Nov. 1, 1966 C. W. GOODWIN 3,282,598

LAND SKIER

Filed Aug. 27, 1964

Fig. 1.

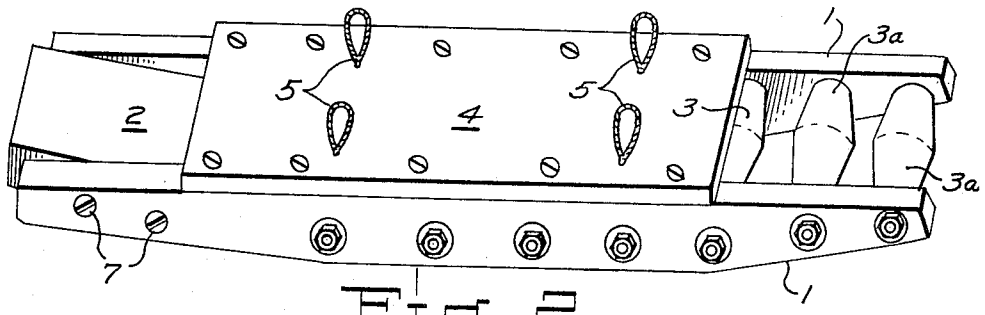


Fig. 2.

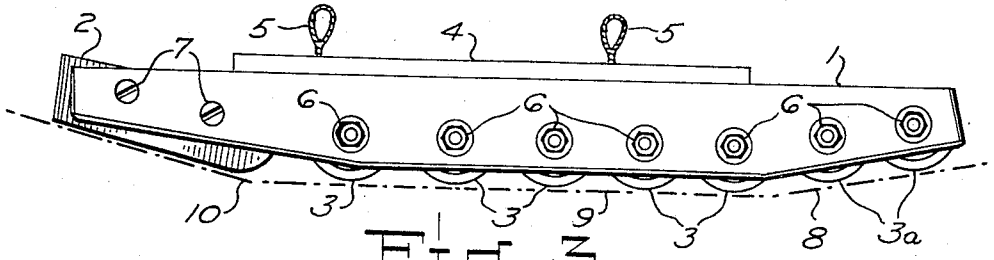


Fig. 3.

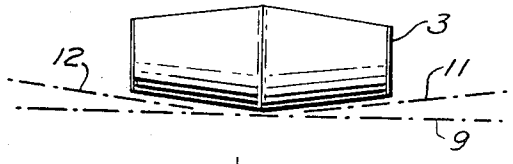
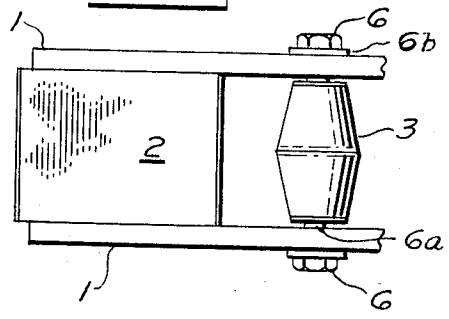


Fig. 4.



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LAND SKIER

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This invention is concerned with a device that permits skiing on dry land, such as grass or weeds.

Winter skiing has become an ever increasing, popular, leisure-time sport and industry. Many slopes with ski tows have been activated and operate only during the months of the year when there is snow. Some of the slopes are being operated with artificial snow, where the weather is proper, at great expense.

It is a purpose of the within invention to provide a device for permitting dry-land skiing on winter slopes during the warm summer months.

It is a primary object of the within invention to provide a dry-land skier that permits maneuverability.

It is another object of the within invention to provide a skier that permits the user to employ the skills that he would normally employ with winter skiing.

It is still an additional object of this invention to provide a summer skier that is low in the cost of manufacture.

It is yet an additional object of the within invention to provide a summer skier that is simple in construction and yet durable.

These and other objects are obtained by the use of specially-shaped rollers, a plurality of which are mounted between frame members that are in horizontal as well as angular planes, and a drag shoe for controlling speed.

The various objects and features of this invention will be fully understood from the following detailed description of a typical, preferred embodiment and application of the invention, throughout which description reference is made to the accompanying drawings, in which:

FIGURE 1 is a top perspective view of the skier.

FIGURE 2 is a side elevational view of the skier.

FIGURE 3 is a front elevational view of one of the typical rollers.

FIGURE 4 is a top elevational view of a portion of the skier above the drag shoe.

The skiing device has two side rails **1**. A plurality of rollers **3** are mounted between the rails **1** as shown in the various figures of the drawing. The rollers have a central opening through which is mounted a free-moving shaft **6***a* which is threaded at each end and attached to the nuts **6**. A washer **6***b* is located between the rail **1** and the nut **6** for locking the nut **6**. Mounted at the rear end of the skier is a drag shoe **2**. The drag shoe **2** is mounted on the screws **7**. The drag shoe **2** is located between the two rails **1** at the rear of the rollers **3**. Connected above the rollers and between the rails **1** is the shoe plate **4**. The shoe plate **4** is connected by screws or other fastening means to the rails **1** at the top thereof. There are eyes **5** which are secured to the shoe plate **4**. Shoe plate **4** is connected by screws or other fastening means to the rails **1** at the top thereof. Eyes **5** which are secured to the shoe plate **4** are for the purpose of connecting straps or other fastening means for placing the skier's shoe securely in position on the skier device atop shoe plate **4**.

Of extreme importance in the design of the device are the planes of the various parts. There is the plane **8** of the front rollers. It is noted that the front portion of the rails **1** have an upswing. The rollers **3***a* at the front follow the plane **8** of the upswing. There is a horizontal flat plane **9** which is the plane beneath the foot plate **4**. To the rear of plane **9** is the plane **10** of the drag shoe **2**. The plane **10** of drag shoe **2** is longer and not quite as steep as plane **8** and, as can be seen in FIGURE 3, runs upwardly to the rear instead of upwardly to the front (the plane **8** runs upwardly and forward).

The rollers **3** have two separate planes. The center of the roller is much larger in cross-section (larger diameter) than the ends of the roller **3** as can be seen in the views of FIGURE 3 and FIGURE 4. In the view of FIGURE 3, the plane to the right of the rollers is indicated by the numeral **11** while the plane to the left of the roller is indicated by the numeral **12**. The horizontal plane **9** is shown just beneath **11** and **12**. The dotted lines between the planes in FIGURE 3 show the approximate angle of the rollers from their center as determined by a horizontal plane.

The rollers **3** and **3***a* are similar. The rollers **3***a* are the rollers in plane **8**, while the rollers **3** are the rollers in the horizontal plane **9**. The rollers **3** and the rollers **3***a* are similar in structure.

In the view of FIGURE 4 the support of a typical roller **3** (or **3***a*) is shown. The shaft or axle **6***a* which passes through **3** is shown in FIGURE 4. The washer **6***b* is between the frame **1** and the nut **6**.

It is contemplated that the shaft **6***a* could be a sleeve or bearing which does not pass through the roller **3**. The roller **3** would then spin within the openings in the frame **1** at the same time that the bearings or pins would spin. The rollers **3** and **3***a* must be easily rotatable.

The device may be made from strong wood, aluminum, or other similar metal, synthetic plastic or a material that is strong and will stand up under abuse without departing from the spirit of the invention. On an assembly basis the parts could be manufactured from molds and jigs.

In operation, the skier applies the ski device to his shoe by placing his foot on the plane **4**. Straps are passed through the eyes **5** over the shoe to secure the shoe or ski foot to the device. When each shoe has been secured to the device, the skier is ready to ski on dry land. It is to be noted in the previous description that there are five planes in the device, four inclined and one horizontal. When the skier presses his weight forward, the center of gravity is on the flat horizontal plane **9**. In the embodiment shown, this plane **9** consists of six free-wheeling rollers **3**. Forward of plane **9** as already stated is the inclined plane **8**. The purpose of plane **8** is to permit deflection for any ground irregularities, stones, or other objects. The inclined plane **10** to the rear of the rollers **3** gives the drag shoe **2** sufficient clearance while the user's weight is pressed forward. However, when the user's weight is shifted to the rear of the device, the center of gravity is taken from the rollers **3** and plane **9** and placed upon the drag shoe **2**. This change of gravity has the effect of giving a stabilizing effect for slowing down, turning, or stopping. There is an analogy between plane **9** and plane **10**. Water skiing is a good example. The rollers **3** and **3***a* allow for ample speed to be obtained. When sufficient speed is attained, the user will then throw his weight to the rear of the device so that the drag shoe **2** will come into play. The drag shoe **2** itself will then act with amazing effect as a ski when there is a fair degree of fall line. The motion forward has been discussed. However, in skiing there is required maneuverability to the side, which is known as lateral movement. The shape of the planes **11** and **12** on the rollers **3** allows lateral movement of the device. The inclined angles of these planes also permit almost friction-free rolling with no edge or irregularities to catch or throw the skier's leg. The lateral angle of the rollers **3** and **3***a*, which is controlled by the inclined planes **11** and **12**, permits the skier to make a sharp turn either to the right or left at a fair rate of speed without being thrown. Similar to real skiing, the skier throws his weight to either the right or left side.

Certain dimensions in the drawing have been exagger-

ated and a change in size or shape would be within the spirit and scope of this invention.

In consideration of the foregoing disclosure—

I claim.

1. A land skier having two parallel rails, a plurality of rotating devices connected between the said rails, said rotating devices having their bottom surfaces extending below the bottom of said rails, the bottom of said rails having an upward plane in the front and an upward extending plane to the rear with a horizontal plane therebetween, said rotating devices at the front of the said rails being in the upwardly extending plane, a braking device for controlling speed being located between the rear of the rails and extending below the lower surface of the rails, and a plate for securing said rails together and supporting a user.

2. A land skier having two parallel rails, a plurality of rollers connected between said rails, means whereby said rollers are rotatable between said rails, said rollers having a larger diameter cross-section in the middle thereof and tapering symmetrically in conical shape towards each end thereof, said rollers having their bottom surfaces extending below the bottom of the said rails, the bottom of said rails having an upward plane in the front and an upward extending plane to the rear with a horizontal plane therebetween, said rollers at the front of said rails being in the upwardly extending plane, a braking device connected at the rear of said rails for controlling the speed of the skier, said braking device extending below the bottom of the lower surface of the rear of said rails, and a plate for securing said rails together and supporting a user.

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