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Oct. 8, 1968 J. L. RIPPETOE 3,404,900

SLALOM SNOW SKI

Filed Nov. 21, 1966

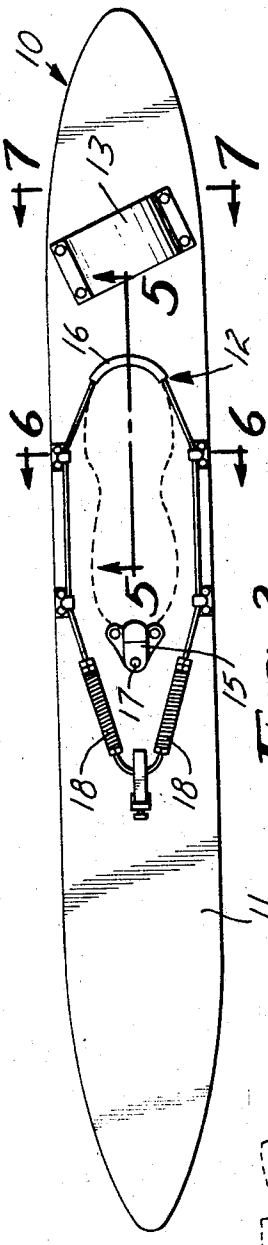


FIG. 2

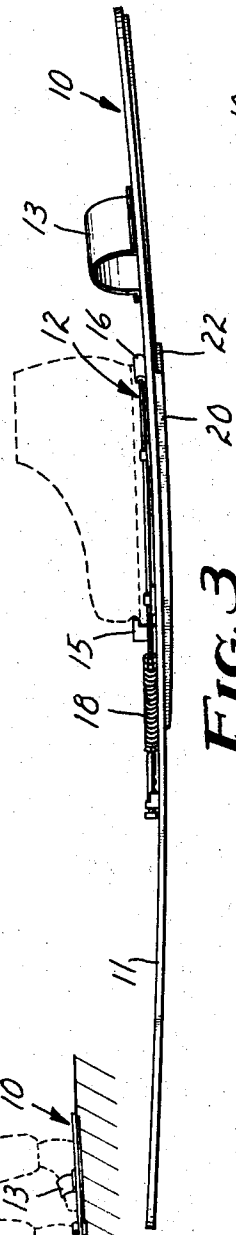


FIG. 3

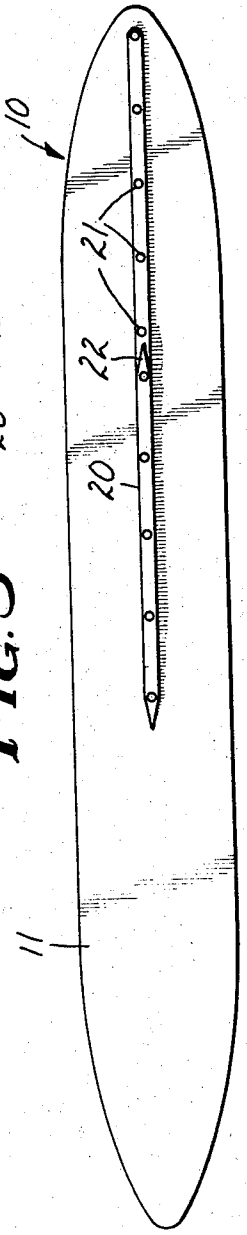


FIG. 4

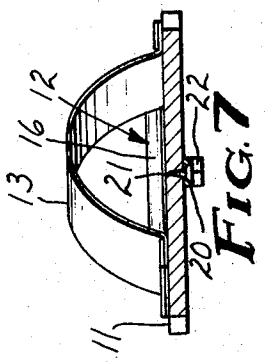


FIG. 7

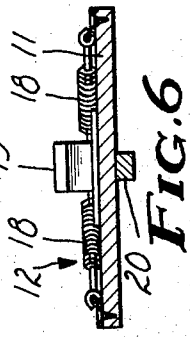


FIG. 6

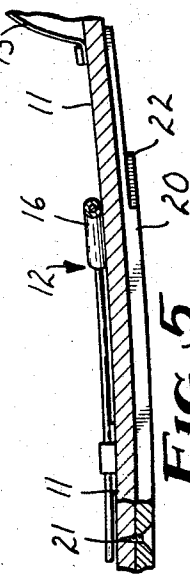


FIG. 5

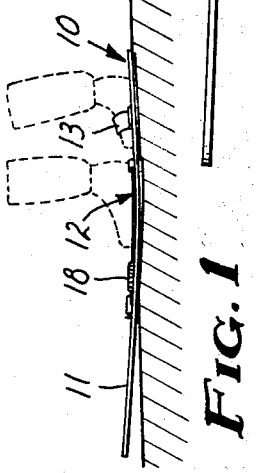


FIG. 1

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SLALOM SNOW SKI

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6 Claims. (Cl. 280—11.13)

ABSTRACT OF THE DISCLOSURE

A single snow ski having a base constructed with elongated, generally elliptical ends and substantially straight edge portions therebetween. The base has a releasable binding attached in an approximately central location to the upper surface thereof, which releasable binding clamps one boot of the skier so as to substantially prevent relative movement between the boot and the base, and a second binding attached to the upper surface to the rear of the first binding, which second binding receives the toe of the skier's other boot therein and substantially prevents transverse or forward movement thereof relative to the base. The base has attached to the under surface thereof a downwardly extending rib which extends along the longitudinal direction at approximately the transverse center of the base, a sufficient distance to intersect a perpendicular line through the center of gravity of the skier.

This invention pertains to a slalom snow ski on which the skier places both boots, as opposed to a pair of snow skis, generally known in the field, in the use of which a skier places one boot on each ski. More specifically, this invention pertains to a slalom snow ski having a releasable binding attached to the upper surface thereof for temporarily clamping one boot of the skier in a relatively immovable position, a second binding positioned behind the first binding for receiving the toe of the second boot of the skier therein, and a stabilizing rib fixedly attached to the under surface thereof and adapted to aid the skier in maneuvering the ski.

It is an object of the present invention to provide a new and improved slalom snow ski.

It is a further object of the present invention to provide a slalom snow ski having a stabilizing rib fixedly attached to the under surface thereof for aiding the skier in operating and maneuvering the ski.

It is a further object of the present invention to provide a slalom snow ski whereon one boot is temporarily, immovably fixed to the upper surface thereof, and a binding is provided to the rear thereof for receiving the toe of the skier's second boot, once he has established equilibrium.

These and other objects of this invention will become apparent to those skilled in the art upon consideration of the accompanying specification, claims, and drawings.

Referring to the drawings, wherein like characters indicate like parts throughout the figures:

FIG. 1 is a side view of an embodiment of the present invention, somewhat diminished in size, illustrating the operating position;

FIG. 2 is a view in top plan of the slalom snow ski;

FIG. 3 is a view in side elevation of the slalom snow ski;

FIG. 4 is a view in bottom plan of the slalom snow ski;

FIG. 5 is an enlarged fragmentary sectional view as seen from the line 5—5 in FIG. 2;

FIG. 6 is an enlarged sectional view as seen from the line 6—6 in FIG. 2; and

FIG. 7 is an enlarged sectional view as seen from the line 7—7 in FIG. 2.

In the figures, the numeral **10** generally designates a slalom snow ski having a base **11**, a releasable binding generally designated **12**, and a second binding designated

13. The base **11** of the ski **10** is constructed with elongated generally elliptical ends and substantially straight edge portions therebetween. Also, the base **11** arcs slightly downwardly between the front and rear ends thereof, as illustrated in FIG. 3. The base **11** may be constructed from any suitable material, such as wood, plastic, metal, or the like, and in this embodiment, has a transverse width somewhat wider than the average, well-known snow ski. The additional width of the base **11** in this embodiment provides the skier with transverse stability, and reduces, somewhat, the tendency of a skier to fall sideways when both feet are positioned in tandem. It should be understood that the particular construction of the base **11** in this embodiment is designed to provide a skier with the maximum amount of maneuverability and stability, however, this construction might be altered by those skilled in the art, and it is intended that any such alterations come within the scope of this invention.

The releasable binding **12** includes a toe clamping device **15**, and a heel clamping device **16**. In this embodiment, the toe clamping device **15** is the type which rotates about a pivot point **17** upon the application of a sufficient amount of pressure in a direction transverse to the longitudinal axis of the ski **10**. The heel clamping device **16** is the cable type, having springs **18** affixed thereto for urging the boot firmly into the toe clamping device **15**, and substantially preventing any movement of the boot relative to the base **11** of the ski **10**. Both the toe clamping device **15** and the heel clamping device **16** are utilized on pairs of snow skis, and, therefore, the operation thereof will not be elaborated upon further. It should be understood that the releasable binding **12**, illustrated in the figures, is simply one type of a releasable safety binding which can be utilized in conjunction with the base **11**, and many other types of releasable bindings, safety or non-safety, could be utilized in conjunction therewith, and would come within the scope of this invention.

The second binding **13** includes a flexible strap in this embodiment fixedly attached to the upper surface of the base **11** along either side of the strap. The binding **13** is mounted somewhat to the rear of the binding **12**, and canted at an angle to the longitudinal axis of the base **11** to provide the skier with additional transverse balance. The binding **13** is adapted to receive only the toe of the second boot therein, and to substantially prevent forward or transverse movement thereof. In the operation, the skier places one boot in the binding **12** and clamps it immovably to the base **11**. He then begins downhill or forward movement, and once he has established balance or equilibrium, the second boot is engaged in the binding **13** by sliding it forwardly thereunder. It should be understood that various modifications of the second binding **13** might be provided by one skilled in the art, which modifications might include making the binding adjustable for different size boots and mounting the binding **13** for limited pivotal movement to accommodate right and left-footed skiers. However, it is intended that all such modifications come within the scope of this invention.

The under surface of the base **11** is generally flat and smooth, except for the slight arc therein previously mentioned, and has affixed thereto a downwardly extending rib generally designated **20**. The rib **20** is affixed to the under surface of the base **11** by any convenient means, such as screws **21**. The rib **20** is positioned at approximately the transverse center of the base **11**, and, in this embodiment, extends beneath the bindings **12** and **13** to a point adjacent the rear end of the base **11**. The front end of the rib **20**, which lies somewhat in front of the toe clamping device **15**, is tapered generally inwardly from the sides and the bottom toward the under surface of the base **11** to form a smooth, substantially unbroken curve with the under surface of the base **11** and reduce the drag

caused by the rib **20**. The vertical width of the rib **20** increases gradually to a point generaly below the area adapted to receive the toe of the forward boot, and the vertical width remains approximately the same to a point designated **22**, generally beneath the area adapted to receive the heel of the forward boot. At the point **22**, the rib **20** is stepped inwardly toward the under surface of the base **11** a substantial distance. The remainder of the rib **20** has a uniform vertical width. In the use of the slalom ski **10**, most of the skier's weight rests on the forward boot clamped in the releasable binding **12**, while the rear boot in the binding **13** is utilized for balance and control. Since the majority of the skier's weight is on the forward boot, a perpendicular line through the skier's center of gravity will pass generally through the area of the base **11** adapted to receive the first boot. The portion of the rib **20** having the additional vertical width lies generally below the area of the base **11** adapted to receive the first boot so that it intersects the perpendicular line through the center of gravity of the skier. The rib **20** is provided with additional vertical width at the point of intersection with the vertical line through the skier's center of gravity to increase the stability of the slalom snow ski **10**. The step in the rib **20**, at the point **22**, is provided to reduce the drag produced by the rib **20**.

What is claimed is:

1. A slalom snow ski comprising:

(a) a base having a generally flat under surface and constructed of some suitable material;

(b) a releasable binding attached to the upper surface of said base and adapted to receive a boot therein, said binding being constructed to clamp said boot to said base in a manner to substantially prevent movement of said boot during skiing;

(c) a second binding attached to the upper surface of said base immediately behind said releasable binding for receiving a second boot therein; and

(d) a downwardly extending rib having a transverse width which is narrow relative to the transverse width of said base and being attached to said under surface of said base at approximately the transverse center thereof, said rib extending longitudinally along the under surface of said base in underlying relationship to a boot engaged in said releasable binding at least the length of said boot so as to intersect a perpendicular line through the center of gravity of a skier correctly positioned thereon.

2. A slalom snow ski as set forth in claim **1** wherein the base is constructed with elongated, generally elliptical ends and substantially straight edge portions therebetween, said base is further constructed with a slight arc therein along the longitudinal dimension thereof.

3. A slalom snow ski as set forth in claim **1** wherein the releasable binding is of the safety-type which releases a boot clamped therein upon the application of a sufficient amount of pressure in a transverse direction.

4. A slalom snow ski as set forth in claim **1** wherein the second binding includes a fixed strap for substantially preventing forward or transverse movement of a boot received therein and freely allowing rearward movement thereof.

5. A slalom snow ski as set forth in claim **1** wherein the downwardly extending rib extends from somewhat in front of the tip of a boot positioned in the releasable binding to adjacent the rear end of the base, said rib in addition extending downwardly a greater amount adjacent the point of intersection with the perpendicular line through the center of gravity.

6. A slalom snow ski as set forth in claim **5** wherein the downwardly extending rib has an upwardly extending step therein somewhat behind the point of intersection of said rib with the perpendicular line through the center of gravity.

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