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3,378,274

SURF-TYPE SNOW SKI

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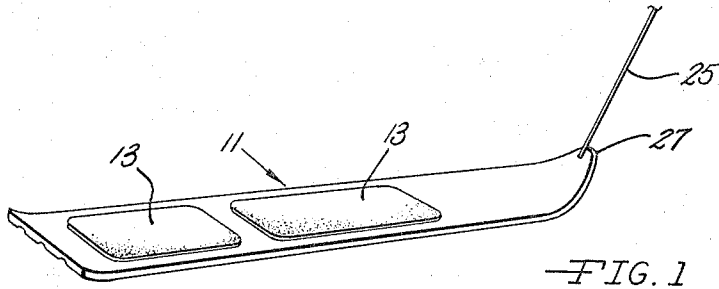


FIG. 1

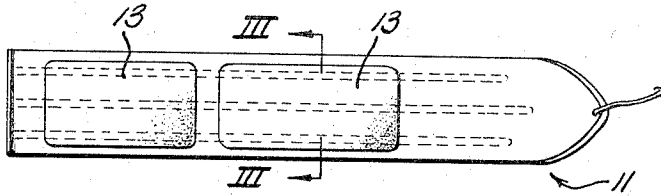


FIG. 2

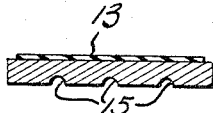


FIG. 3



FIG. 4



FIG. 5

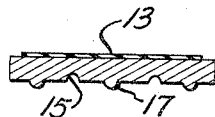


FIG. 6

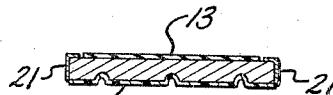


FIG. 7

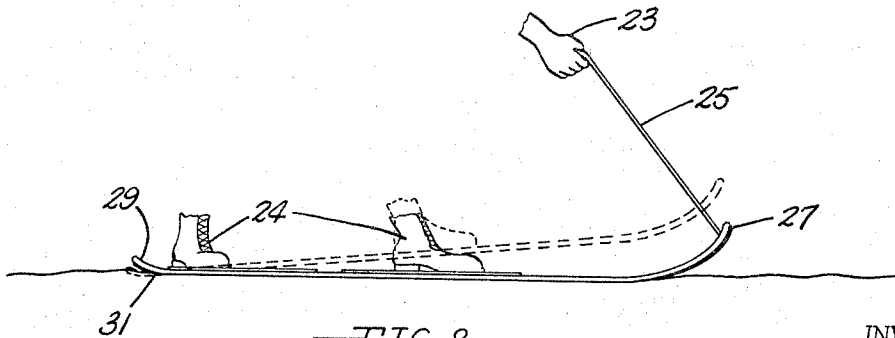


FIG. 8

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**SURF-TYPE SNOW SKI**

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**ABSTRACT OF THE DISCLOSURE**

A snow coasting device for use as a mono-ski with both feet of the skier thereon disposed fore and aft and unbound, in the form of an elongate board or the like generally flat transversely having a width greater than the normal ski of a pair of skis and a length less than the length of the normal ski of a pair of skis, there being an intermediate portion, an upwardly curved front end portion and an upturned rear end portion, with anti-skid foot rest means approximately midway the length of the board and the rear end thereof, a lanyard attached to the front end of the ski, laterally spaced grooves or ridges on the bottom of the ski, a durable waterproof plastic cover on the bottom of the ski and metal protection at the edges.

The present invention relates to a snow ski, and more particularly to a surf-type snow ski which is adapted to support both feet of a skier and to be easily maneuvered thereby without foot bindings, thereby providing a new snow sport which incorporates features of certain summer pastimes, namely surfboarding, skate boarding, and slalom water skiing.

The prodigious entertainment and athletic recreation provided by the sport of surfing is well known. In this sport the athlete stands on an elongate, usually wooden, board, and is borne shoreward on the crest of a breaking wave. The central interest involves the surfers' efforts to remain upright. Tricks, stunts, or maneuvers may be executed by the more skilled while remaining balanced on the gyrating surf board.

Another well known sport, recently popular among physically agile youngsters, is that of the skate board, which is a short narrow platform supported by roller skate wheels. The skater's feet are placed in a fore and aft alignment on the skate board; and the "skater" attempts to remain balanced on the board while it coasts along a flat surface, usually an ordinary sidewalk. This roller sport resembles surfing on dry land, and the skater may execute special tricks or maneuvers for an intensified interest and thrill.

Still another sport which enjoys extremely widespread popularity is that of water skiing with both feet on a single, so-called slalom, ski. The athletic challenge enjoyed in this sport is well known and is accomplished by the use of a finned slalom ski having foot holders in fore and aft arrangement, as exemplified by the disclosure in U.S. Letters Patent 2,971,207 to Eicholtz.

The above described sports of surfing, slalom water skiing, and skate boarding are summer activities, two being definite water sports and the other being restricted to a smooth dry land surface.

The present invention provides a new winter sport, combining popular features of seashore surfing, skate boarding, and slalom water skiing into a new winter sport. A specially configured single ski is provided which accommodates both feet of the skier in fore and aft juxtaposition. The configuration and proportions of the ski structure are such that the user may, with a modest amount of skill or practice, balance himself for a downhill run with his feet braced fore and aft, without bindings, and

execute sudden changes of direction or other maneuvers during the run. Although single or mono-type snow skis have been previously used, the fore and aft, unbound arrangement of the skier's feet introduces the skate board-surfboard-slalom ski sensations to snow skiing, and distinguishes the present invention over the mono-ski revealed in U.S. Letters Patent No. 3,154,312 to Marchand (which is believed to represent the most pertinent prior art). An additional structural distinction over that art is a slight curl at the back of the new ski, upon which the skier may push to pivot the front portion of the ski off the ground (as is done in skate boarding) to execute sudden, exhilarating sidewise maneuvers. A balancing lanyard is provided in the present invention, to somewhat offset the lack of foot bindings or boot holders by holding the user to the board.

Accordingly it is the object of this invention to provide a snow ski structure with which may be practiced a new winter sport.

It is accordingly another object of the present invention to provide a snow ski structure which will afford a valuable source of amusement, novel entertainment, and vigorous outdoor exercise in the form of a new winter sport.

It is a further object of this invention to teach a ski-like structure upon which a winter sports enthusiast can coast downhill, balancing himself with feet braced fore and aft, and steer the ski through turns and slaloms, without the use of foot bindings.

In the drawings:

FIGURE 1 is a perspective view of a ski of the present invention, showing the stabilizing grooves at the rear of the ski, and a balancing lanyard attached to the front of the ski.

FIGURE 2 is a top plan view of the snow ski of the present invention, showing increased width and relative shortness as contrasted to ordinary snow skis, and showing a pair of anti-skid foot treads aligned on the ski in fore and aft, rather than side by side, relation.

FIGURE 3 is a cross section view taken at III-III of FIGURE 2, and shows the profile of longitudinal stability grooves for control of the ski on snow.

FIGURE 4 is a cross section view showing an alternative to FIGURE 3, this embodiment utilizing a greater number of longitudinal stability grooves.

FIGURE 5 is a cross section view showing an alternative to that of FIGURE 3, this embodiment having the stability grooves replaced by stability ridges.

FIGURE 6 is a cross section view showing an alternative to FIGURE 3, this embodiment having a combination of grooves and ridges for stability.

FIGURE 7 is a cross section view showing an alternative to that of FIGURE 3, this embodiment having a resin or plastic layer on the bottom of the ski, and the sides thereof covered by protective metal edgings.

FIGURE 8 is a side elevation view of the ski of the present invention in operation, showing a skier balanced thereon, grasping the tether. In phantom line is displayed an alternate position which the skier achieves by leaning back on the rear curl of the ski to uplift the front portion and allow lateral pivoting for steerage and maneuvering.

The ski 11, as seen in perspective in FIGURE 1, has a configuration similar to an ordinary snow ski, but the proportions are seen in FIGURE 2 to resemble those of a water ski. Although single skis, (mono-skis) have been previously known, the present invention brings to snow skiing the fore and aft (rather than side by side) relation of the skier's feet, as employed in slalom water skiing.

The width of the ski is somewhat wider than a conventional snow ski to give a broad base and prevent tipping. This is important because a skier's feet give little lateral stability when situated in fore and aft alignment.

Two anti-skid foot treads 13 are bonded to the upper surface of the ski, the skier's boots are situated on these treads, and the feet of the skier are manipulated to control the ski. The treads prevent slipping of the ski boots. The feet of the skier have no bindings, and therefore control forces must be downward or else transmitted to the ski through lateral friction at the upper surface thereof. These sidewise frictional forces cannot be delivered except through a rough surface such as the treads 13. The treads 13 also act to prevent the user's feet from slipping. It should be realized that a single long tread could be used to the same effect as the pair of separate treads 13 shown.

The bottom of the ski is grooved in the longitudinal direction as seen in FIGURE 3. The grooves 15 are filled with snow under the weight of a skier and the "tongue" of snow in the groove gives a laterally stabilizing, tracking effect. Such grooves are commonly used in ordinary snow skis. In FIGURE 4 is seen a greater number of grooves 15, to achieve a stronger "grip" on the snow to resist side slipping and yawing of the skis. In FIGURE 5 it is appreciated that, as an alternative to grooves 15, longitudinal ridges 17 may be used for sidewise directional guidance and stability. Finally FIGURE 6 demonstrates an embodiment of the invention wherein is used a combination of grooves 15 with ridges 17. It should be understood that the particular grooves and ridges shown here are merely exemplary of tested configurations, and that other obvious modifications are within the scope of this invention.

A more elegant embodiment is depicted in FIGURE 7 which shows a plastic or resin layer 19 bonded to the bottom surface of the ski 11, to give a smooth, durable, waterproof covering which conforms to the shape of the ridges 17 and/or grooves 15, and resists gouging better than the wood which it covers. Also shown are metal edges 21 running the length of the skis to insulate the sides and corners thereof from bumps and gouges, and to enhance the general appearance of the ski.

In operation the ski is controlled by a rider with feet 24, positioned on the ski 11 for a downhill run, as seen in FIGURE 8. The rider may grip the lanyard 25 in his hand 23 as an aid to remaining erect and to facilitate maneuvering of the ski. The lanyard 25 is attached through a hole (not shown) in the tip 27 of the ski 11. The rider desiring the ultimate challenge to his physical co-ordination may discard the lanyard 25, and rely solely upon his feet to control the ski and avoid tumbling off into the snow. Of course falling off is part of the game, and generates much amusement for the skier, as well as entertaining the onlookers.

A central element of this sport is the manner of control of the ski, which differs markedly from ordinary skiing. The control is exercised more in the nature of skate boarding. On a skate board a downward pressure from the rear foot of the skater pivots the forward part of the skate off the ground, the pivot point being the rear wheels. With the front wheels off the ground the board may then be rotated on the rear wheels to change the direction of travel, i.e., to execute a turn.

The ski of the present invention is so constructed that it may be turned in much the same fashion as the skate board: an upwardly curled portion 29 is provided at the rear end of the ski. By shifting his weight rearward the skier relieves the weight on his forward foot while his rear foot applies an increased force to the curl 29. This tends to pivot the ski upward into the alternate position shown in phantom line. The ski is then turned by the feet to a new direction of travel. The turning is easily accomplished by rotating the ski about the point of contact at 31, the uplifted ski encountering minimal resisting friction from ground contact. Turning is accomplished more easily when the shifting of weight is accompanied by simultaneously pulling up or lifting the ski with the lanyard 25.

The entire maneuver is performed with a smooth, continuous, swoop, that puts a certain grace and pleasure into the motions involved. Practicing these feats augments the smoothness of performance, and tricks of increasing difficulty may be performed. The necessary athletic skill and movements have a character distinct from ordinary snow skiing, due to the absence of foot bindings for attaching the ski to the feet. The lack of bindings intensifies the challenge to stay upright, and provides a novel exhilaration in the execution of turns, jumps, and maneuvers. In addition the skier may invent any number of acrobatics of his own, according to his skill and imagination.

Having thus described an operative, preferred embodiment of my invention, modifications, changes, and improvements will be apparent to those skilled in the art upon reading this description, and such modifications, changes, and improvements are intended to be included herein limited only by the scope of the hereinafter appended claims.

I claim:

1. A surf-type snow ski comprising: a single snow ski somewhat shorter and wider than a conventional snow ski, and having the rearward end thereof curved mildly upward; an anti-skid tread means on the upper surface of said ski, of sufficient extent to accommodate both feet of a skier in fore and aft juxtaposition thereon; a lanyard fixed at one end to the forward tip of said ski, to be manually held at the other end by said skier as an aid to balancing and maneuvering on said ski; the lower surface of the ski having a plurality of longitudinal grooves along substantially the entire length thereof for a directionally stabilizing influence upon the ski as it travels on snow; the lower surface of said ski being covered by a conforming layer of waterproof durable resin; and the sides and corners of said ski being protected by metal edges.

2. A snow coasting device for use as a mono-ski with both feet of a skier thereon disposed fore and aft and unbound comprising an elongate board or the like generally flat transversely having a width to accommodate a skier's boot transversely thereon, and a length approximately six times the width, said board having an intermediate portion extending a major part of the length of the board, a relatively short upturned front end portion and a relatively short upturned rear end portion, anti-skid footrest means on the upper surface of the board approximately midway the length thereof for the leading foot of the skier, anti-skid footrest means on the upper surface of the board near the rear end thereof for the trailing foot of the skier, the rear footrest means being located relative to the upturned rear end portion such that the skier's weight may be shifted to the rear end portion to elevate the front end of the ski and turn the front end of the ski left or right about the bottom surface of the ski at the bend in the ski at the rear end of the intermediate portion.

3. A device as in claim 2, including a lanyard attached to the front end of the ski and adapted to be gripped by the skier to stabilize the skier and assist in elevating the front end of the ski to turn.

4. A device as defined in claim 2 including a plurality of laterally spaced relief portions on the bottom of the board extending a major portion of the length thereof to assist in straight tracking.

5. A device as defined in claim 2 including a cover of durable waterproof plastic bonded on the bottom of the board.

6. A device as defined in claim 2 including a metal strip attached to the board at each lateral edge thereof protecting all the corners of the board and the side edges thereof.

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