



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 226 848 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
31.07.2002 Bulletin 2002/31

(51) Int Cl.7: **A63C 5/03**

(21) Application number: **02001149.0**

(22) Date of filing: **25.01.2002**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR**
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **26.01.2001 US 264341 P**
03.12.2001 US 7126

(71) Applicant: **THE BURTON CORPORATION**
Burlington, VT 05401 (US)

(72) Inventors:
• **Haaksonsens, Terje**
304 0260 Oslo (NO)
• **Barbieri, Scott G.**
Bristol, Vermont 05443 (US)
• **Gerndt, John**
Stowe, Vermont 05672 (US)

(74) Representative: **HOFFMANN - EITLE**
Patent- und Rechtsanwälte
Arabellastrasse 4
81925 München (DE)

(54) **Gliding board**

(57) A gliding board, such as a snowboard, is constructed and arranged so that the board is suited for different riding conditions that benefit from different board arrangements and/or for different riding styles that also may benefit from varying board configurations. Nose,

tail, overall dimensions, and binding mounting locations may be varied to achieve a balance of desired board performance characteristics.

EP 1 226 848 A1

Description

[0001] This application claims the benefit of the filing date of U.S. Nonprovisional Application No. 10/007,126, filed on December 3, 2001, and the benefit under 35 U.S.C. §119(e) of the filing date of U.S. Provisional Application No. 60/264,341, filed on January 26, 2001, both of which are hereby incorporated by reference in their entirety.

Field of the Invention

[0002] The present invention relates generally to a gliding board and, more particularly, to a snowboard.

Background of the Invention

[0003] Specially configured boards for gliding along a surface are known, such as snowboards, snow skis, water skis, wake boards, surfboards and the like. For purposes herein, "gliding board" refers generally to any of the foregoing boards as well as to other devices which allow a rider to traverse a surface.

[0004] Gliding enthusiasts typically prefer to ride their boards on a variety of different surface terrain or conditions, and also may enjoy different styles of riding. Snowboards, for example, are ridden on many different surface conditions, such as deep powder as well as dense groomed or hard packed snow. There are several styles of snowboard riding, including freeride which favors long runs down a mountain and freestyle which emphasizes jumps and tricks, including spins and other aerial moves, that may be performed in a half pipe or a terrain park. A snowboarder may enjoy both freestyle and freeride styles of riding and may find herself in powder conditions on one run and groomed terrain on the next. Snowboards have been designed to enhance performance in a particular snow condition or for a particular style of riding. Thus, longer boards, typically greater than 160 cm or 162 cm are preferred for powder riding since the greater length enhances the ability of the board to "float", that is, to remain within or on top of the powder rather than sinking deeply into the snow. Longer boards, however, are more difficult to spin in the air, making it harder to ride in a terrain park or in the half pipe. These and other competing design factors may come into play when planning and constructing a snowboard that may be ridden in both powder and dense snow conditions, as well as for a board that may be ridden in a terrain park or half pipe as well as down trails. Commercially available snowboards, consequently, typically are tailored for a particular terrain or riding style, and while the snowboard may be ridden in other conditions or using a different riding form, the performance properties of the board may be less desirable than when ridden in the intended fashion or targeted condition.

Summary of the Invention

[0005] In one illustrative embodiment of the invention, a gliding board is constructed and arranged so as to strike a good balance in the performance properties characterized by two or more styles of riding and/or two or more types of terrain or surface conditions.

[0006] Where the gliding board is a snowboard, one aspect of the invention provides a board that is suitable for riding in powder and on hard packed or groomed snow and, or alternatively, a board that is amenable to spinning in the half pipe or park as well as deep powder riding.

[0007] In one embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, a waist, a running length extending between the nose and the tail, an edge to edge direction, wherein the nose and the tail are curved upwardly away from the running length, and binding positions for securing two feet to the elongated member simultaneously such that one foot is secured forward of the other foot in relation to the nose. The elongated member has an overall length of less than about 162 cm, the nose and the tail each has a length in a nose to tail direction, the nose and the tail each has a largest width in the edge to edge direction, and the waist has a narrowest waist width in the edge to edge direction. The elongated member has a largest nose width in the edge to edge direction of at least about 30 cm, wherein the largest nose width is at least about 1.5 cm greater than the largest tail width.

[0008] In another embodiment, the nose length is greater than about 22 cm.

[0009] In another embodiment, the nose length is greater than about 23.5 cm.

[0010] In another embodiment, the nose length is greater than about 25 cm.

[0011] In another embodiment, the tail length is less than about 19.0 cm.

[0012] In another embodiment, the tail length is less than about 17.5 cm.

[0013] In another embodiment, the tail length is less than about 16.0 cm.

[0014] In another embodiment, a ratio of the nose length to the tail length is at least about 1.45.

[0015] In another embodiment, a ratio of the nose length to the tail length is greater than about 1.48.

[0016] In another embodiment, a ratio of the nose length to the tail length is greater than about 1.5.

[0017] In another embodiment, a ratio of the nose length to the tail length is greater than about 1.53.

[0018] In another embodiment, a ratio of the nose length to the tail length is greater than about 1.56.

[0019] In another embodiment, the largest nose width is at least about 2.0 cm greater than the largest width of the tail.

[0020] In another embodiment, the largest nose width is at least about 2.5 cm greater than the largest width of

the tail.

[0021] In another embodiment, the largest nose width is at least about 3.0 cm greater than the largest tail width.

[0022] In another embodiment, a ratio of the largest nose width to the largest tail width is greater than about 1.05.

[0023] In another embodiment, a ratio of the largest nose width to the largest tail width is greater than about 1.07.

[0024] In another embodiment, a ratio of the largest nose width to the largest tail width is greater than about 1.09.

[0025] In another embodiment, a ratio of the largest nose width to the largest tail width is greater than about 1.1.

[0026] In another embodiment, the largest nose width is between 5 and 20 percent greater than the largest tail width.

[0027] In another embodiment, the largest nose width is between 7.5 and 15 percent greater than the largest tail width.

[0028] In another embodiment, the largest nose width is between 20 and 25 percent greater than the narrowest waist width.

[0029] In another embodiment, the largest nose width is about 22 percent greater than the narrowest waist width.

[0030] In another embodiment, the largest nose width is less than 1.30 times the narrowest waist width.

[0031] In another embodiment, a ratio of the narrowest waist width to the largest nose width is greater than about 0.77.

[0032] In another embodiment, a ratio of the narrowest waist width to the largest tail width is greater than about 0.85.

[0033] In another embodiment, a sidecut extending along the running length, the sidecut comprising a sidecut depth and a sidecut length, a ratio of the sidecut depth to the sidecut length being about 0.02.

[0034] In another embodiment, the overall length is less than about 160 cm.

[0035] In another embodiment, the overall length is less than about 158 cm.

[0036] In another embodiment, the overall length is less than about 155 cm.

[0037] In another embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, a running length extending between the nose and the tail, and a mid-line defining the center of the running length. The nose and tail may be curved upwardly away from the running length. The elongated member includes a first and a second binding mounting location corresponding to a front and a back binding, the first binding mounting location positioned between the mid-line and the tail and the second binding mounting location positioned between the mid-line and the nose, wherein the first and second binding mounting locations are offset in a direction of the tail

more than 25 mm from the mid-line.

[0038] In another embodiment, the first and second mounting locations are offset by at least about 30 mm from the mid-line in a direction of the tail.

[0039] In another embodiment, the first and second mounting locations are offset by at least about 50 mm from the mid-line in a direction of the tail.

[0040] In another embodiment, the first and second mounting locations are offset by at least about 75 mm from the mid-line in a direction of the tail.

[0041] In another embodiment, the first and second mounting locations are offset by at least about 100 mm from the mid-line in a direction of the tail.

[0042] In another embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, and a running length extending between the nose and the tail. The nose and the tail are curved upwardly away from the running length and each have a largest width in an edge to edge direction of the board and a length. The board includes a mid-line defining the center of the running length and first and second binding mounting locations preformed in the board. The first binding mounting location is positioned between the mid-line and the tail, and the second binding mounting location is positioned between the mid-line and the nose. The gliding board has at least three of the following dimensions and structural arrangements:

an overall length less than about 162 cm, a largest nose width greater than 30 cm, a largest nose width more than 1.5 cm greater than a largest tail width, a largest tail width of at least about 25 cm, a nose length greater than about 22 cm, a tail length less than about 19 cm, first and second binding mounting locations that are off-set from a mid-line of the board more than 25 mm in a direction of the tail.

[0043] In another embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, and a running length extending between the nose and the tail. The nose and the tail are curved upwardly away from the running length and each have a largest width in an edge to edge direction of the board and a length. The board includes a mid-line defining the center of the running length and first and second binding mounting locations preformed in the board. The first binding mounting location is positioned between the mid-line and the tail, and the second binding mounting location is positioned between the mid-line and the nose. The gliding board has at least three of the following dimensions and structural arrangements:

an overall length less than about 160 cm, a largest nose width greater than 30 cm, a largest nose width more than 1.5 cm greater than a largest tail width, a largest tail width of at least about 25 cm, a nose length greater than about 22 cm, a tail length less than about 19 cm, first and second binding mount-

ing locations that are off-set from a mid-line of the board more than 25 mm in a direction of the tail.

[0044] In another embodiment of the invention, a gliding board, such as a snowboard, is provided including an elongated member having a nose, a tail, a running length extending between the nose and the tail, and an edge to edge direction. The nose has a largest width in the edge to edge direction that is at least about 2 cm greater than a largest width of the tail in the edge to edge direction.

[0045] In another embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, a running length extending between the nose and the tail, and an edge to edge direction. The nose and tail may be curved upwardly away from the running length. The elongated member has an overall length of less than about 162 cm, a largest nose width in the edge to edge direction of at least about 30 cm, a tail length of less than about 19.0 cm, and a largest tail width in said edge to edge direction of at least about 25 cm.

[0046] In another embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, a running length extending between the nose and the tail, and an edge to edge direction. The nose and tail may be curved upwardly away from the running length. The elongated member has an overall length of less than about 160 cm, a largest nose width in the edge to edge direction of at least about 30 cm, and a tail length of less than about 19.0 cm, and a largest tail width in said edge to edge direction of at least about 25 cm.

[0047] In another embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, and a running length extending between the nose and the tail. The nose and tail may be curved upwardly away from the running length. The nose and the tail each having a length in a nose to tail direction, a ratio of the nose length to the tail length being at least about 1.45.

[0048] In another embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, and a running length extending between the nose and the tail. The nose and tail may be curved upwardly away from the running length. The nose and the tail each having a length in a nose to tail direction, a ratio of the nose length to the tail length being at least about 1.5.

[0049] In another embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, a waist, and a running length extending between the nose and the tail. The nose and the tail are curved upwardly away from the running length and each has a largest width in an edge to edge direction of the board. The waist has a narrowest waist width in the edge to edge direction. The largest nose width is greater than 30 cm and between 20 and

25 percent greater than the narrowest waist width.

[0050] In another embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, a waist, a running length extending between the nose and the tail, and an edge to edge direction. The nose and tail are curved upwardly away from the running length and each has a largest width in the edge to edge direction. The waist has a narrowest width in the edge to edge direction. The largest nose width is greater than about 25 cm, at least 2 cm greater than the largest tail width and less than 1.30 times the narrowest waist width.

[0051] In another embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, a waist, a running length extending between the nose and the tail, and an edge to edge direction. The nose and tail are curved upwardly away from the running length and each has a largest width in the edge to edge direction. The waist has a narrowest waist width in the edge to edge direction. The largest nose width is greater than about 30 cm, and a ratio of the narrowest waist width to the largest nose width is greater than about 0.77. A ratio of the narrowest waist width to the largest tail width is greater than about 0.85. A ratio of the largest nose width to the largest tail width is about 1.10.

[0052] In another embodiment of the invention, a gliding board, such as a snowboard, includes an elongated member having a nose, a tail, an edge to edge direction, a running length extending between the nose and the tail, and a sidecut extending along the running length. The nose and tail are curved upwardly away from the running length and each has a largest nose width in the edge to edge direction. The sidecut includes a side cut depth and a sidecut length. The largest nose width is greater than about 30 cm and at least 2 cm greater than the largest tail width. A ratio of the sidecut depth to the side cut length is about 0.02.

[0053] Various aspects and/or dimensions of the invention identified above and/or described below may be combined with one or more other aspects and/or dimensions of the invention in any suitable way.

Brief Description of the Drawings

[0054] It should be understood that the drawings are provided for the purpose of illustration only and are not intended to define the limits of the invention. Various aspects of the present invention will become apparent with reference to the following detailed description taken in conjunction with the accompanying drawings in which:

Fig. 1 is a top view of a gliding board, in the illustrated case a snowboard, in accordance with the present invention; and

Fig. 2 is a side view of the snowboard illustrated in Fig. 1.

Detailed Description

[0055] In at least one embodiment, the invention is directed to a versatile gliding board characterized by performance properties suitable for two or more riding styles and/or use in two or more surface conditions. The inventive board has particular application to a gliding implement that is rideable in both coarse and dense conditions, such as powder and either hard packed or groomed trails, when the gliding board is a snowboard. The inventive board also is suited to a gliding implement that may be spun in the air as well as ridden along a trail, and where the gliding implement is a snowboard may be ridden freeride all over a mountain and freestyle, performing spins and other aerial maneuvers, in the half pipe or park.

[0056] For ease of understanding, and without limiting the scope of the invention, illustrative embodiments of the inventive gliding board to which this patent is addressed are disclosed below particularly in connection with a snowboard. It should be appreciated, however, that the inventive board may be embodied in a gliding implement that is used to traverse a terrain other than snow, such as grass, dirt, ice, water, sand, and other surfaces. Further, while the gliding board for use on snow is discussed in connection with a snowboard, the invention is not limited in that respect and other devices for traversing snow also are contemplated.

[0057] In one illustrative embodiment, the snowboard of the present invention is particularly suited for riding in deep powder as well as for traversing more dense terrain such as hard packed or groomed trails. It should be appreciated, however, that the two or more disparate conditions in which the inventive snowboard is designed for riding are not limited only to powder and compact snow as should be apparent to one of skill in the art. Although embodiments of the inventive snowboard permit a snowboarder to ride freestyle and freeride, the two or more different riding styles enabled by the present invention are not limited only to these two riding preferences but include other riding forms as should be apparent to one of skill in the art.

[0058] Thus, in one embodiment, a gliding board allows a rider to use his or her board on different terrains that demand different board performance properties and to switch amongst different riding styles that, too, emphasize different board characteristics. The subject board may be arranged for any one of the riding conditions and/or riding styles indicated above, or may be configured for a combination of such riding styles and/or conditions. For example, the gliding board, where embodied as a snowboard, may be arranged for riding in powder, riding in powder and on hard pack, riding in powder and in the half pipe (free style), or riding in powder, on hard pack and in the half pipe. The exact specification and construction of a particular board encompassed by the invention ultimately will depend upon the performance properties that are desired.

[0059] A snowboard 10, as illustrated in Fig. 1, includes a nose 12, a tail 14, and a running length 16 extending between the nose and the tail that defines the effective length of the board that actually contacts the snow on flat terrain. The dimensions and relative dimensions of the board are especially designed to provide the desired balance in performance properties, and the relevant variables include the overall length, nose width and length, tail width and length, waist width, taper, and binding mounting location offset. The overall length 18 is the distance between the absolute tip of the tail to the absolute tip of the nose. The nose width NW is defined as the largest distance in an edge to edge direction in the nose section of the board, while the tail width TW is defined as the largest distance in an edge to edge direction in the tail section of the board. The length NL of the nose section runs from the transition point or junction of the essentially flat running length to the upwardly curving shovel shape of the nose and to the absolute tip of the nose, and a similar length defines the tail section TL. The board may be provided with one or more sets of binding mounting locations 20, 22 that, as shown, may include internally threaded insert fasteners. The front and back binding mounting locations may be offset in the direction of the tail to enhance the float properties of the board in connection with riding in powder.

[0060] The float of a board in powder or powder-like snow is influenced by the width of the nose and may be characterized by the difference in width between the nose and the tail and/or by the ratio of the nose width to tail width. The board may be provided with a nose width that is at least about 15 mm greater than the tail width, preferably is provided with a nose width that is at least about 18 mm greater than the tail width, more preferably at least about 20 mm greater than the tail width, and even more preferably is provided with a nose width that is at least about 25 mm greater than the tail width. In one embodiment developed by Burton, the nose width is about 25 mm greater than the tail width. In another embodiment developed by Burton, the nose width is about 30 mm greater than the tail width. In another embodiment, the board may also be provided with an upper limit to the difference between the greater nose width and the smaller tail width that is less than about 80 mm, preferably less than about 75 mm, and even more preferably less than about 70 mm.

[0061] Comparing the nose width and the tail width by percent difference, the board may be provided with a nose width that is between 5 and 20 percent greater than the tail width, and more preferably between 7.5 and 15 percent greater than the tail width. In one embodiment developed by proprietor, The Burton Corporation, the nose width is about 9 percent greater than the tail width. In another embodiment developed by Burton, the nose width is about 10.5 percent greater than the tail width. In still another embodiment developed by Burton, the nose width is about 11 percent greater than the tail width. The inventive board may have a nose width to tail

width ratio of greater than about 1.05, preferably greater than about 1.07, more preferably greater than about 1.09 and even more preferably greater than about 1.10. In one embodiment, the board has a nose width to tail width ratio of 1.091. In another embodiment, the board has a nose width to tail width ratio of 1.106. In yet another embodiment, the board has a nose width to tail width ratio of 1.105.

[0062] The width of the nose and its influence on the board's float in powder-like snow may also be characterized by the difference in width between the nose and waist. The board may be provided with a largest nose width that is between 20 and 25 percent greater than the narrowest waist width. In an embodiment developed by Burton, the largest nose width is about 22 percent greater than the narrowest waist width. Characterizing the difference between the nose width and the waist width in an alternative fashion, the largest nose width is less than 1.30 times the narrowest waist width, and more preferably less than 1.25 times the narrowest waist width. In an embodiment developed by Burton, the nose width is about 1.22 times the narrowest waist width.

[0063] Comparing various dimensions of the inventive board from a different perspective, a ratio of the narrowest waist width to the largest nose width is greater than about 0.77. In an embodiment developed by Burton, the ratio of the narrowest waist width to the largest nose width is about 0.81. A ratio of the narrowest waist width to the largest tail width is about 0.85. In another embodiment developed by Burton, the ratio of the narrowest waist width to the largest tail width is about 0.86. In another embodiment developed by Burton, the ratio of the narrowest waist width to the largest tail width is about 0.90. In a further embodiment developed by Burton, the ratio of the narrowest waist width to the largest tail width is about 0.92.

[0064] The length of the nose and of the tail, in combination with other board dimensions, also departs from conventional board arrangements. The nose may have a length greater than about 22 cm, more preferably greater than about 23.5 cm, and even more preferably greater than about 25 cm. In one embodiment, the nose has a length of about 24 cm. In another embodiment, the nose has a length of about 25 cm. The tail may have a length less than about 19 cm, more preferably less than about 17.5 cm, and even more preferably less than about 16 cm. In one embodiment, the board has a tail length of 16 cm.

[0065] The overall length of the board may impact the float of the board when freeriding in powder as well as the maneuverability and rotation of the board when freestyle riding in the park or half pipe. Longer boards, such as those greater than about 160 cm, are less likely to sink in powder while shorter boards, those less than about 160 cm, are more suited to aials and tricks. Certain embodiments of the present board possess strong floating properties while still being amenable to spinning

in the pipe and park. Such versatile boards may have a length of less than 162 cm, preferably less than 160 cm, more preferably less than 158 cm, and even more preferably less than 155 cm. In an embodiment developed by Burton, the board has an overall length of 150 cm. In another embodiment developed by Burton, the board has an overall length of 156.5 cm. In yet another embodiment developed by Burton, the board has an overall length of 160 cm. With a shorter board, comes the added benefit that the board is lighter; it is observed that board manufacturers strive to reduce the weight of a board without adversely affecting performance properties.

[0066] A still further way to characterize the board is to consider the ratio of the nose length to the tail length. A larger nose length may provide enhanced performance in deep powder riding and a ratio of greater than 1.45, preferably greater than 1.48, more preferably greater than 1.5, even more preferably greater than 1.53, and still more preferably greater than 1.56 are contemplated. In another embodiment, the ratio of the nose length to the tail length is less than about 2.75, preferably less than 2.70, and even more preferably less than 2.65.

[0067] The binding mounting locations may be offset from the mid-line of the effective length and positioned closer to the tail of the board, providing a longer segment of the board between the front binding and the absolute outer tip of the nose that may influence the ability of the board to float in powder and powder-like conditions. It is conventional for the insert pattern in a Burton board, whether tailored for powder, compact snow conditions, freeride or freestyle riding, to be offset towards the tail no more than 25 mm from the mid-line of the effective length. In certain embodiments of the present board, the front and back binding mounting locations, which correspond to one or more pairs of insert fastener patterns prearranged in the board, are offset rearward of the effective length mid-line by at least about 30 mm, preferably by at least about 50 mm, even more preferably by at least about 75 mm, and even further more preferably by at least about 100 mm. In an embodiment developed by Burton, the complementary front and back insert fasteners are offset about 100 mm from the mid-line of the effective length. In another embodiment developed by Burton, the fasteners are offset about 75 mm from the mid-line of the effective length.

[0068] Accordingly, the present board provides an arrangement that particularly is suited for powder riding, yet also is easy to ride on hardpack and groomed runs and, or alternatively, in the terrain park and in half pipes. The board may be tailored for a specific one of these riding conditions or styles or may be arranged for any combination of such riding conditions or styles.

[0069] In one illustrated embodiment of the present board, the overall length of the board is 150 cm and the running length, also known as the sidecut length, is 110 cm. The nose has a width of 30.05 cm and a length of 24 cm. The tail has a width of 27.55 cm and a length of

16 cm. The waist has a width of 24.7 cm. The ratio of the nose length to tail length is 1.50. The taper, that is the difference between the nose width and the tail width, is 2.5 cm. The sidecut depth is 2.05 cm. In another illustrated embodiment, the overall length of the board is 156.5 cm while the running length is 115.5 cm. The nose has a width of 31.25 cm and a length of 25 cm, while the tail has a width of 28.25 cm and a length of 16.0 cm. The waist has a width of 25.5 cm. The ratio of nose length to tail length is 1.56 to 1. The taper of the board is 3 cm. The sidecut depth is 2.125 cm. The nose may have a height from 5 to 6 cm, and typically the tail height is between 0.5 to 1.5 cm shorter than the nose.

[0070] In yet another illustrated embodiment, the overall length of the board is 160 cm and the running length is 119 cm. The nose has a width of 31.6 cm and a length of 25 cm, while the tail has a width of 28.6 cm and a length of 16.0 cm. The waist has a width of 25.8 cm. The ratio of nose length to tail length is 1.56. The board taper is 3 cm. The sidecut depth is 2.15 cm.

[0071] As indicated earlier, the invention is not limited to a board with these specific dimensions or any of the dimensions recited in this specification, and other widths and lengths whether of the same or varying proportions to that described and illustrated are contemplated. Further, one or more of the dimensions, relationships between dimensions, or structural arrangements of a board in an embodiment disclosed above could be modified to change or eliminate a performance property yet still be within the scope of the invention. For example, the overall length of the illustrated board could be increased one or more centimeters and even beyond 160 cm if desired and while the increase in length may make it more difficult to rotate the board 360° while in the air, the longer board would still have a nose to tail width ratio within one of the ranges mentioned above, and, consequently, would still be within the scope of the contemplated invention. Also instructive is that the insert patterns corresponding to the front and back bindings may be offset 25 mm from the mid-line in the conventional Burton manner, yet the board because of its nose and tail dimensions still provides advantageous floating properties as compared to a board with a narrower nose or a smaller taper, and such a board is still encompassed by the present invention. Thus, the invention is not limited only to a board that includes all of the beneficial arrangements discussed above but, rather, encompasses any board that includes one or more of these particular dimensional attributes or structural arrangements. Of course, as should be appreciated by one of skill in the art, many other board specifications come within the present invention in addition to those recited further below in the claims.

[0072] The construction and assembly of the snowboard is not critical to the present invention. A representative board may include a vertical laminate wood core surrounded by one or more fiber/resin layers for torsional control. A sintered or extruded polyethylene,

graphite or other base material may be provided in sheet form on the snow contacting surface of the board while a plastic, preferably opaque, top sheet is arranged on the opposite surface for protecting the core and laminate from abrasion and from exposure to ultraviolet light. Sidewall, cap or mixed sidewall/cap construction may be employed to protect and seal the core from the environment. Metal edges (not shown) may wrap around a partial, or preferably a full, perimeter of the board, providing a hard gripping edge for board control on snow and ice. Damping material to reduce chatter and vibrations also may be incorporated into the board. The board may have a sidecut, typically from about 6.0 to 10.0 m radius, for ease of turning the gliding device, and or camber, e.g., to even the contact pressures on the board along the running length. The board may have a thickness ranging from about 15 to 16 mm that may taper downwardly in the region of the nose and tail to about 3 to 8 mm. The board may have an overall length between 135 to 170 cm for an adult model. The width of the nose section may range from 25 to 30 cm, more preferably up to 32 cm, while the width of the tail section typically is from about 24 to 30 cm. Nose height typically ranges from about 2 to about 6 cm, more preferably up to about 8 cm, with the tail height in many boards being about 0.5 to 1.5 cm shorter, or even up to about 3 to 4 cm shorter.

[0073] Any binding or other device for attaching a rider's foot or boot to a board, including strap, step-in, and plate bindings, may be mounted to the board. Such bindings typically include a front and a back binding each provided with a hold down disc having one or more holes through which hardware such as a bolt, screw or other fastener is passed and then engaged with the inserts preformed in the board, so that the tightened disc secures the respective bindings to the board. While the insert pattern shown in the illustrated embodiment is the 3D® pattern proprietary to Burton, other insert arrangements may be utilized, such as the 4x4 pattern, as should be appreciated by one of skill in the art.

[0074] Having described particular embodiments of the invention in detail, various modifications and improvements will readily occur to those skilled in the art. Such modifications and improvements are intended to be part of this disclosure and within the scope of the invention. Furthermore, various aspects and/or dimensions of the invention described above may be combined with one or more other aspects and/or dimensions of the invention in any suitable way. Accordingly, the foregoing description is by way of example only.

Claims

1. A gliding board, comprising:

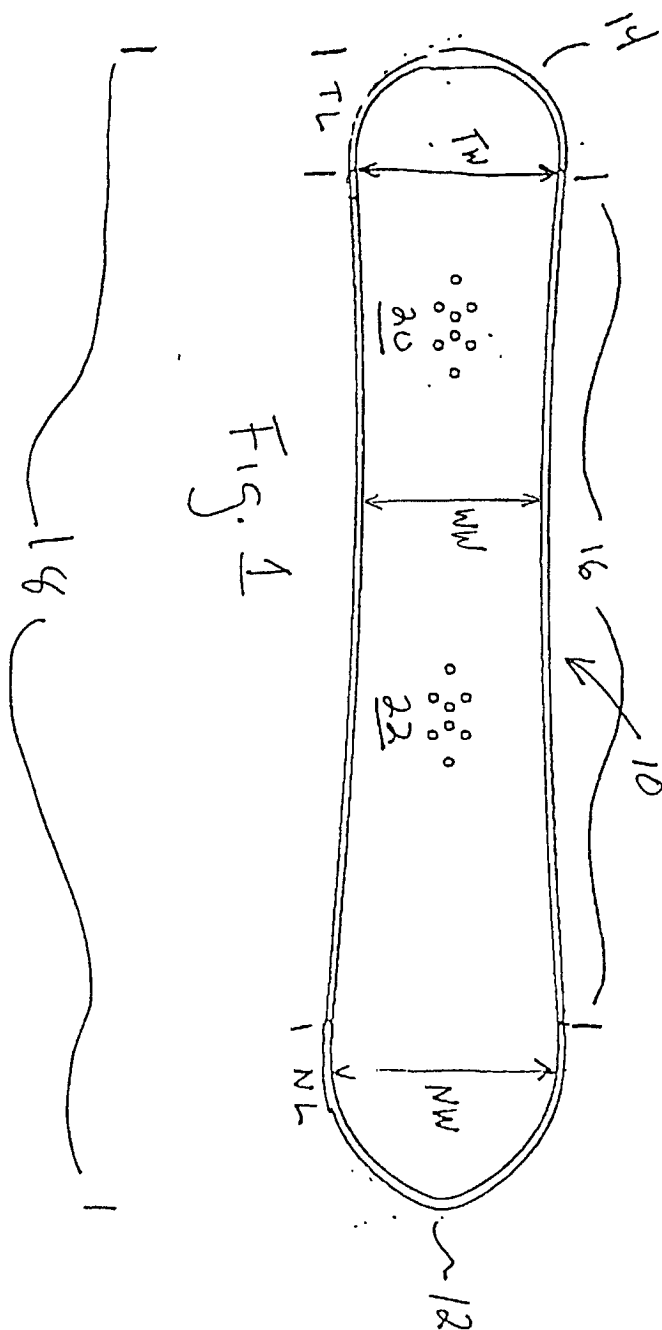
an elongated member having a nose (12), a tail (14), as well as a running length (16) extending

- between the nose and the tail and having two edges defining an edge to edge direction, wherein the nose (12) and the tail (14) are curved upwardly away from the running length (16), and positions (20, 22) for, in use of the gliding board, binding two feet of a rider to the elongated member are provided such that one foot is bound forward of the other foot in relation to the running length (16); the elongated member having an overall length (18) of less than about 162 cm, the nose (12) and the tail (14) each having a largest width (NW, TW) in the edge to edge direction, the running length having a narrowest width in the edge to edge direction defining a waist width (WW) of the elongated member, and the largest nose width (NW) in the edge to edge direction being at least about 30 cm and at least about 1.5 cm greater than the largest tail width (TW).
2. The gliding board recited in claim 1, wherein the nose has a length (NL) in a nose to tail direction greater than about 22 cm, preferably greater than about 23.5 cm, and most preferably greater than about 25 cm.
 3. The gliding board recited in claim 1 or 2, wherein the tail has a length (TL) in a nose to tail direction less than about 19.0 cm, preferably less than about 17.5 cm, and most preferably less than about 16.0 cm.
 4. The gliding board recited in any one of claims 1 to 3, wherein a ratio of the nose length (NL) to the tail length (TL) is greater than about 1.45, preferably greater than about 1.48, more preferably greater than about 1.5, still more preferably greater than about 1.53, and most preferably greater than about 1.56.
 5. The gliding board recited in any one of claims 1 to 4, wherein the largest nose width (NW) is at least about 2.0 cm greater, preferably at least about 2.5 cm greater, and most preferably at least about 3.0 cm greater than the largest tail width (TW).
 6. The gliding board recited in any one of claims 1 to 5, wherein a ratio of the largest nose width (NW) to the largest tail width (TW) is greater than about 1.05, preferably greater than about 1.07, more preferably greater than about 1.09, and most preferably greater than about 1.1.
 7. The gliding board recited in any one of claims 1 to 6, wherein a ratio of the largest nose width (NW) to the narrowest waist width (WW) is less than about 1.3, preferably between about 1.2 and about 1.25, and most preferably about 1.22.
 8. The gliding board recited in any one of claims 1 to 7, wherein a ratio of the narrowest waist width (WW) to the largest nose width (NW) is greater than about 0.77.
 9. The gliding board recited in any one of claims 1 to 8, wherein a ratio of the narrowest waist width to the largest tail width (TW) is greater than about 0.85.
 10. The gliding board recited in any one of claims 1 to 9, further comprising a sidecut extending along the running length (16), the sidecut comprising a sidecut depth and a sidecut length, a ratio of the sidecut depth to the sidecut length being about 0.02.
 11. The gliding board recited in any one of claims 1 to 10, wherein the overall length (18) is less than about 160 cm, less than about 158 cm, or less than about 155 cm.
 12. The gliding board recited in any one of claims 1 to 11, wherein as the binding positions first (20) and second (22) binding mounting locations are preformed in the elongated member, the first binding mounting location (20) being positioned between the middle of the elongated member along the overall length (18) and the tail, and the second binding mounting location (22) between the middle of the elongated member along the overall length (18) and the nose; the first (20) and second (22) binding mounting locations being offset toward the tail more than 25 mm from the middle of the elongated member along the overall length (18).
 13. The gliding board recited in claim 12, wherein the first (20) and second (22) binding mounting locations are offset by at least about 30 mm, preferably by at least about 50 mm, more preferably by at least about 75 mm, and most preferably by at least about 100 mm.
 14. The gliding board recited in any one of claims 1 to 13, wherein the gliding board is a snowboard.

Fig. 2



Fig. 1





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 02 00 1149

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	FR 2 748 400 A (PRUDHOMME DOMINIQUE) 14 November 1997 (1997-11-14) * the whole document *	1-14	A63C5/03
A	US 5 782 475 A (BALMAIN PATRICK) 21 July 1998 (1998-07-21) * the whole document *	1-14	
A	WO 00 48693 A (NORTH SHORE PARTNERS) 24 August 2000 (2000-08-24) * the whole document *	1-14	
A	US 5 816 590 A (FEY ERIK W ET AL) 6 October 1998 (1998-10-06) * the whole document *	1-14	
A	WO 99 46016 A (HITURN AS ;KARLSEN JOERGEN (NO)) 16 September 1999 (1999-09-16) * the whole document *	1-14	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A63C
Place of search		Date of completion of the search	Examiner
THE HAGUE		24 May 2002	Verelst, P
CATEGORY OF CITED DOCUMENTS T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document & : member of the same patent family, corresponding document			

EPO FORM 1503 03 82 (P04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 00 1149

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

24-05-2002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
FR 2748400	A	14-11-1997	FR 2748400 A1	14-11-1997
US 5782475	A	21-07-1998	FR 2690350 A1	29-10-1993
			FR 2690351 A1	29-10-1993
			AT 144906 T	15-11-1996
			DE 69305844 D1	12-12-1996
			DE 69305844 T2	05-06-1997
			DK 637981 T3	07-04-1997
			EP 0637981 A1	15-02-1995
			ES 2096295 T3	01-03-1997
			WO 9322013 A1	11-11-1993
			JP 8500746 T	30-01-1996
WO 0048693	A	24-08-2000	US 6382658 B1	07-05-2002
			AU 4002700 A	04-09-2000
			WO 0048693 A2	24-08-2000
US 5816590	A	06-10-1998	EP 0925097 A1	30-06-1999
			WO 9738680 A1	23-10-1997
			US 6000711 A	14-12-1999
WO 9946016	A	16-09-1999	NO 981056 A	13-09-1999
			AU 2749699 A	27-09-1999
			CA 2322866 A1	16-09-1999
			EP 1062008 A1	27-12-2000
			JP 2002505935 T	26-02-2002
			WO 9946016 A1	16-09-1999

EPC FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82