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**Gulbranson**

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(54) **SEATED SKIING OR SNOWBOARDING DEVICE**

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(22) Filed: **Jan. 12, 2010**

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**Related U.S. Application Data**

(63) Continuation of application No. 11/827,819, filed on Jul. 13, 2007, now abandoned.

(51) **Int. Cl.**
*A63C 5/03* (2006.01)

(52) **U.S. Cl.** ..... **280/14.1**; 280/21.1; 280/28.14

(58) **Field of Classification Search** ..... 280/14.1, 280/21.1, 27, 28.14, 14.22
See application file for complete search history.

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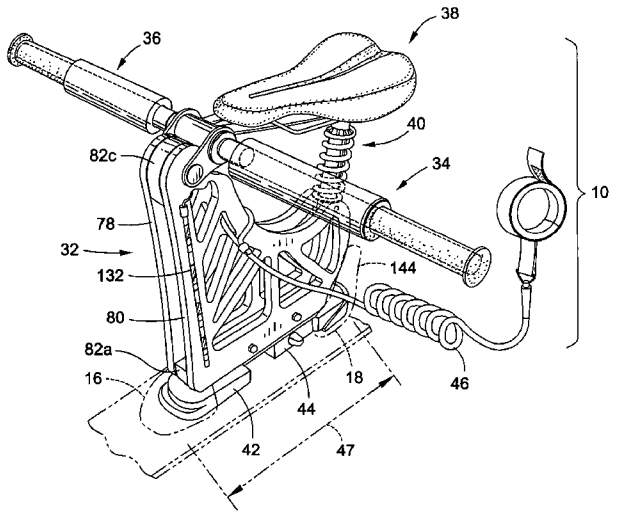
(57) **ABSTRACT**

A seated skiing device having an adjustable heel protrusion and a fixed toe protrusion is provided. The distance between the toe and heel protrusions are adjustable such that the seated the skiing device may engage toe and heel bindings of a snow ski set to a riders ski boot. In this manner, the seated skiing device is engageable to the snow ski of the rider without any additional tools. Also, a seated snowboarding device is disclosed herein. The seated snowboarding device is removably attachable to standard front and rear bindings of a snowboard.

**17 Claims, 7 Drawing Sheets**



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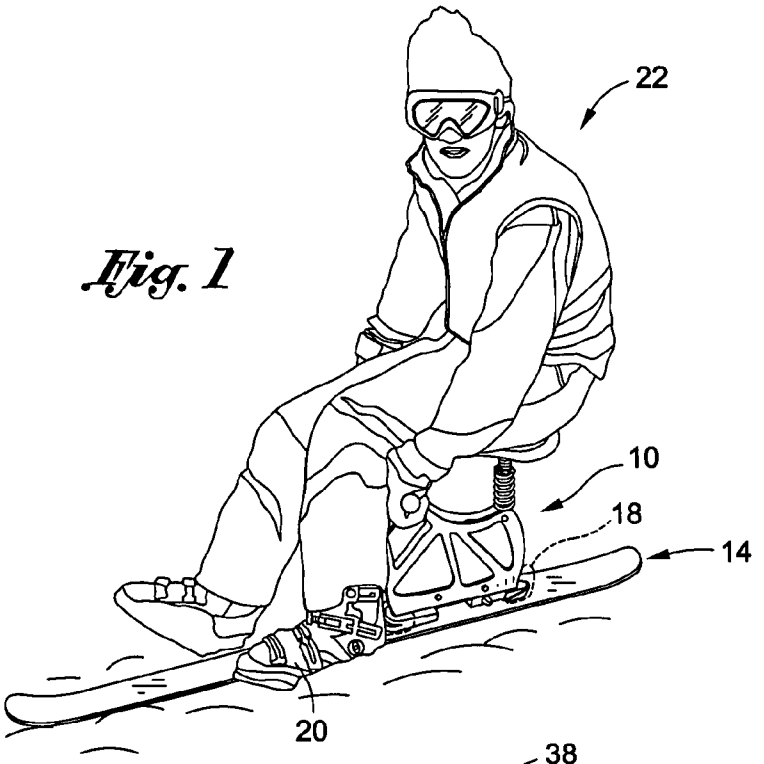
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Fig. 1

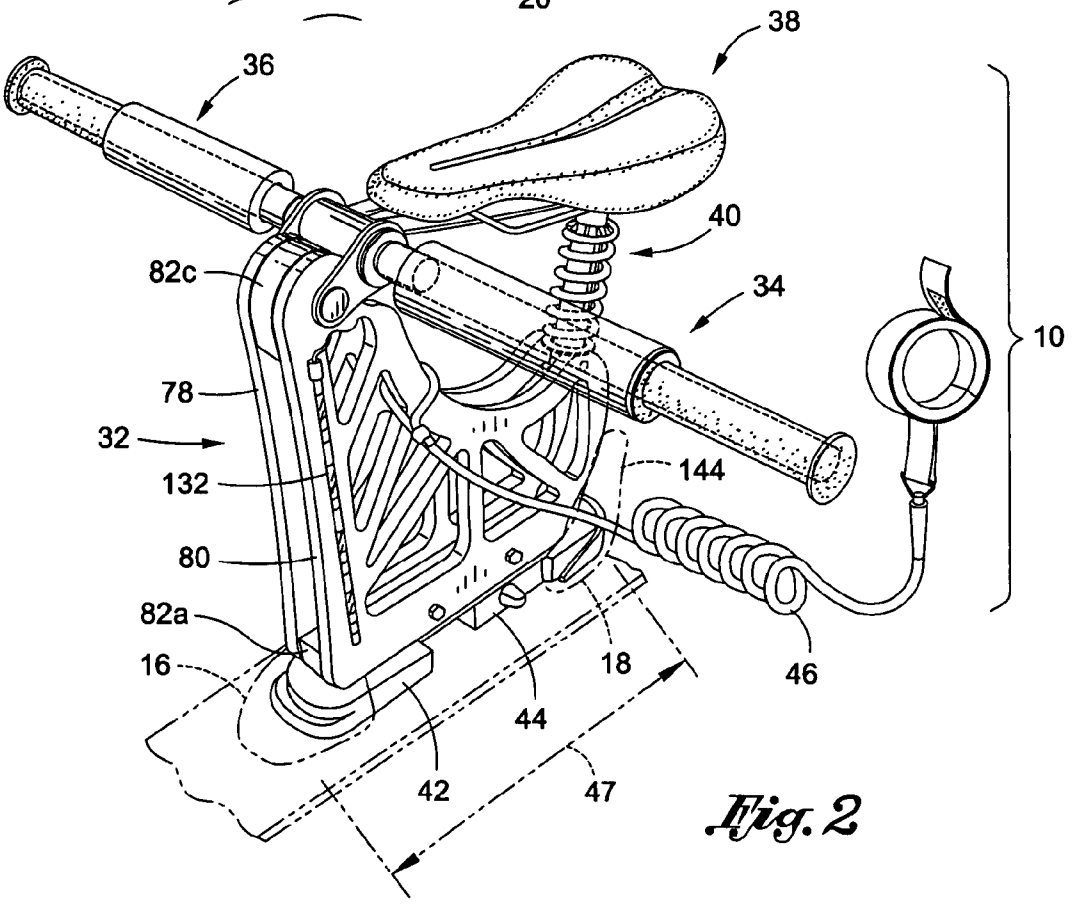
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Fig. 2

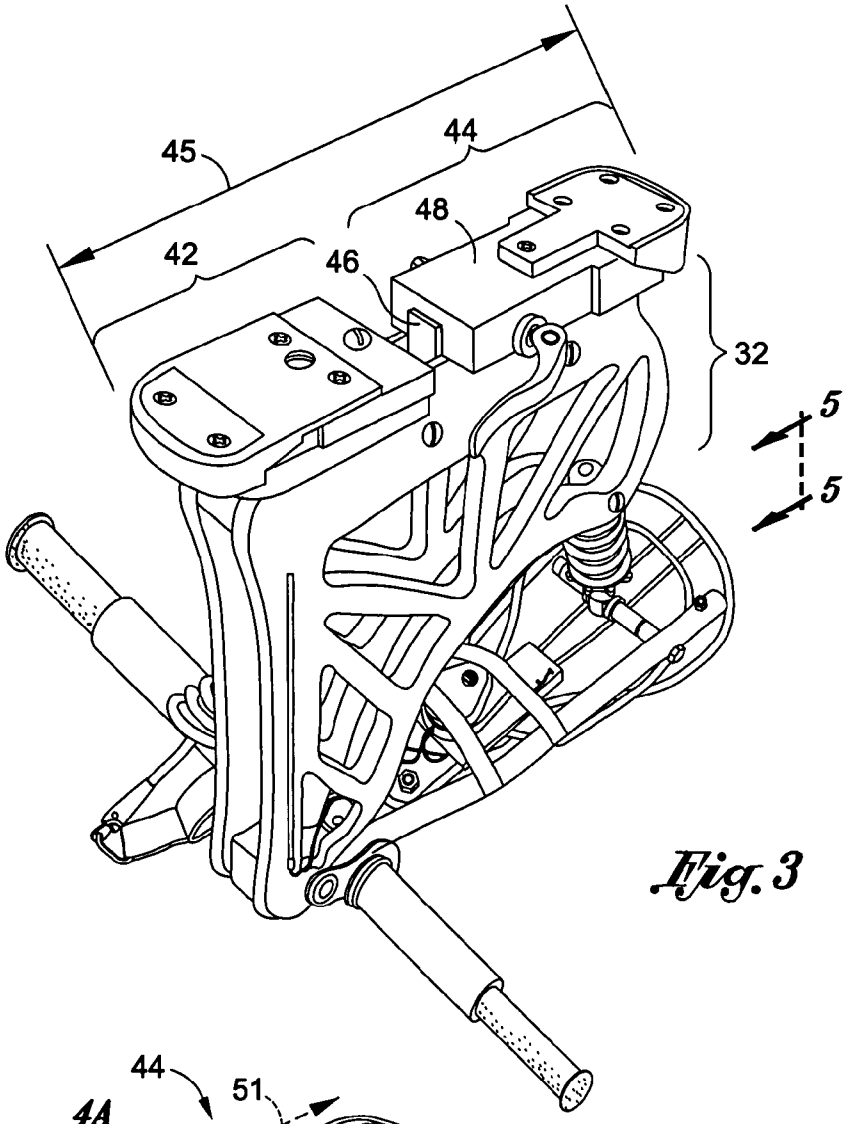



Fig. 3

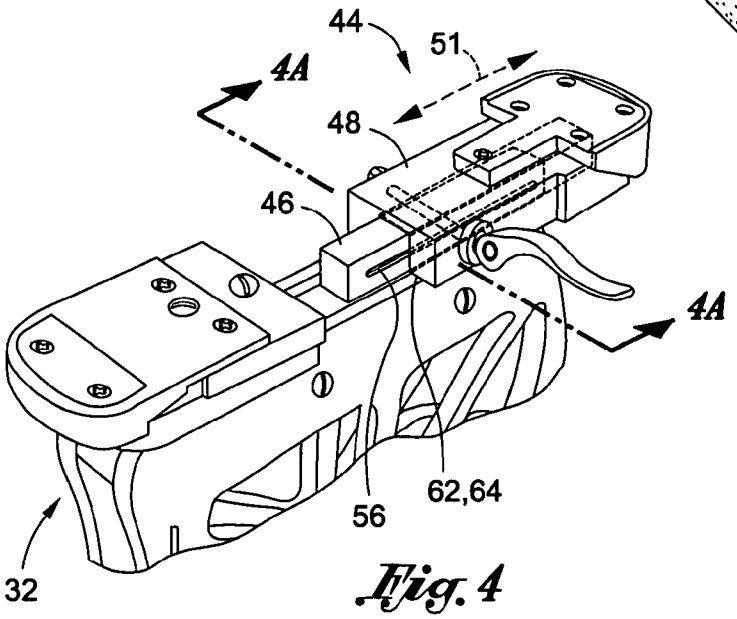
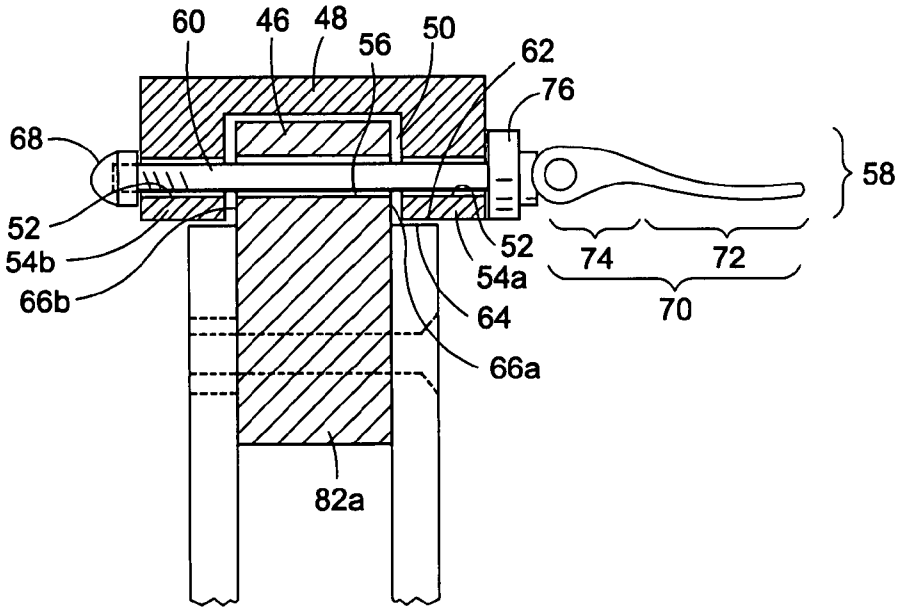



Fig. 4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66a
82a

*Fig. 4A*

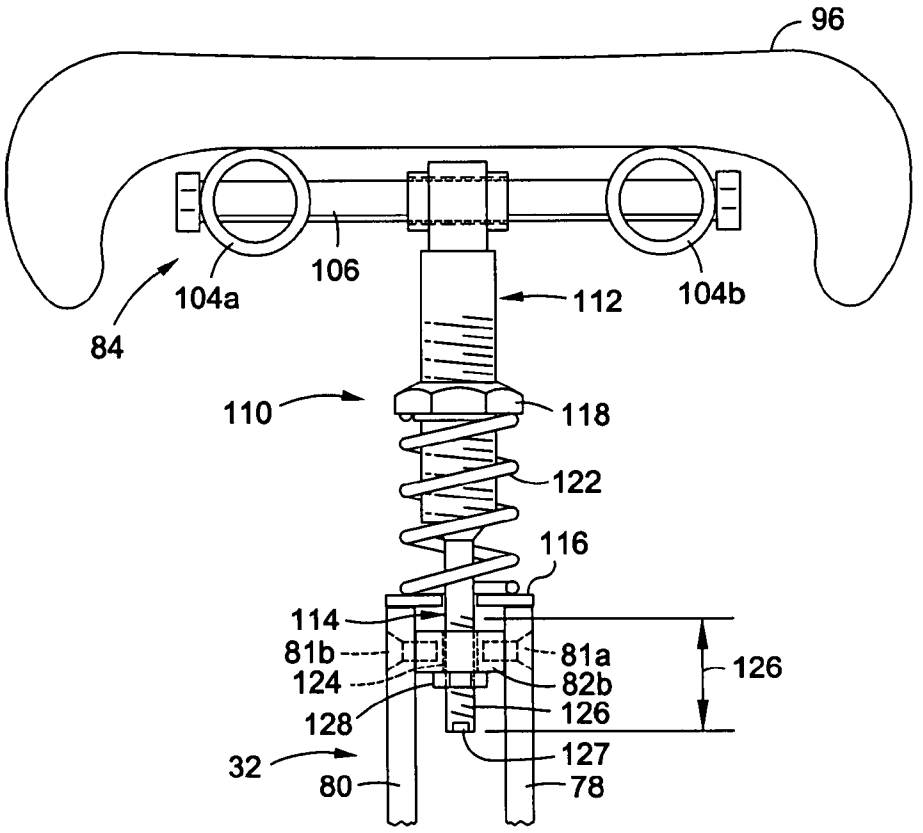
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*Fig. 5*

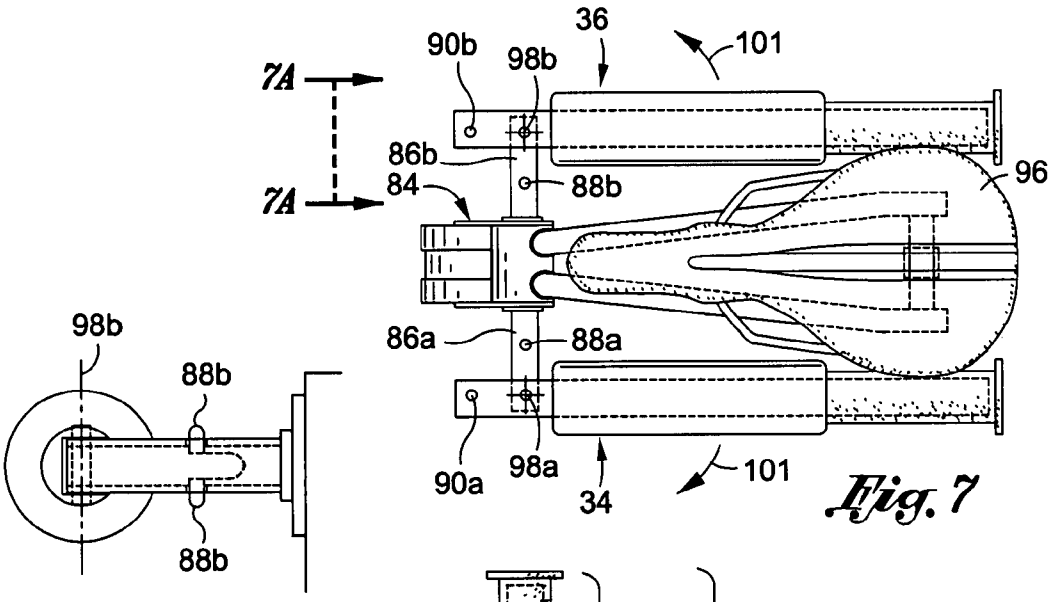



Fig. 7




Fig. 7A

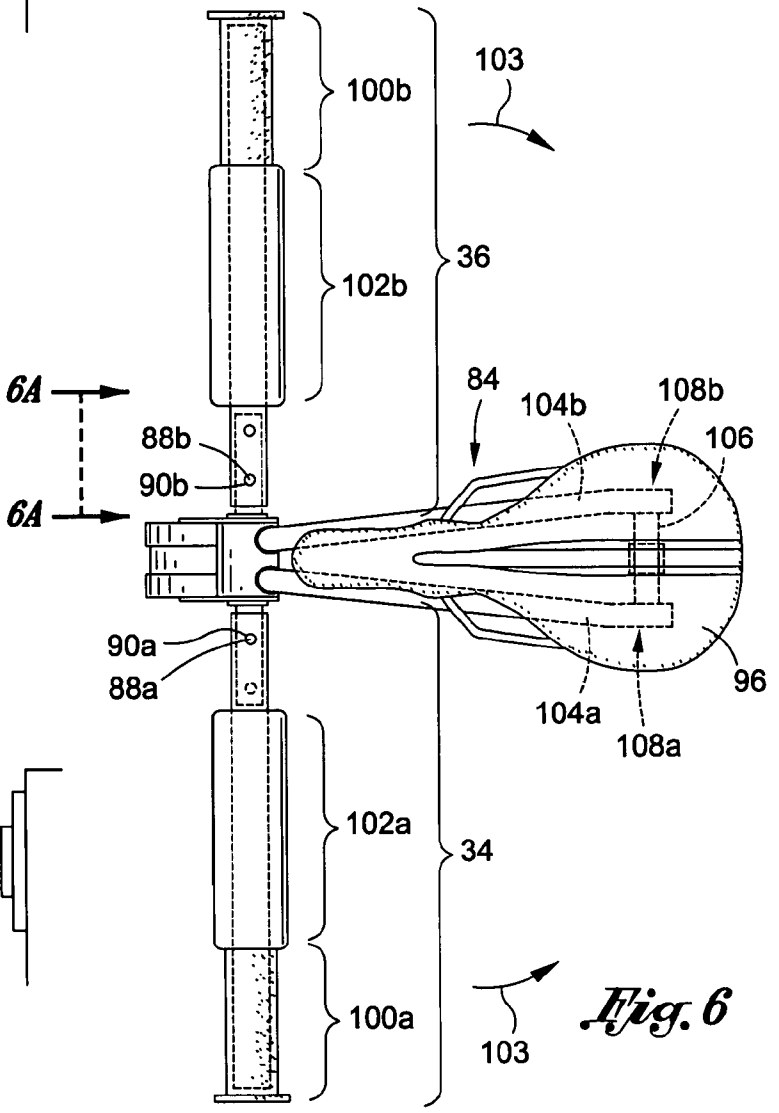



Fig. 6

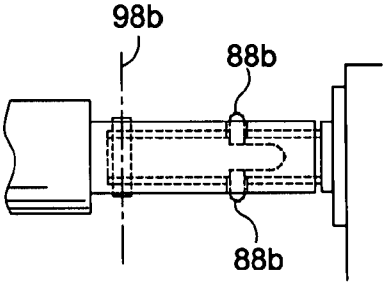
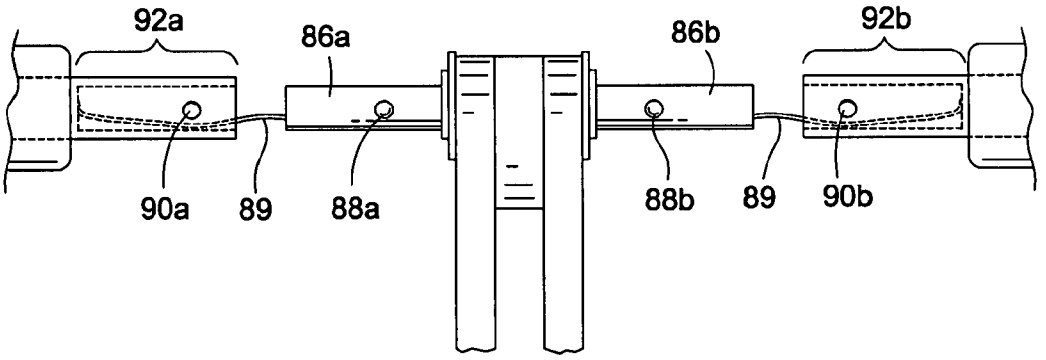



Fig. 6A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90b

*Fig. 8*

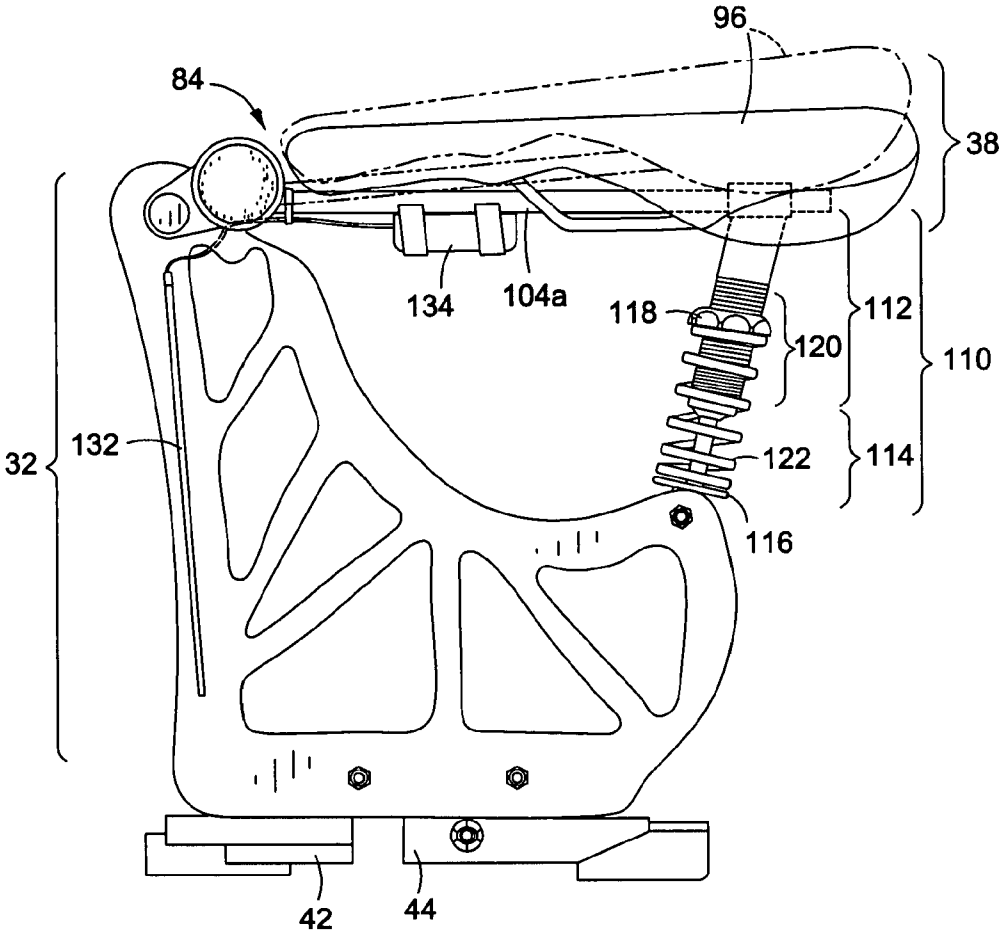
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*Fig. 9*

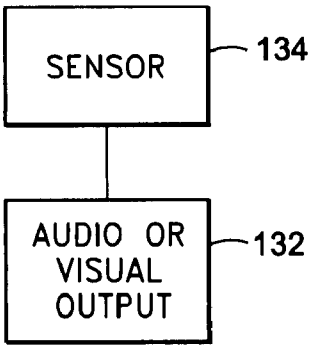



*Fig. 10*

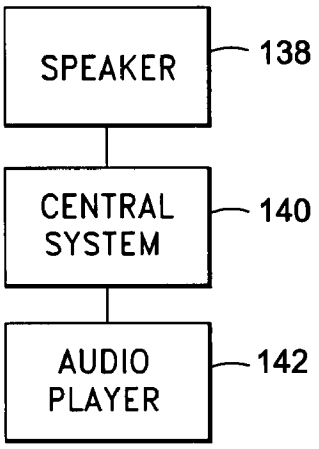



*Fig. 11*

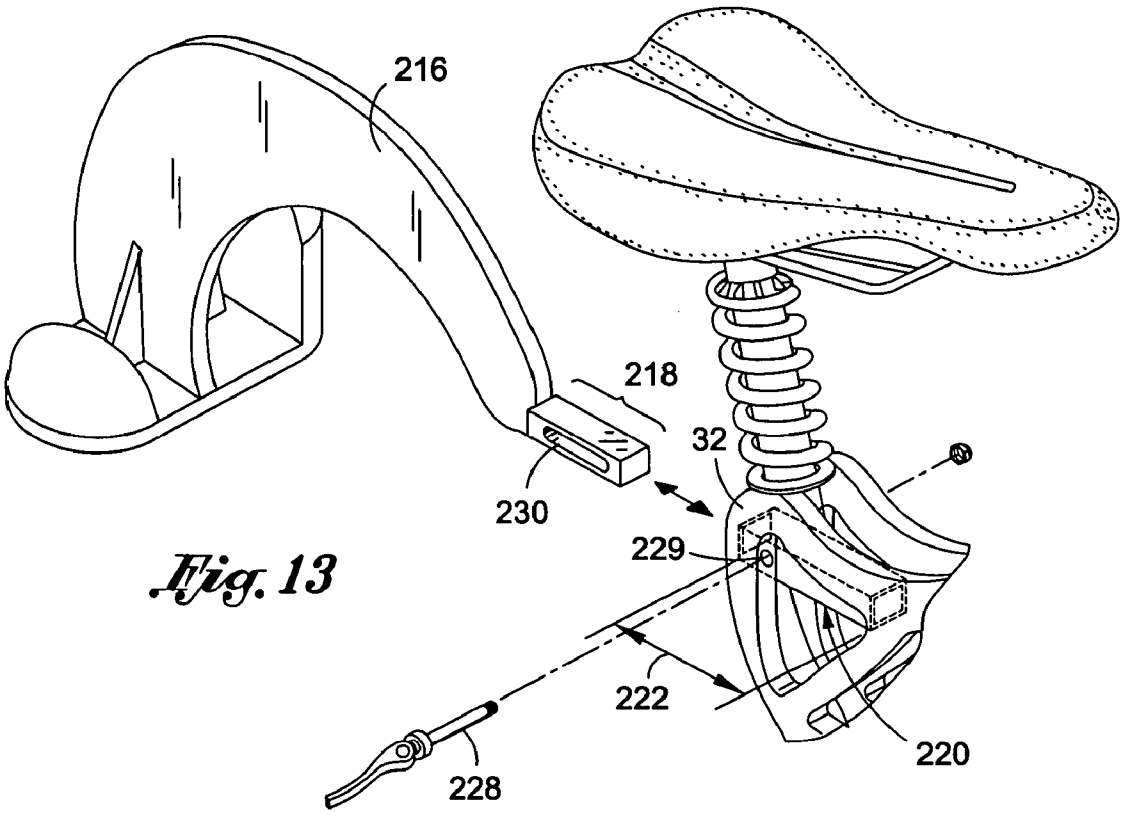
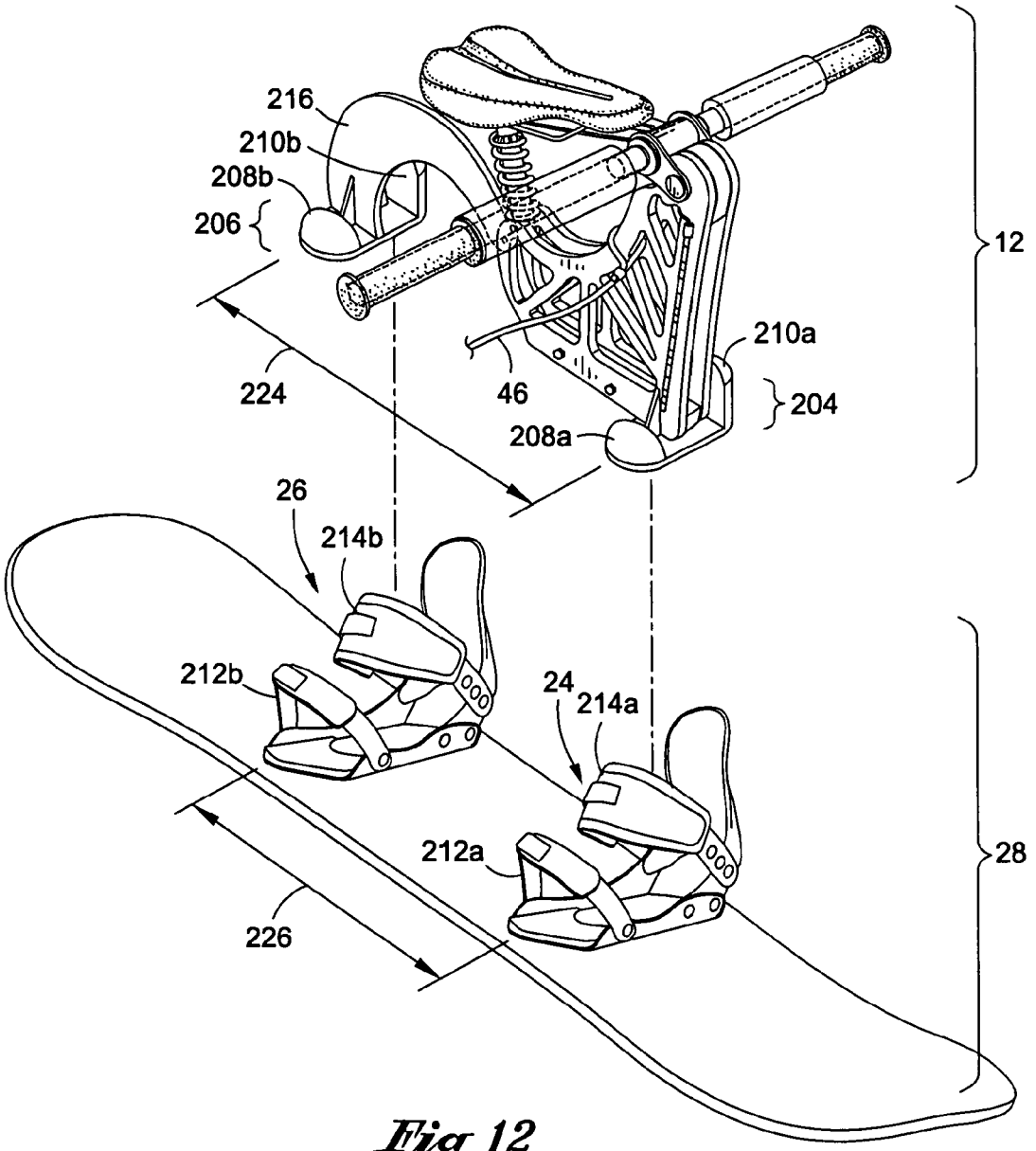



*Fig. 13*


216
210b
208b
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224
46
210a
204
208a
12
26
214b
212b
24
214a
212a
226
28

*Fig. 12*

# SEATED SKIING OR SNOWBOARDING DEVICE

## CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is a continuation of U.S. patent application Ser. No. 11/827,819 entitled SEATED SKIING OR SNOWBOARDING DEVICE filed Jul. 13, 2007 now abandoned.

## STATEMENT RE: FEDERALLY SPONSORED RESEARCH/DEVELOPMENT

Not Applicable

## BACKGROUND

The present invention relates to a device for traversing down a snow-covered downhill terrain while in a seated position.

There are numerous seated downhill snow riding devices in the prior art. For example, U.S. Pat. No. 6,179,305 (hereinafter '305 patent) illustrates a seated downhill snow riding device for a physically challenged person. As understood, the seat assembly is attached to the standard mounting holes of the snowboard. U.S. Pat. No. 3,917,301 illustrates another seated downhill snow riding device wherein a seat assembly is attached to a snow ski instead of a snowboard. As understood, the seat assembly is attached to the snow ski via front and rear custom brackets fixably attached to the snow ski. U.S. Pat. No. 4,193,609 (hereinafter the '609 patent) also illustrates a seated snow riding device wherein a seat assembly is attached to the snow ski via a customized interface between the snow ski and the seat assembly. Unfortunately, these prior art seated downhill snow riding devices require a customized interface between the seat assembly and the snow ski or snowboard. Accordingly, one is not able to choose between riding down the snow-covered downhill terrain in the seated position or switching to the standard upright position without additional tools.

Another deficiency of prior art seated downhill snow riding devices is related to their bulkiness making them hard to transport. By way of example and not limitation, the devices shown in the '305 patent, the '609 patent and U.S. Pat. No. 6,036,202 (hereinafter '202 patent) are very bulky. In particular, the rider must carry the seat assembly as well as the snowboard or snow ski. These devices would be difficult to carry while skiing or snowboarding down a snow-covered downhill terrain in the upright position. Moreover, the devices shown in the '202 patent and the '609 patent appear to have side skis or side poles. The rider must carry these devices as well as the seat assembly and snow ski or snowboard. The device shown in the '301 patent attempts to alleviate the bulkiness of the prior art seated downhill snow riding devices by providing a collapsible seat assembly. However, the rider must still carry the snow ski or the snowboard along with the seat assembly albeit in a folded position. Accordingly, it would be impracticable for the rider to carry a set of equipment for riding down the downhill snow-covered terrain in the upright position and a separate second set of equipment for riding down the downhill snow-covered terrain in a seated position such that the rider can switch between the seated and upright positions while on the mountain.

Moreover, the device shown in U.S. Pat. No. 4,193,609 (hereinafter '609 Patent) has handlebars but protrude our laterally so as to increase the bulkiness of the seat assembly.



In particular, the handle of the '609 device is fixedly attached to a base of the device. The handlebars extend out laterally beyond the seat of the seat assembly. Accordingly, the device of the '609 patent is inconvenient to carry.

Another deficiency with respect to prior art seated downhill snow riding devices is that they are boring to watch as the rider traverses down the snow-covered downhill terrain. Additionally, the prior art seated downhill snow riding devices are boring to ride in that they are not configured to provide music to the rider for listening to music while the rider is traversing down the snow-covered downhill terrain.

Accordingly, there is a need in the art for an improved seated downhill snow riding device.

## BRIEF SUMMARY

The seated skiing and snowboarding devices described herein addresses the problems discussed above, discussed below and those that are known in the art.

The seated skiing device may have a toe protrusion and a heel protrusion which are adjustable so as to fit within toe and heel bindings of a snow ski adjusted to a ski boot of a rider. In particular, the heel protrusion of the seated skiing device may be slid closer to the toe protrusion or slid further away from the toe protrusion and locked in place. The distance between the toe protrusion and the heel protrusion is adjusted and locked in place to fit the toe and heel bindings of the snow ski. In this manner, the skier may disengage his/her ski boots from the snow ski and engage the seated skiing device to the snow ski to ride down the snow covered downhill terrain in the seated position. The rider may alternate between riding down the snow covered downhill terrain in the seated position with the seated skiing device or in the traditional upright position by engaging his/her ski boot to the snow ski.

In an aspect of the seated skiing device, the same may have collapsible handle and thigh bars. The collapsible handle and thigh bars may be traversable between a collapsed position and an extended position. The rider may traverse the handle and thigh bars to the collapsed position for stowing the seated skiing device in a backpack. To ride down the snow covered downhill terrain in the seated position, the seated skiing device is removed from the backpack, the handle and thigh bars are traversed to the extended position and the seated skiing device is engaged to the snow ski.

In an aspect of the seated skiing device, the same may incorporate a shock absorber for providing comfort to the skier while riding down the snow covered downhill terrain in the seated position.

In an aspect of the seated skiing device, the same may also additionally have a leash attached to the seated skiing device and removably attachable to a leg or arm of the skier.

The seated snowboarding device may have a front protrusion and a rear protrusion which are removably attachable to traditional front and rear bindings of a snowboard. The seated snowboarding device may have all of the features discussed herein in relation to the seated skiing device except for the toe protrusion and the heal protrusion.

## BRIEF DESCRIPTION OF THE DRAWINGS

These and other features and advantages of the various embodiments disclosed herein will be better understood with respect to the following description and drawings, in which like numbers refer to like parts throughout, and in which:

FIG. **1** is an illustration of a skier riding down a snow covered downhill terrain in the seated position with a seated skiing device attached to a snow ski;

FIG. **2** is an enlarged perspective view of the seated skiing device shown in FIG. **1**;

FIG. **3** is an enlarged bottom perspective view of the seated skiing device shown in FIG. **2**;

FIG. **4** is an enlarged view of a heel protrusion adjustably attached to a frame of the seated skiing device shown in FIG. **3**;

FIG. **4**A is a cross sectional view of the heel protrusion shown in FIG. **4**;

FIG. **5** is a rear view of the seated skiing device shown in FIG. **3** and illustrating a shock absorber;

FIG. **6** is a top view of the seated skiing device shown in FIG. **2**;

FIG. **6**A is an enlarged view of a right handle and thigh bar;

FIG. **7** illustrates a collapsed position of the left and right handle and thigh bars shown in FIG. **6**;

FIG. **7***a* is an enlarged view of the right handle and thigh bar in the collapsed position;

FIG. **8** illustrates an alternative means of attaching the left and right handle and thigh bars to the frame;

FIG. **9** is a side view of the seated skiing device shown in FIG. **2** and illustrating the pivotable nature of a seat of the seated skiing device;

FIG. **10** is a schematic diagram of a sensor and an audio/visual output;

FIG. **11** is a schematic diagram of an audio system;

FIG. **12** is a perspective view of a seated snowboarding device removably attachable to standard front and rear bindings of a snowboard; and

FIG. **13** is an exploded view of the seated snowboarding device shown in FIG. **11** wherein an extension has a tongue removably attachable to a receiver of a frame.

## DETAILED DESCRIPTION

Referring now to the drawings, the same illustrates a seated skiing device **10** (see FIG. **1**) and a seated snowboard device **12** (see FIG. **12**). The seated skiing device **10** may be removably to a snow ski **14** with toe and heel bindings **16**, **18** set to the ski boot **20** of the skier **22**. Similarly, the seated snowboard device **12** may be removably attachable to front and rear bindings **24**, **26** of a snowboard **28** with the front and rear bindings **24**, **26** set to the stance of the snowboarder. Accordingly, the seated skiing and snowboard devices **10**, **12** may be respectively removably attachable to the snow ski **14** and snowboard **28** as desired. As such, the rider may choose to ride down a snow covered downhill terrain in the traditional upright position with his/her snow ski **14** or snowboard **28**. Also, at the appropriate time, as desired, the skier **22** or snowboarder may decide to ride down the snow covered downhill terrain in a seated position by engaging the seated skiing device **10** to the snow ski **14** or the seated snowboard device **12** to the snowboard **28**. The skier **22** or snowboarder may alternate between riding down the snow covered downhill terrain in the standard traditional upright position or in the seated position.

Referring now to FIG. **1**-**9**, the seated skiing device **10** may have a frame **32**, left and right handle and thigh bars **34**, **36**, a seat assembly **38**, a shock assembly **40**, and adjustable toe and heel protrusions **42**, **44**. Also, the seated skiing device **10** may have a leash **46**.

As shown in FIG. **3**, the toe protrusion **42** may be fixedly attached to the frame **32**. The toe protrusion **42** may be sized and configured to engage the toe bindings **16**. Similarly, the heel protrusion **44** may be sized and configured to engage the heel binding **18**. Moreover, the heel protrusion **44** may be adjustably attached to the frame **32** such that a distance **45** (see FIG. **3**) between the toe and heel protrusions **42**, **44** may be adjusted so as to be equal to a distance **47** (see FIG. **2**) between the toe and heel bindings **16**, **18**. In this manner, the toe and heel protrusions **42**, **44** are adjusted to the toe and heel bindings **16**, **18** already adjusted to the preferences of the skier **22**. The toe and heel bindings **16**, **18** are not adjusted to the requirements of the toe and heel protrusions **42**, **44**. Accordingly, the toe and heel protrusions **42**, **44** of the seated skiing device **10** or the ski boot **20** of the skier **22** may be selectively engaged to the toe and heel bindings **16**, **18** of the snow ski.

The heel protrusion **44** may be adjustably attached to the frame **32** in that the heel protrusion **44** may be slid closer to the toe protrusion **42** and locked in place or slid away from the toe protrusion **42** and locked in place, as shown by arrow **51** in FIG. **4**. The position of the heel protrusion **44** depends on the setting of the toe and heel bindings **16**, **18** of the snow ski **14**. To achieve the slide and lock feature of the heel protrusion **44** to the frame **32**, an elongate block **46** may be fixedly secured to an underside of the frame **32**. The heel protrusion **44** may additionally have an extension **48**. The extension **48** of the heel protrusion **44** may have a channel **50** (see FIG. **4**A) sized and configured to receive the elongate block **46**. The elongate block **46** may slide in a longitudinal direction into or out of the channel **50**, as shown by arrow **51** (see FIG. **4**). The extension **48** may have aligned apertures (e.g., circular hole) **52** formed in opposed walls **54***a, b* which defines the channel **50**. The elongate block **46** may have a mating elongate slot **56** (see FIG. **4**) which is aligned to the apertures **52** formed in the opposed walls **54***a, b*. A fastener **58** (see FIG. **4**A) having an elongate bolt **60** may be inserted through the apertures **52** of the opposed walls **54***a, b* and the elongate slot **56** of the elongate block **46**. When the elongate bolt **60** is inserted through the apertures **52** and the elongate slot **56**, the heel protrusion **44** does not substantially wiggle in the vertical up and down direction. The reason is that the extension **48** defines an upper surface **62** which may contact a lower surface **64** of frame **32**. The elongate bolt **60** of the fastener **58** holds the upper surface **62** of the extension **48** against the lower surface **64** of the frame **32**. The heel protrusion **44** may be slid closer to the toe protrusion **42** or further away from the toe protrusion **42**. To this end, the elongate bolt **60** slides within the elongate slot **56**. When the distance between the toe and heel protrusions **42**, **44** are properly adjusted to the toe and heel bindings **16**, **18**, the fastener **58** is tightened to lock the heel protrusion **44** in place. In particular, the opposed walls **54***a, b* are deflected inward against opposed sides **66***a, b* when the fastener **58** is tightened.

The fastener **58** may be a quick release lever such as is commonly found in modern bicycles, as shown in FIG. **4**A. The quick release lever may have a nut **68**, the elongate bolt **60**, a lever **70** and a collar **76**. The nut **68** may be attached to a first distal end of the elongate bolt **60**. The lever **70** may be attached to an opposed second distal end of the elongate bolt **60**. The lever may have a handle **72** and cam **74**. The handle **72** is operative to rotate the cam **74** to loosen (see FIGS. **4** and **4**A) or tighten (see FIG. **3**) the quick release lever. In particular, the cam **74** draws the elongate bolt **60** toward the cam side when the lever **70** is traversed to a tightened position (see FIG. **3**). Conversely, the cam **74** releases tension in the elongate bolt **60** when the handle **72** is traversed to a release position (see FIGS. **4** and **4**A). Accordingly, the heel protrusion **44** may be slid and locked in the following manner. The handle **72** may be traversed to the released position to allow the distance **45** between the heel and toe protrusions **44**, **42** to be adjusted. After the distance **45** between the toe and heel protrusions **42**, **44** are adjusted, the handle **72** is traversed to

the tightened position (see FIG. **3**). The opposed walls **54***a, b* press against the opposed sides **66***a, b* thereby frictionally locking the heel protrusion **44** in place.

In an aspect of the seated skiing device **10**, it is contemplated that the heel protrusion **44** be fixedly attached to the frame **32** and the toe protrusion **42** be adjustably attached to the frame **32** in that the toe protrusion **42** may be slid closer to the heel protrusion **44** and locked in place or slid away from the heel protrusion **44** and locked in place. The toe protrusion **42** may be adjustably attached to the frame **32** in the same manner that the heel protrusion **44** is adjustably attached to the frame **32** as discussed above.

The frame **32** may have a first plate **78** and a second plate **80**, as shown in FIG. **2**. The first and second plates **78**, **80** may be spaced apart with various spacers **82***a, b, c* positioned between the first and second plates **78**, **80**. Spacer **82***a* may be positioned at a lower portion of the first and second plates **78**, **80**. The spacer **82***a* may be attached to the first and second plates **78**, **80** with a nut and bolt, adhesive or other methods known in the art. The spacer **82***b* (see FIG. **5**) may be positioned between the first and second plates **78**, **80** at an upper rear portion of the first and second plates **78**, **80**. The spacer **82***b* may be attached to the first and second plates **78**, **80** with two bolts **81***a,b* or other methods known in the art. The spacer **82***c* (see FIG. **2**) may be positioned between the first and second plates **78**, **80** at an upper front portion of the first and second plates **78**, **80**. The spacers **82***a, b, c* may be sized and configured to maintain a parallel relationship between the first and second plates **78**, **80**. To lighten the weight of the seated skiing device **10**, the first and second plates **78**, **80** may be hollowed out so as to form a web configuration.

The left and right handle and thigh bars **34**, **36** (see FIGS. **6**-**7**A) may be collapsible. In particular, left and right posts **86***a, b* (see FIG. **7**) may be attached to a seat frame **84** immediately adjacent the upper front portion of the frame **32**. The left and right posts **86***a, b* may extend out in opposed lateral directions from each other. Moreover, the left and right posts **86***a, b* may be aligned to each other and extend out perpendicularly with respect to a plane defined by the frame **32**. The left and right handle and thigh bars **34**, **36** may rotate to a collapsed position (see FIGS. **6** and **7**).

In particular, the left and right handle and thigh bars **34**, **36** may be pivoted rearward under a seat **96** (see FIG. **7**). The left and right handle and thigh bars **34**, **36** may be pivotable about pivot axis **98***a, b* of the left and right posts **86***a, b*. The left and right handle and thigh bars **34**, **36** are pivotable between a collapsed position (see FIG. **7**) and an extended position (see FIG. **6**). To traverse the left and right handle and thigh bars **34**, **36** to the collapsed position from the extended position, spring loaded buttons **88***a, b* are pushed inward and out of apertures **90***a, b*. The left and right handle and thigh bars **34**, **36** may then be rotated rearward in the direction of arrow **103** (see FIG. **6**) under the seat **96**, as shown in FIG. **7**. The left and right handle and thigh bars **34**, **36** may then be secured to the frame **32** with a bungee cord or other fastening device. To traverse the left and right handle and thigh bars **34**, **36** back to the extended position (see FIG. **6**) from the retracted position, the fastening device is removed from the left and right handle and thigh bars **34**, **36**. The skier **22** then traverses or pivots the left and right handle and thigh bars **34**, **36** about the pivot axis **98***a, b* in the direction of arrow **101** (see FIG. **7**). The left and right handle and thigh bars **34**, **36** are pivoted until the spring loaded buttons **88***a, b* are received back into the apertures **90***a, b*. At this point, the left and right handle and thigh bars **34**, **36** are secured to the frame **32** in the extended position.

Alternatively, the left and right handle and thigh bars **34**, **36** may be rotated in a downward direction so as to be positioned vertically with respect to the frame **32**. To this end, the angular position of the left and right posts **86***a, b* are rotated ninety degrees. The left and right handle and thigh bars **34**, **36** may be traversed between the extended position and the retracted position in the same manner that the left and right handle and thigh bars **34**, **36** are traversed therebetween as discussed above.

Alternatively, the left and right handle and thigh bars **34**, **36** may be removably attachable to the left and right posts **86***a, b*, as shown in FIG. **8**. When the skier **22** is riding down the snow-covered down hill terrain with the seated skiing device **10**, the left and right handle and thigh bars **34**, **36** are attached to the left and right posts **86***a, b*. When the skier **22** is riding down the snow-covered downhill terrain in the traditional upright position, the seated skiing device **10** is disposed within a large backpack. To this end, the left and right handle and thigh bars **34**, **36** are detached from the left and right posts **86***a, b* and placed against the frame **32** such that the seated skiing device **10** may have a compact configuration so as to be disposable within the large backpack.

To attach or detach the left and right handle and thigh bars **34**, **36** from the left and right posts **86***a, b*, the left and right posts **86***a, b* may have spring loaded buttons **88***a, b*. The left and right handle and thigh bars **34**, **36** may have corresponding apertures **90***a, b* sized and configured to receive the spring loaded buttons **88***a, b*. To engage the left and right handle and thigh bars **34**, **36** to the left and right posts **86***a, b*, distal end portions **92***a, b* may have a hollow center. The distal end portions **92***a, b* of the left and right handle and thigh bars **34**, **36** may be slid over the left and right posts **86***a, b*. The left and right posts **86***a, b* may be sized and configured to have a close fit with the distal end portions **92***a, b*. The left and right posts **86***a, b* are inserted into the distal end portions **92***a, b* until the spring loaded buttons **88***a, b* spring up into the apertures **90***a, b* to secure the left and right handle thigh bars **34**, **36** to the left and right posts **86***a, b*. To remove the left and right handle and thigh bars **34**, **36**, the spring loaded buttons **88***a, b* are pushed downward and out of the apertures **90***a, b*. The left and right handle and thigh bars **34**, **36** may be slid off of the left and right posts **86***a, b*. To ensure that the skier does not lose the left and right handle and thigh bars **34**, **36** a bungee cord or other band **89** may be attached to the left and right posts **86***a, b* and the left and right handle and thigh bars **34**, **36**. The left and right handle and thigh bars **34**, **36** may be laid against the frame **32**. The left and right handle and thigh bars **34**, **36** may be secured to the frame with a bungee cord or other fastening device.

The left and right handle and thigh bars **34**, **36** may each define a handle portion **100***a, b* and a thigh portion **102***a, b*, as shown in FIG. **6**. The thigh portions **102***a, b* may be positioned medially with respect to the handle portions **100***a, b*. The thigh portions **102***a, b* may be covered with a soft sponge or cushion such that when the skier's thighs rest upon the thigh portions **102***a, b*, (see FIG. **1**), the thigh portions **102***a, b* do not cause discomfort to the rider or skier **22**. The handle portions **100***a, b* may be sized and configured to receive the left and right hands of the skier **22**. The handle portions **100***a, b* may be covered with a friction material such as handle grips commonly used on a bicycle.

The seat frame **84** may have left and right bars **104***a, b*, as shown in FIG. **6**. The left and right bars **104***a, b* may extend from the upper forward portion of the frame **32** and generally horizontally over the rear portion of the frame **32**. The left and right bars **104***a, b* may be skewed outward as the left and right bars **104***a, b* extend toward the rear portion of the frame **32**. A cross bar **106**, may be attached to rear distal end portions **108***a, b* of the left and right bars **104***a, b*. The seat **96** may be

permanently attached, removably attachable, selectively adjustable to the seat frame **84** in any manner known in the art shown herein or developed in the future. By way of example and not limitation, a plurality of screws may be inserted through the left and right bars **104***a, b* and engaged to a bottom surface of the seat **96**. Alternatively, although not shown, a seat post of a bicycle may be attached to the seat frame **84** via welding, fastening or other attachment methods known in the art or developed in the future. By way of example and not limitation, the seat post may have a saddle clamp typically used for a bicycle. The seat **96** may have saddle rails. The saddle rails may be adjustably attachable to the saddle clamp in a forward/rearward motion as well as a tilting orientation. The seat **96** may be a bicycle seat such as one that is sold under the trademark FORTE CONTOUR.

A shock absorber **110** may be attached to the seat frame **84** and the frame **32**, as shown in FIG. **5**. In particular, the shock absorber **110** may define an upper distal portion **112** and a lower distal portion **114**. The upper distal portion **112** may be a gas charged cylinder. The lower distal portion **114** may be a rod slideably disposable within the gas charged cylinder **112**. The upper distal portion **112** may be attached to the seat frame **84**. Also, the lower distal portion **114** may be attached to the frame **32**. As the skier rides down the snow-covered downhill terrain in the seated position with the seated skiing device **10**, bumps in the snow impart gyrations to the seated skiing device **10**. These gyrations are absorbed by the shock absorber **110**. The attachments made between (1) the upper distal portion **112** and the seat frame **84** and (2) the lower distal portion **114** and frame **32** may be made in any manner known in the art or developed in the future.

As shown in FIG. **9**, a lower collar **116** may be disposed about the lower distal portion **114**. An upper collar **118** may be threadably attached to a threaded portion **120** of the upper distal portion **112**. A spring **122** may be disposed between the lower collar **116** and upper collar **118**. The shock absorber **110** may provide stiffer or looser suspension by compressing or loosening the spring **122**. To compress or loosen the spring **122**, the upper collar **118** may be rotated clockwise or counterclockwise. Compression of the spring **122** provides greater resistance to a downward force imposed on the top of the seat **96** or an upward force imposed on the frame **32** by the snow ski **14**. In use, the rider traverses down a snow-covered downhill terrain. Bumps in the snow will cause the snow ski **14** to gyrate up and down. Such gyration imposes forces on the frame **32** and are absorbed by the shock absorber **110** to provide a more comfortable ride to the skier **22**.

Referring now to FIG. **5**, the seat **96** may be raised or lowered by raising or lowering the shock absorber **110**. In particular, the first and second parts **78**, **80** of the frame **32** may be attached to each other at the rear portion thereof with the spacer **82***b*. The spacer **82***b* may have a threaded through hole **124**. The lower distal portion **114** may also have a threaded portion **126**. Such threaded portion **126** may be threadable into the threaded through hole **124** of the spacer **82***b* to raise or lower the seat **96**. The lower distal portion **114** may be threaded into or out of the threaded through hole **124** of the spacer **82***b* with an allen wrench insertable into a receiver **127** by rotating the lower distal portion **114** into or out of the threaded through hole **124**. A locknut **128** may be threaded onto the threaded portion **126** of the lower distal portion **114** and jammed against the spacer **82***b* to lock the position of the lower distal portion **114** and the height of the seat **96**. It is also contemplated that the seat **96** may be lowered or raised by attaching a seat tube to the seat frame **84** wherein the seat tube is sized and configured to receive a seat post as is typical in a bicycle. The seat post may be fastened or secured to the seat tube in a similar manner compared to a typical bicycle or via welding, adhesive or other methods known in the art.

Optionally, the seated skiing device **10** may have a leash **46**, as shown in FIG. **2**. The leash **46** may be a standard surfboard leash or snowboard leash. In particular, a first distal end of the leash **46** may be looped around the frame **32**. A second distal end of the leash **46** may be removably securable to the skier's leg or arm via methods known in the art or developed in the future. The leash **46** prevents loss of the seated skiing device **10**.

The seated skiing device **10** may optionally also have an audio or visual output **132** activatable by a sensor **134**, as shown in FIGS. **9** and **10**. The audio output **132** may be a speaker, horn, bell, and/or other sound producing device. The visual output **132** may be a video screen, neon light, light bulb, light illuminating device, or other visual output device. The audio or visual output **132** may initiate and/or vary based on a sensed condition of the sensor **134**. The sensor **134** may be an accelerometer, sound meter, light meter, or any other type of environmental sensor. As shown in FIGS. **2** and **9**, the visual output **132** may be a strip of light. The strip of light **132** may be attached to the frame **32**. The strip of light **132** may be in electrical communication with the sensor **134** which may be an accelerometer. As such, as the seated skiing device **10** accelerates or decelerates down the snow covered downhill terrain, the strip of light **132** is illuminated. The intensity of the illumination and/or the illumination/de-illumination of the strip of light **132** may be based on the sensed acceleration/deceleration of the seated skiing device **10** sensed by the sensor **134**.

Optionally, the seated skiing device **10** may have an audio system, as shown in FIG. **11**. The audio system may comprise one or more of the following components, namely, a speaker **138**, control system **140**, an audio player **142** (e.g., Ipod, Mp3 Player, etc.) the speaker **138** may be a pair of ear buds, ear head phones, a traditional speaker, or other audio output device. The control system **140** may control the audio player **142** to play different songs, search for different songs, fast forward, rewind, stop, pause as well as other functions that are necessary for the operation of the audio player **142**. The control system **140** may be separate and apart from the audio player **142** or the control system **140** may be integral with the audio player **142**. One or more components **138**, **140**, **142** of the audio system **136** may be fixedly attached to the seated skiing device **10**. By way of example and not limitation, the speaker **138** may be disposed and fixedly attached between the first and second parts **78**, **80** of the frame **32**. The control system **140** may be attached adjacent the left and right handle and thigh bars **34**, **36**. The control system may be in electrical communication with the speaker **138** and/or audio player **142**. The audio player **142** may be attached to the underside of the seat frame **84**.

In use, to ride the seated skiing device **10**, the ski boat is removed from the snow ski and the seated skiing device **10** may be attached to the snow ski **14**. In particular, the release lever **144** (see FIG. **2**) of the heel binding **18** is pushed downward to release the ski boot **20** from the toe and heel bindings **16**, **18** of the snow ski **14**. The toe protrusion **42** of the seated skiing device **10** is wedged into the toe binding **16** of the snow ski **14**. The heel protrusion **44** is then pushed downward on the heel binding **18** of the snow ski **14**. The heel binding **18** then engages the heel protrusion **44**. Simultaneously, the release lever **144** is traversed upward. At this point, the seated skiing device **10** is engaged to the snow ski **14**. Beneficially, the seated skiing device **10** is attachable to the snow ski **14** without any additional tools. After the seated skiing device is

attached to the snow ski **14**, the nose of the snow ski is pointed downhill while the skier stands in front of the left and right handle and thigh bars **34**, **36**. The left and right handle and thigh bars **34**, **36** may be urged forward against the skier's legs by gravity. The skier then grasps the handle portions **100***a, b* while simultaneously sitting on the seat **96**, as shown in FIG. **1**. The skier's thighs are positioned over the thigh portions **102***a, b* of the left and right handle and thigh bars **34**, **36**. To make left and right turns on the seated skiing device **10**, the skier places pressure on the left edge or right edge of the snow ski **14** by leaning towards the left side or right side or applying pressure to the left or right handle and thigh bars **34**, **36** with his/her hands and/or thighs.

In an aspect of the seated skiing device **10**, the seated skiing device **10** may be carried in a backpack. In particular, the left and right handle and thigh bars **34**, **36** are foldable into the collapsed position. In the collapsed position, the skier may stow the seated skiing device **10** in a backpack. As such, the skier may ride down the snow covered downhill terrain in the traditional upright position. At certain times during the day, the skier **22** may disengage his/her ski boot **20** from the snow ski **14**. The seated skiing device **10** may be removed from the backpack and the left and right handle and thigh bars **34**, **36** may be traversed to the extended position. The seated skiing device **10** may be engaged to the snow ski **14**. The skier **22** may then pack the one remaining snow ski in a snow ski backpack. The skier **22** may then ride down the snow covered downhill terrain in the seated position.

In an aspect of the seated skiing device **10**, the same has been illustrated with typical alpine bindings which fix the ski boot **20** to the snow ski **14** at the toe and heel. It is also contemplated that the toe and heel bindings **16**, **18** may be replaced with cross-country bindings, telemark bindings, alpine ski touring bindings, ski board and snow blade non-release bindings. In all of these cases, the seated skiing device **10** may be designed to be removably attachable to such alternate bindings.

In a second embodiment, the seated snowboard device **12** is shown in FIGS. **12** and **13**. The seated snowboard device **12** may incorporate all of the features discussed above in relation to the seated skiing device **10** except that the seated snowboard device **12** is removably attachable to front and rear bindings **24**, **26** of a snowboard **28**. In particular, the seated snowboard device **12** may have a front protrusion **204** and a rear protrusion **206**. Each of the front and rear protrusions **204**, **206** may have a toe portion **208***a, b* and a heel side portion **210***a, b*. The toe portions **208***a, b* may be sized and configured to receive a toe strap **212***a, b* of the front and rear bindings **24**, **26**. Similarly, the heel side portions **210***a, b* of the front and rear protrusions **204**, **206** may be sized and configured to receive upper straps **214***a, b* of the front and rear bindings **24**, **26**. The heel side portions **210***a, b* may be elevationally higher compared to the toe portions **208***a, b*. Moreover, the toe portions **208***a, b* and the heel side portions **210***a, b* may have a curved configuration. The rear protrusion **206** may be attached to the frame **32** via an extension **216**.

The extension **216** may be removably attached to the frame **32** via a tongue **218** and a receiver **220**, as shown in FIG. **13**. In particular, the tongue **218** may have a square cross sectional configuration. The receiver **220** may also have an aperture having a square cross sectional configuration. The expandable tongue **218** may have a close fit with the receiver **220** such that the extension **216** does not substantially wiggle once the tongue **218** is inserted into the receiver **220**. The receiver **220** may have a length **222** which is substantially long such that a distance **224** (see FIG. **12**) between the front and rear protrusions **204**, **206** may be adjusted to equal a distance **226** (see FIG. **12**) between the front and rear bindings **24**, **26** of the snowboard **28**. When the distance **224** between the front and rear protrusions **204**, **206** is substantially equal to the distance **226** between the front and rear bindings **24**, **26**, the tongue **218** may be locked in place in the receiver **220** via a fastener **228**. The fastener **228** may be a quick release lever as described above and shown in FIG. **4**A. The bolt of the quick release lever **228** may be inserted into aligned apertures formed in the frame **32**. The aligned apertures **229** formed in the frame **32** may also be aligned to an elongate slot **230** through which the bolt of the fastener **228** is also inserted. When the tongue **218** is being slid in and out of the receiver **220** to adjust the distance **224** between the front and rear protrusions **204**, **206**, the bolt of the fastener **228** slides within the elongate slot **230**. When the distance **224** between the front and rear protrusions **204**, **206** is equal to the distance **226** between the front and rear bindings **24**, **26**, the fastener **228** is tightened, as discussed above, to lock the position of the tongue **218** in the receiver **220**.

In use, the seated snowboard device **12** may be attached to the snowboard **28** such that the front and rear bindings **200**, **202** of the snowboard **28** are in a goofy stance or regular stance. For example, in FIG. **12**, the front and rear bindings **24**, **26** are illustrated such that the rider rides down the snow covered downhill terrain in a regular stance. In the regular stance, the left foot of the snowboarder is pointed downhill. The seated snowboard device **12** is attached to the snowboard, specifically, the front and rear bindings **24**, **26** such that the front and rear bindings **24**, **26** are in a regular stance when the rider or snowboarder is riding down the snow covered downhill terrain with the seated snowboard device **12**. Alternatively, if the snowboard **28** has front and rear bindings **24**, **26** set to a goofy stance rider the seated snowboard device **12** is merely rotated 180° and attached to the snowboard such that the snowboarder is riding down the snow covered downhill terrain with the front and rear bindings **24**, **26** in a goofy stance orientation but in this situation the snowboarder is riding backwards on the snowboard **28**. Accordingly, the seated snowboard device **12** may be removably attachable to a snowboard **28** whether the front and rear bindings **24**, **26** are set to a regular stance rider or a goofy stance rider. Moreover, the seated snowboard device **12** is adjustable, namely, the front and rear protrusions **204**, **206** may be spread apart or drawn closer to each other such that the front and rear protrusions **204**, **206** may be matched to the front and rear bindings **24**, **26**, as discussed above.

In an aspect of the seated snowboarding device **12**, the seated snowboarding device **12** may be disassembled by removing the tongue **218** from the receiver **220**. In particular, the fastener **228** is loosened and removed from the elongate slot **230** and the apertures **229**. The tongue **218** may be slid out of the receiver **220**. The extension **216**, frame **32** and the fastener **228** may be compactly stored in a backpack. In this manner, the snowboarder may traverse down a snow covered downhill terrain in the traditional upright position with the seated snowboarding device **12** in a backpack. During the day, the snowboarder may remove his/her boots from the front and rear bindings **24**, **26** of the snowboard **28** and engage the seated snowboarding device **12** such that the snowboarder may ride down the snow covered downhill terrain in the seated position. In particular, the tongue **218** is inserted into the receiver **220** until a distance **224** between the front and rear protrusions **204**, **206** is about equal to a distance **226** between the front and rear bindings **24**, **26** of the snowboard **28**. The fastener **228** is inserted into the aligned apertures **229** and the elongate slot **230** and tightened to lock the position of the tongue **218** within the receiver **220**. The rider may now

strap the front and rear protrusions **204**, **206** into the front and rear bindings **24**, **26**. The snowboarder may now ride down the snow covered downhill terrain in the seated position with the seated snowboarding device **12**.

In an aspect of the seated snowboarding device **12**, the same has been described in relation to strap-in bindings. However, it is also contemplated that the front and rear protrusions **204**, **206** may be adapted, sized and configured to be removably attachable to step-in bindings, flow bindings, and other bindings that are known in the art or developed in the future.

The above description is given by way of example, and not limitation. Given the above disclosure, one skilled in the art could devise variations that are within the scope and spirit of the invention disclosed herein. Further, the various features of the embodiments disclosed herein can be used alone, or in varying combinations with each other and are not intended to be limited to the specific combination described herein. Thus, the scope of the claims is not to be limited by the illustrated embodiments.

What is claimed is:

**1**. A downhill snowboard device mountable to a snowboard having a front binding and a rear binding defining a binding distance therebetween, the downhill snowboard device comprising:

a frame;

a seat attached to the frame for allowing the rider to ride down a snow covered downhill terrain while seated on the seat;

a front portion attached to the frame and receivable in the front binding of the snowboard;

a rear portion attached to the frame and receivable in the rear binding of the snowboard, a snowboard device distance defined by the front and rear portions being adjustably settable to equal the binding distance;

wherein front and rear portions have a tongue telescopingly receivable into an opening so that the tongue may be positioned within the opening at any position for fine tuning the snowboard device distance, the front and rear portions operative to slide and lock into position so as to fit in the front and rear binding of the snowboard.

**2**. The downhill snowboard device of claim **1** further comprising a fastener insertable into an aperture formed in the front portion and an elongate slot formed in the rear portion wherein the fastener is slideably disposed within the elongate slot for adjusting the snowboard device distance so as to be equal to the binding distance and tightenable for setting the snowboard device distance.

**3**. The downhill snowboard device of claim **2** wherein the fastener is an overcenter fastener for quick release and adjustment of the protrusion distance.

**4**. The downhill snow device of claim **2** wherein the elongate slot is aligned longitudinally with the snowboard when the downhill snowboard device is mounted to the snowboard.

**5**. The downhill snowboard device of claim **1** further comprising a steering handle attached to the frame and disposed transversely with respect to the frame to balance and steer the downhill snowboard device down the snow covered downhill terrain.

**6**. The downhill snowboard device of claim **5** wherein the steering handle is rotateable so as to be flush with respect to the frame for carrying the downhill snowboard device.

**7**. A downhill snow ski device mountable to a snow ski having a toe binding and a heel binding defining a binding distance therebetween, the downhill snow ski device comprising:

a frame defining a lower portion and an upper portion;

a seat attached to the frame for allowing the rider to ride down a snow covered downhill terrain while in a seated position, the seat being pivotally attached to the upper portion of the frame;

a toe protrusion attached to the frame and receivable in one of the toe and heel bindings of the snow ski;

a heel protrusion attached to the frame and receivable in one of the toe and heel bindings of the snow ski; and

a shock absorber attached to the seat and the lower portion of the frame for absorbing shocks imparted to the downhill snowboarding device;

wherein a pivot axis of the seat is at an elevation at about an upper end portion of the shock absorber.

**8**. The downhill snow ski device of claim **7** further comprising a steering handle attached to the upper portion of the frame and disposed transversely with respect to the frame to balance and steer the downhill snow ski device down the snow covered downhill terrain.

**9**. The downhill snow ski device of claim **8** wherein the steering handle is rotateable horizontally or vertically so as to be flush against the frame for carrying the downhill snow ski device in a backpack.

**10**. The downhill snow ski device of claim **7** further comprising a speaker attached to the frame and an input for receiving audio signals and transmitting the audio signals to the speaker.

**11**. The downhill snow ski device of claim **7** further comprising an output system comprising:

an output device attached to the frame;

a sensor for producing a signal upon sensation of a condition, the sensor being in communication with the output device;

wherein the output device is actuated when the sensor senses the condition and transmits the signal to the output device.

**12**. The downhill snow ski device of claim **11** wherein the output device is a speaker or a light.

**13**. The downhill snow ski device of claim **11** wherein the sensor is a sound sensor, a light sensor, a speed sensor, a pressure sensor or an accelerometer.

**14**. The downhill snow ski device of claim **7** further comprising a sound system comprising:

a speaker attached to the frame;

a mp3 player; and

an input which is operative to receive signals from the mp3 player, the input being in communication with the speaker.

**15**. The downhill snow ski device of claim **7** further comprising a shock absorber attached to the seat and the frame for absorbing shocks imparted to the downhill snow ski device.

**16**. The downhill snow ski device of claim **7** wherein the heel protrusion is attached to an extension having a tongue and the frame has a receiver sized and configured to telescopingly receive the tongue, the tongue having an elongate slot, the receiver having aligned apertures, and the downhill snow ski device further comprising a fastener insertable into the aligned apertures and the elongate slot, the tongue being insertable into the receiver at selective depths and the fastener tightened such that a protrusion distance defined by the toe and heel protrusions is fixed to the binding distance defined by the binding distance of the front and rear bindings.

**17**. The downhill snow ski device of claim **7** wherein the upper portion of the frame is the upper half of the frame.

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