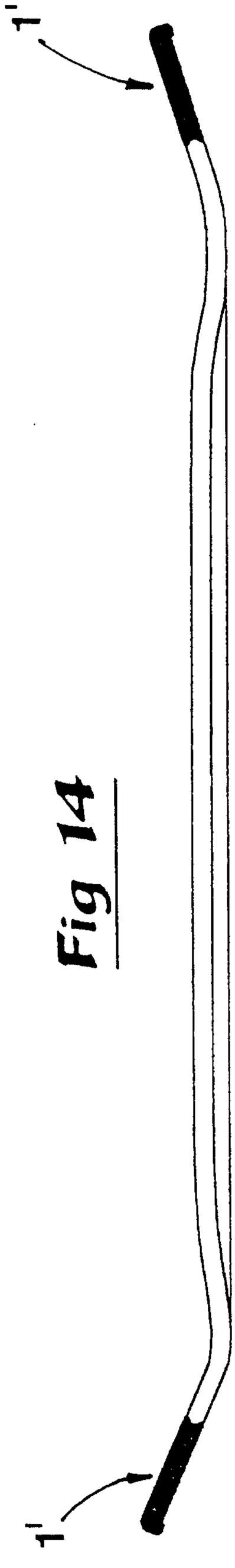



Fig 14

Fig 13

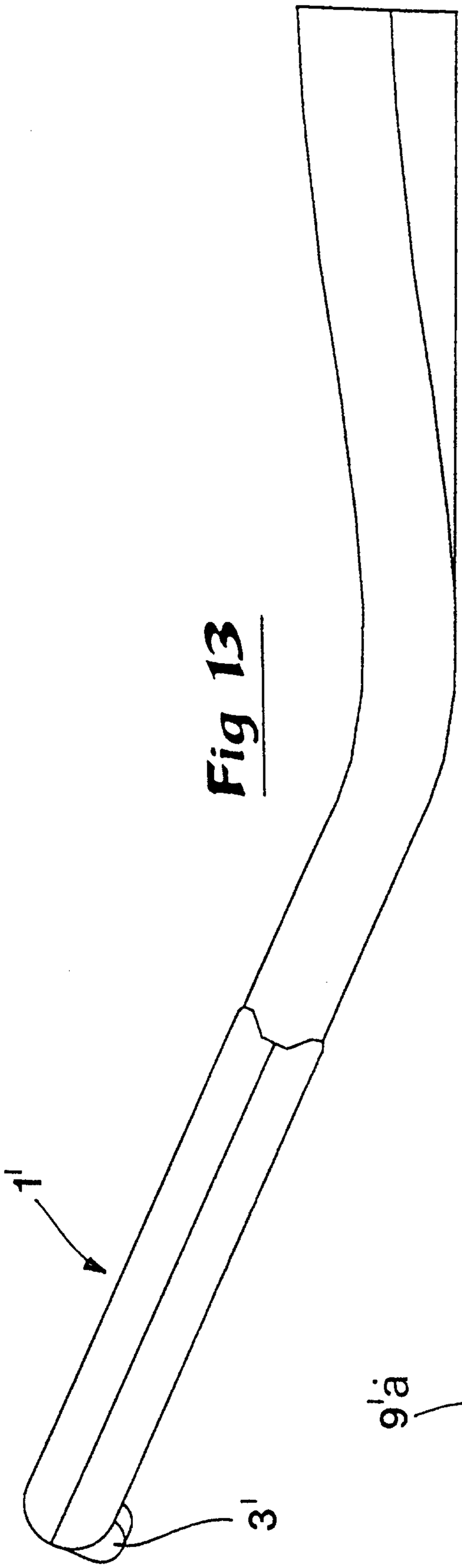
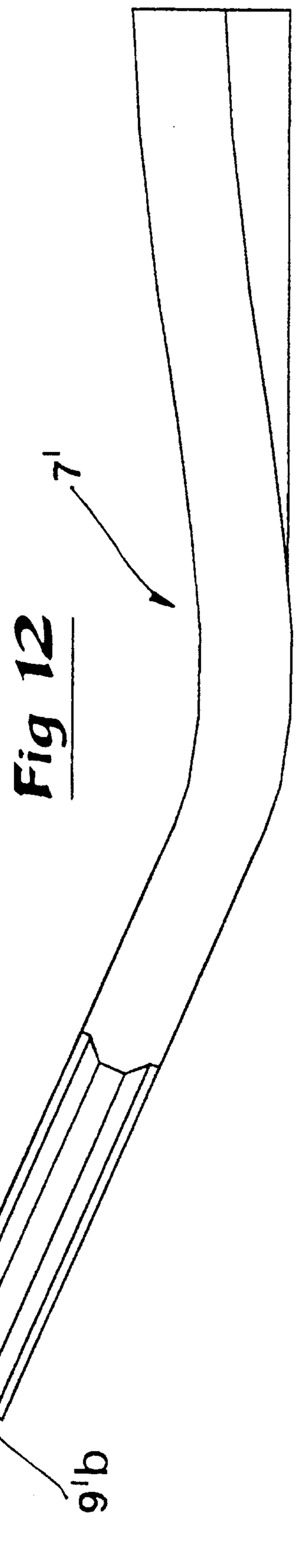



Fig 12



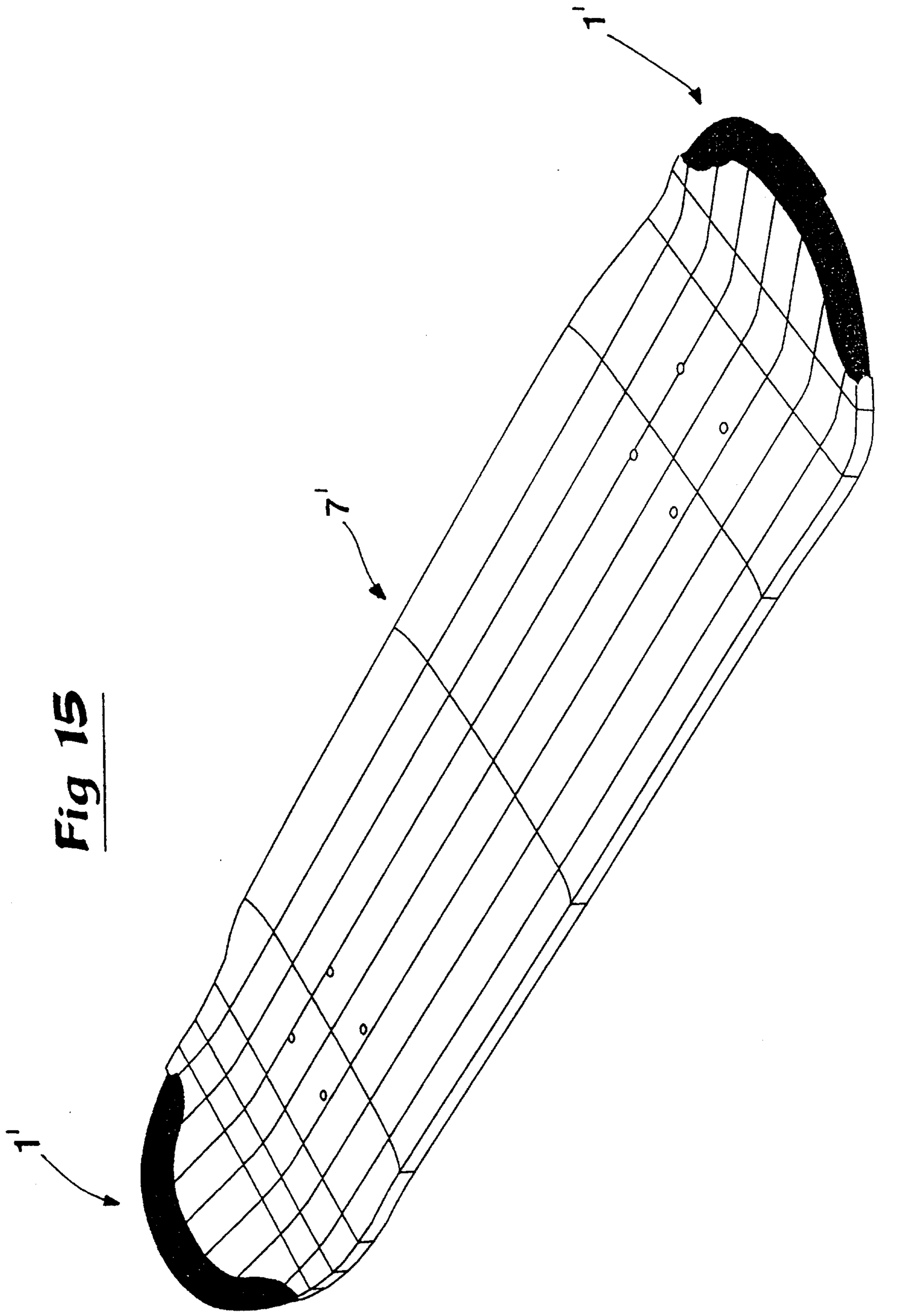
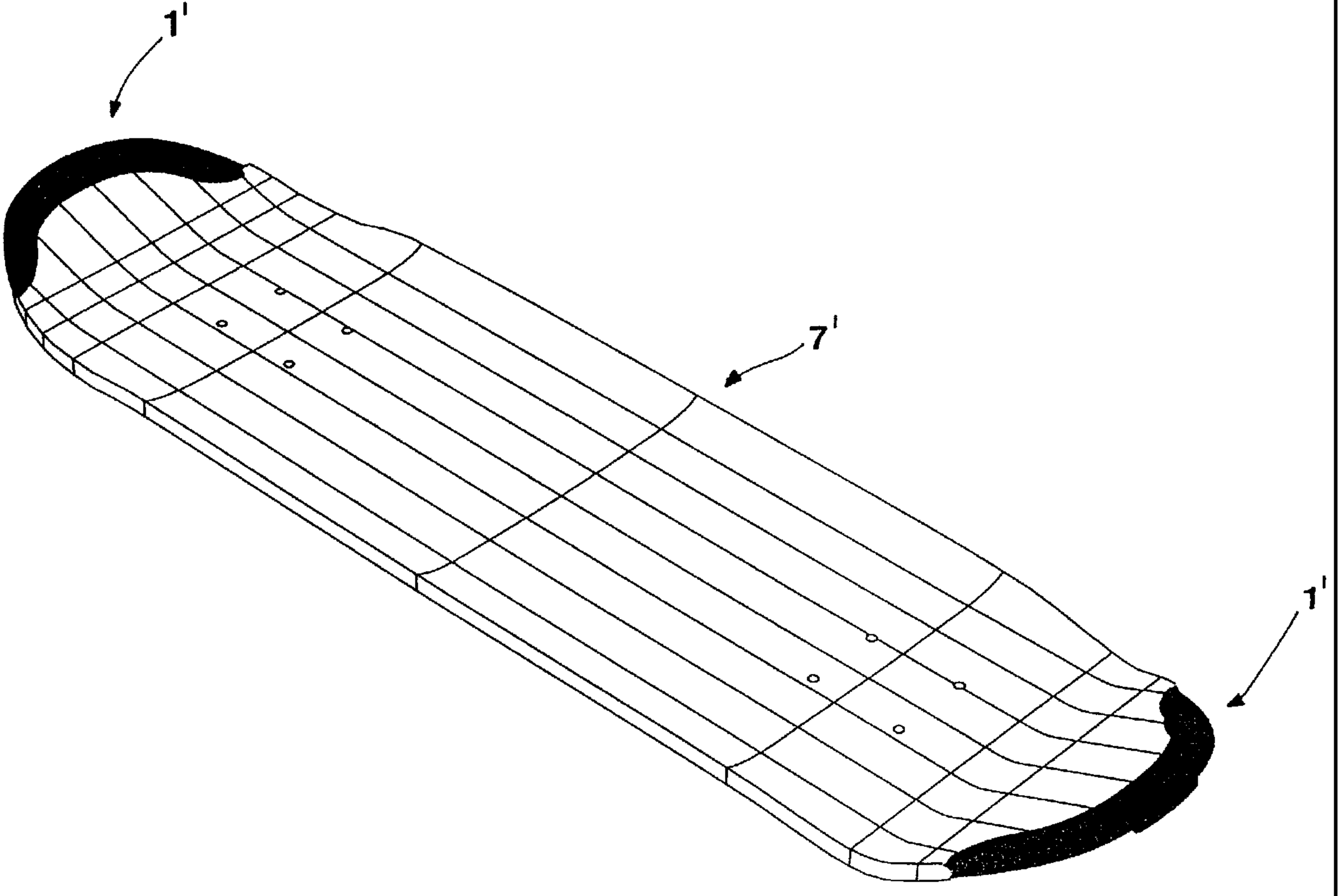



Fig 15


1'
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