May 9, 1939. L. G. CURRIER 2,157,325

SKI

Filed Dec. 28, 1936

Fig. 1

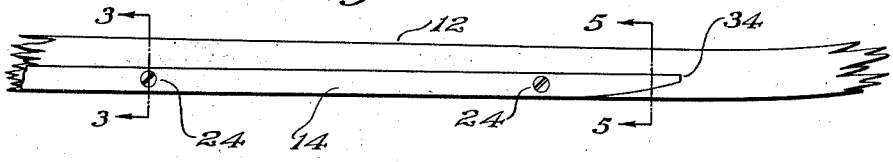


Fig. 2

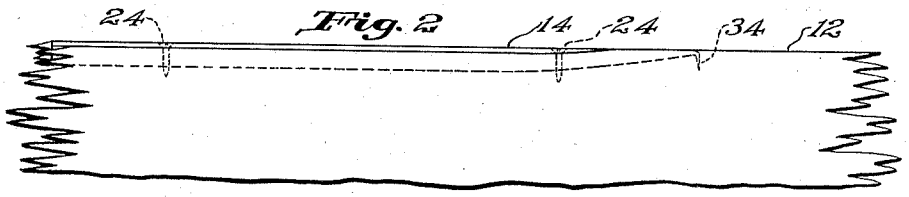


Fig. 4

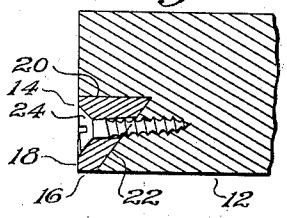


Fig. 3

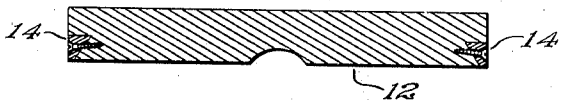


Fig. 5

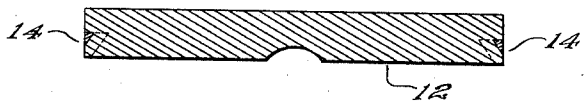


Fig. 7

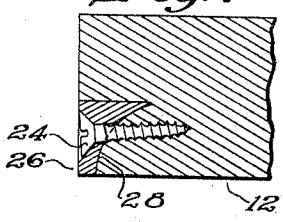


Fig. 6

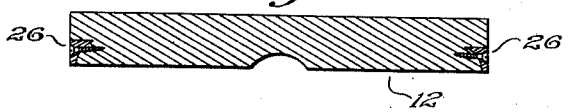


Fig. 9

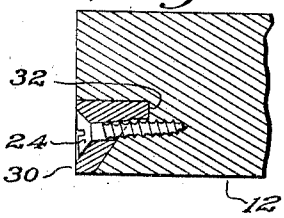


Fig. 8



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2,157,325

SKI

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Application December 28, 1936, Serial No. 117,790

2 Claims. (Cl. 280—11.13)

The present invention relates to skis, and more particularly to an improved edge strip for the same.

It is essential, for skiing under conditions other than ideal, that the ski have a square, sharp edge along each side of its running surface. Skis are generally made of wood which, after a short period of use, becomes worn along the snow-engaging edges, with the result that the skis are no longer suitable for use on crust or hard packed snow. To resist wear and preserve the desired sharp edges, strips of metal or other hard material are usually substituted for the wood of the ski along each side of the bottom or running surface. Such edge strips generally consist of strips of thin flat metal set into the body of the ski flatwise with respect to the running surface. Similarly shaped strips have also been mounted along the sides of the ski with the lower edge of the strip flush with the ski running surface.

Since the material best adapted for use as edge strips is usually not susceptible to wax treatment like the wooden portion of the running surface, and has different frictional characteristics on the snow, it is desirable that the snow contacting face of said strips constitute only a very small fraction of the total ski running surface. The relatively wide snow contacting face of the flatwise mounted strip is, therefore, a serious drawback. A further disadvantage of such strips lies in the fact that the attaching screws pass through the bottom face of the strips, the consequent unevenness of the surface substantially reducing the gliding qualities of the skis. The edgewise mounted strips, on the other hand, offer excessive resistance to flexing with the ski, and furthermore, are difficult to secure to the skis with sufficient strength to prevent their being torn off or buckling when subjected to severe lateral stress.

With a view toward obviating the defects inherent in the prior constructions, the principal object of the present invention is to provide an edge strip for skis having a smooth and extremely narrow snow contacting face constituting only a small fraction of the ski running surface which will offer no substantial resistance to flexing with the ski, yet will have adequate lateral stiffness.

A further object of the invention is to provide an edge strip which may be readily attached to skis, and which, when so attached will be far less likely to be twisted or torn off than strips heretofore employed.

With these and other objects in view, as will hereinafter appear, the invention consists in the edge strip hereinafter described and claimed, the advantages of which will be obvious to those skilled in the art from the following description.

In the accompanying drawing illlustrating the preferred embodiment of the invention and various modifications thereof, Fig. 1 is a view in side elevation of a portion of a ski adjacent the base of the upturn, showing the edge strip and the method of terminating the same; Fig. 2 is a bottom view of the portion of the ski and edge portion shown in Fig. 1; Fig. 3 is a sectional view taken along the line 3—3 of Fig. 1; Fig. 4 is a sectional view illustrating on an enlarged scale the edge strip and a portion of the ski shown in Fig. 3; Fig. 5 is a sectional view taken along the line 5—5 of Fig. 1; Fig. 6 is a view taken similar to Fig. 3 and illustrating a ski embodying a modified form of edge strip; Fig. 7 is a sectional view on an enlarged scale of the edge strip and a portion of the ski shown in Fig. 6; Fig. 8 is a view taken similar to Fig. 3 and illustrating a further modified edge strip; and Fig. 9 is a sectional view on an enlarged scale of the edge strip and a portion of the ski shown in Fig. 8.

The edge strip comprising the invention is illustrated as embodied in a ski 12 of wood or similar material, and of conventional design, the strips 14 fitting into rabbets cut along each edge of the running surface of the ski by means of a rotary cutter or a plane having the appropriate shape of cutting edge. The strips may be made of any hard and tough material such as Bakelite, Celluloid, brass, etc., but preferably are formed by extrusion or by drawing through a die from one of the light weight heat treated aluminum alloys.

The edge strip illustrated in section in Figs. 3 and 4 is trapezoidal in shape, having exposed faces 16 and 18 forming portions of the running and side surfaces respectively of the ski, while the faces 20 and 22, which form the top and interior side faces of the strip, are in contact with the wood of the ski. The side 18 is drilled and countersunk to receive small flat-headed wood screws 24 which secure the strip in position in the rabbet, the screws preferably being directed upwards at a slight angle.

The bottom face 16 is considerably narrower than the other faces of the edge strip in order that there may be a minimum of edge strip in contact with the snow in proportion to the total running surface of the ski, thus providing a ski having gliding qualities indistinguishable from an all wood ski.

The trapezoidal shape of the edge strip likewise affords stiffness in a lateral plane to prevent buckling of the strip between attaching screws,

the width of the top face compensating for the narrowness of the opposite snow contacting face. Furthermore, the average thickness of the section is sufficient to enable the vertical dimension of the strip to be small without causing undue weakness adjacent the holes for the attaching screws, thereby insuring that the strip will offer no substantial resistance to flexing with the ski.

The trapezoidal shaped section also permits a more effective attachment of edge strip to the ski, due to the acute angle between top face **20** and the sloping inner face **22**. The strip fits into the rabbet in wedge fashion, with the result that a substantial proportion of the forces developed by a quick turn or sudden stop and tending to twist the strip outwardly at its bottom away from the ski is transmitted directly to the faces of the rabbet. The attaching screws **24** are relieved of all shearing and bending stresses by virtue of the engagement of the upper portion of the sloping inner face **22** with the corresponding face of the rabbet, since outward displacement of the strip to relieve the wedging engagement must take place before any twisting is possible.

A modified shape of edge strip is illustrated in Figs. 6 and 7, and is adapted for use where extreme lightness is desired. The bottom, outside, and top faces of the strip **26** may be of the same dimensions as the corresponding sides of the strip illustrated in Figs. 3 and 4, the inner face **28** being concave in order to reduce the cross-sectional area, and therefore the weight of the strip. The shape of the upper portion of the inner face **28** is such that substantial resistance to twisting is afforded by engagement of such portion with the corresponding face of the rabbet.

Where the maximum effectiveness of attachment of edge strip to ski is desired, and weight is of lesser consideration, the shape of strip illustrated in Figs. 8 and 9 may be employed. In this modification the strip **30** is positively locked against twisting by the projecting shoulder **32** which fits into a corresponding recess comprising a portion of the rabbet. No twisting displacement is possible, and consequently the attaching screws **24** are only required to resist outward displacement of the strip.

As a general rule, edge strips do not extend along the entire length of the ski, but only from a point near the base of the upturn to within a few inches of the rear of the ski. It is desirable that the edges be terminated so as to provide a smooth side with the end of the strip fastened in place to avoid the possibility of catching on some obstruction. The edge strip of the invention is particularly adapted to a satisfactory termination, as illustrated in Figs. 1, 2 and 5. The rabbet into which the edge strip fits is formed with portions of gradually decreasing depth adjacent the point of termination of the strip. The edge strip is ground away on its sloping inner face, and parallel to said face, so that the strip tapers gradually, the section becoming triangular in shape as shown in Fig. 5. The sharp tip **34** of the strip is bent over and may be driven into the ski, as illustrated in Fig. 2, to provide a smooth side face with the end of the strip securely locked in place.

The same method of terminating the edge strip is equally applicable to the modified forms of strip.

Having thus described the invention, what is claimed is:

1. A ski comprising a wooden body and an edge strip of hard material set into the body of the ski along the outer edge portion of the ski running surface rearwardly from a point adjacent the base of the upturn at the front end of the ski, said strip being generally trapezoidal in section, having a narrow snow-contacting face and a sloping inner side face, the strip adjacent the point of termination at the front end of the ski being formed with decreasing thickness transversely of said sloping inner face, the body of the ski having a correspondingly shaped recess to receive the strip, the tapered point of the strip being bent at substantially a right angle to the rest of the strip and driven into the body of the ski, and fastening members passing transversely through the strip for securing the same to the ski.

2. An edge strip adapted to be set into the wooden body of a ski to form wear-resistant outer edge portions of the ski running surface, said strip being generally trapezoidal in section, having the bottom and a side face adapted to form portions of the running and side surfaces respectively of the ski, said faces being mutually disposed at substantially a right angle, and having the top and the other side face adapted to be engaged by the wood of the ski, said top face being a plane surface substantially parallel to the bottom face of the strip and the latter mentioned side face being obliquely disposed to said top face, the bottom face of the strip being narrower than the other faces, and a longitudinal shoulder portion extending laterally from the upper portion of the inclined side face of the strip for engaging the wood of the ski and positively locking the strip against rotational displacement while permitting the strip to be mounted and demounted laterally of the ski, said strip having provisions for receiving headed fastening devices for securing the strip to the ski, said devices passing through the strip substantially parallel to the bottom face thereof and at points where the strip is of materially greater transverse thickness in the direction of the fastening device than the width of the adjacent bottom face of the strip.

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