United States Patent

Falkenberg

[15] **3,693,219**

[45] **Sept. 26, 1972**

[54] **SHARPENING DEVICE**

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[73] Assignee: **Douglass Manufacturing Company**

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[52] **U.S. Cl.** .....**29/78,** 29/80, 51/205 WG

[51] **Int. Cl.** **B23d 71/00**

[58] **Field of Search** ...29/78, 80; 51/205 WG, 205 R, 51/173

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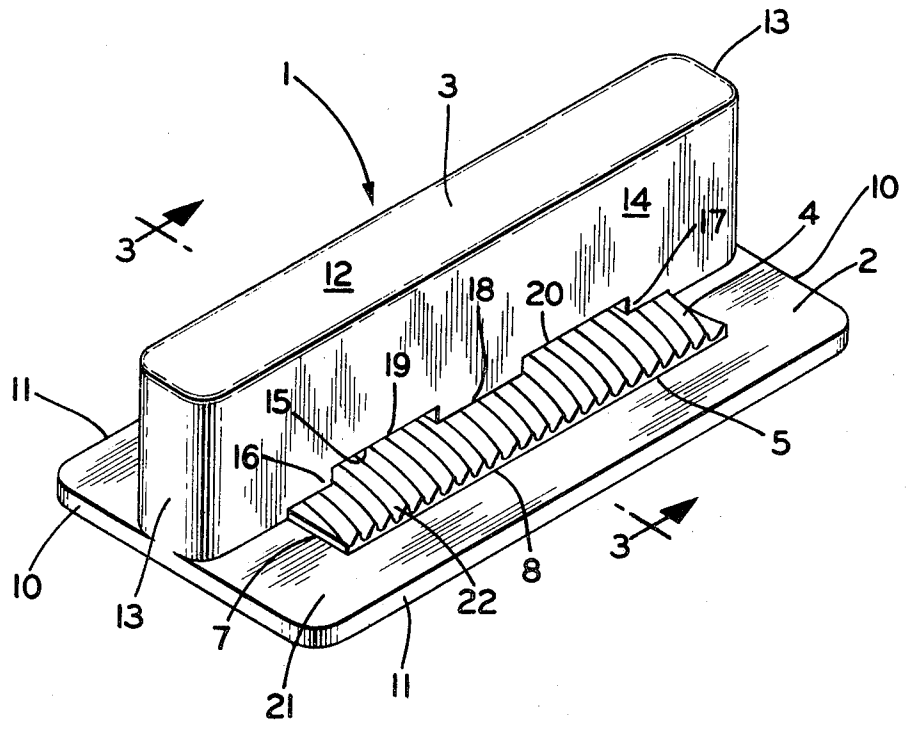
Primary Examiner—Leonidas Vlachos

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[57] **ABSTRACT**

A sharpening device for sharpening metal edges of skiis having a base portion and a handle and guide portion mounted at a right angle on the base portion. The base portion contains an elongated opening for receipt of a file which has work surfaces extending above and below the base portion.

6 Claims, 6 Drawing Figures



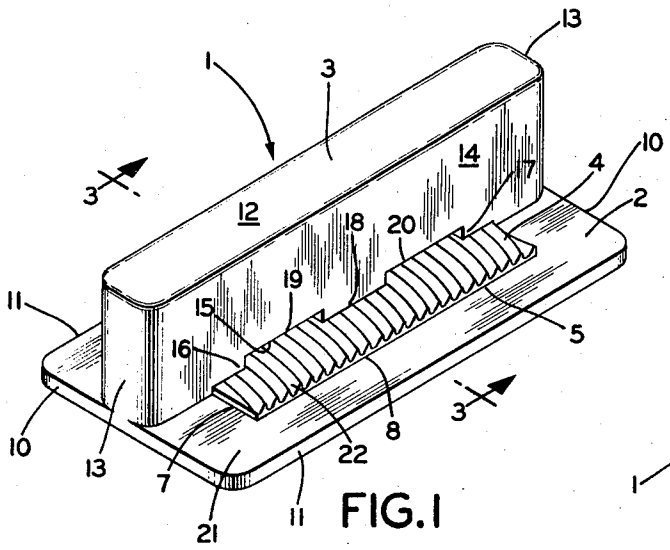


FIG. 1

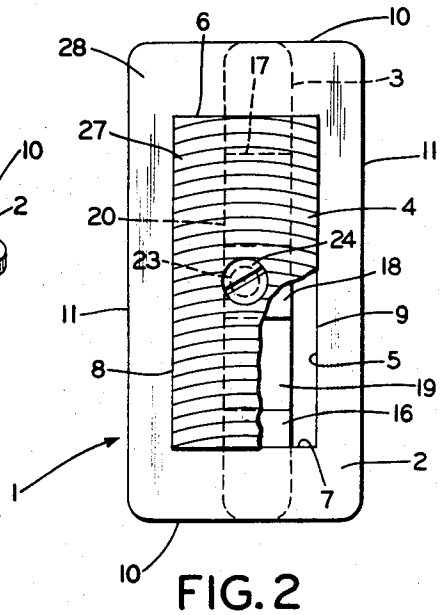


FIG. 2

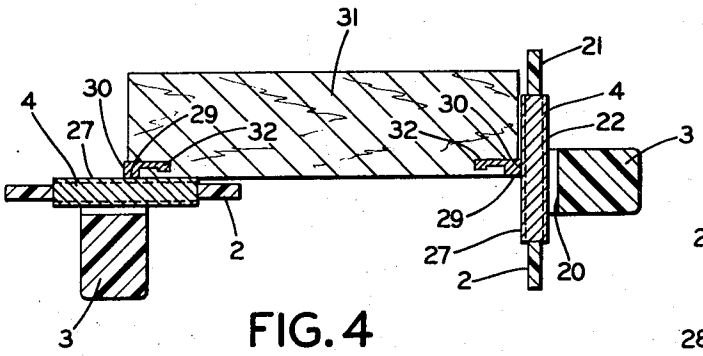


FIG. 4

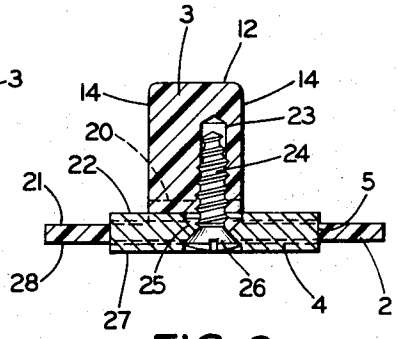


FIG. 3

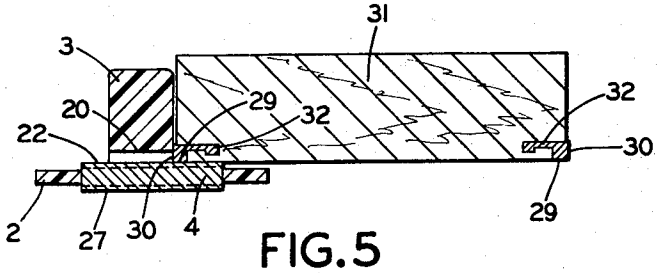


FIG. 5

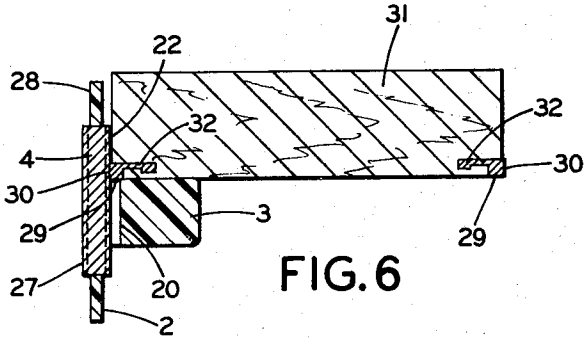


FIG. 6

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SHARPENING DEVICE

It is an object of this invention to provide a sharpening device for metal edges of skiis which can be used on both the bottom and side metal edges of skiis.

It is a further object of this invention to provide a sharpening device which can be used on the metal edges of skiis to provide a smooth right angle edge to the metal edge of the ski.

It is a further object of this invention to provide a sharpening device for the metal edges of skiis which has a base and handle portion with a file carried in the base portion having work surfaces extending above and below the surfaces of the base portion.

It is still a further object of this invention to provide a sharpening device having a base portion and a handle portion approximately at right angles to the base portion so that the handle portion can act as a guide for a file carried in the base portion to file a right angle on a work piece.

It is still a further object of this invention to provide a simple and easily carried hand-operated sharpening device for metal edges of skiis.

Referring now to the drawings, the figures of which will illustrate:

FIG. 1 is a perspective view of the sharpening device of this invention;

FIG. 2 is a bottom plan view partially broken away of the sharpening device of this invention;

FIG. 3 is a sectional view taken along the line 3—3 of FIG. 1;

FIG. 4 is a sectional view showing two different operative positions of the sharpening device applied to the metal edges of a ski;

FIG. 5 is a sectional view of the sharpening device in another operative position on the metal edges of a ski;

FIG. 6 is a sectional view of the sharpening device in still another operative position on the metal edges of a ski.

It has been found in the sport of skiing that it is highly desirable to have a small hand-operated sharpening device to sharpen and clean off burrs and nicks from the metal edges of the skiis. These burrs and nicks occasionally appear in the metal edges of the skiis caused by the skiis hitting a solid obstruction of some type such as small pebbles, stones or the ground. Therefore, the skier rather than taking the skiis to a shop for a machine grinding operation on the metal edges of the skiis, would like to have a hand-operated metal edge sharpening device which can be used to clean off any nicks or burrs from the metal edges of the skiis. The device of this invention is a small, readily carried, hand operated sharpening device for that purpose.

Referring now to the drawings, FIG. 1 illustrates the sharpening device 1 having a base plate 2 and a handle and guide portion 3. The base plate carries a file 4 made of metal as illustrated or could be made of a stone or other type sharpening file device.

The base plate 2 has a cut-out portion 5 having end cut-outs 6 and 7 and side cut-outs 8 and 9. The base plate is substantially rectangular and has ends 10 and sides 11. The handle 3 extends from end to end of the base plate and has a top portion 12, ends 13 and sides 14. The entire assembly of the base plate and handle and guide portion can be molded from a synthetic material such as plastic or could be made in any other fashion desirable to accomplish the intention of this invention. Further, as illustrated, in FIG. 3 the sides 14 of the handle and guide portion 3 are molded or cut at about a 90° angle to the base plate for reasons which will become apparent hereinafter. It should also be noted that the handle is off-set with respect to the base portion to facilitate the entire apparatus function with different widths of metal edges on skiis.

The handle 3 has a cut-out portion 15 extending longitudinally of the handle and has end cut-out shoulders 16 and 17 and a central cut-out shoulder 18 with intermediate recessed areas 19 and 20 between the shoulders 16 and 18 and 17 and 18. The shoulders 16, 17 and 18 are raised above the top surface 21 of the base 2 and receive the upper surface 22 of the file 4. Further, the shoulders 16, 17 and 18 are formed at right angles to the sides 14 of handle and guide 3. Central shoulder 18 has a threaded aperture 23 for receipt of a lock screw 24 passing through centrally disposed opening 25 in the file 4. The head 26 of screw 24 is recessed in the file 4 as illustrated.

The upper work surface 22 of file 4 rests on shoulders 16, 17 and 18 and extends above top surface 21 of base 2 with the lower work surface 27 of file 4 extending below the lower surface 28 of base 2 to permit both the upper and lower surfaces of the file to act as a work surface. The recessed areas 19 and 20 of handle 3 permit shavings to be released when the upper work surface of the file is in use.

FIG. 4 to 6 illustrate the various manners in which the sharpening device of this invention can be utilized on the metal edges of skiis. For example, as illustrated in FIG. 4, the handle portion can be gripped by the operator and the lower work surface 27 of file 4 can be placed against either the bottom edge 29 or the side edge 30 of the metal edge 32 of the ski 31. The operator then merely moves the sharpening device up and down the metal edge to remove all burrs or nicks in the metal edge.

In FIG. 5, the sharpening device is illustrated sharpening the bottom edge 29 of the ski 31 by placing the handle or guide 3 against the side edge 30 of the metal edge 32 of the ski and the upper work surface 22 of the file 4 against the bottom edge 29 of the metal edge 32 of the ski 31. In this fashion, the sharpening device can be moved up and down the ski to again remove any burrs on the bottom edge 29 of the ski metal edge. Since the handle 3 of the sharpening device 1 is formed at a right angle to the base plate 2 and since shoulders 16, 17 and 18 are at right angles to the handle 3, on sharpening in the position illustrated in FIG. 5, the bottom edge of the metal edge of the ski will be sharpened at a right angle to the side edge.

In FIG. 6, there is illustrated still another position of use of the novel sharpening device of this invention. In this illustration, the handle 3 of the sharpening device is placed against the bottom edge 29 of the metal edge 32 of the ski with the upper work surface 22 of the file place against the side edge 30 of the metal edge 32 of the ski. Again, since the base 2 and shoulders 16,17 and 18 are formed at right angles to the handle 3 with the sharpening device shown in the position illustrated in FIG. 6, the handle forms a guide and the file will sharpen the side edge of the metal edge of the ski at a right angle to the bottom edge of the metal edge of the ski.

It thus can be seen that the novel sharpening device of this invention is readily carried by the user and does not have any portion of the file protruding in a manner to snag or rip portions of the garment of the user. Further, since the entire handle and base portion of the sharpening device can be molded from light weight synthetic material, the entire structure is light in weight and easily carried and inexpensively made. Also, the handle portion can be formed with serations or spaced ridges to facilitate gripping the handle during use. Further, since the file member is removable from the handle **3** by removal of the lock screw **24**, the file can be easily and readily replaced or reversed in position. It should also be noted, as previously mentioned, that handle and guide **3** is transversely offset on base **2** to expose different widths of file work surface **22** to sharpen different widths of metal edges **29** and **30** on the metal edges **32**.

Other modes of applying the principle of this invention may be employed instead of those specifically set forth above, changes being made as regards the details herein disclosed provided the elements set forth in any of the following claims or the equivalent be employed.

I claim:

1. A sharpening device for sharpening metal edges on skiis which have two exposed surface edges comprising:

a. an elongated handle and guide portion having sides adapted to be gripped by the user;

b. an elongated base portion secured to said handle and guide portion and having upper and lower surfaces extending beyond said sides of said handle and guide portion;

c. said base portion having an elongated opening extending below said handle and guide portion;

d. a file member received in said elongated opening and having upper and lower surfaces above and below, respectively, said upper and lower surfaces of said base portion;

e. the handle and guide portion being adapted to be placed against one exposed edge of the metal edge of the ski with the upper working surface of the file member being disposed against the other exposed metal edge of the ski.

2. The sharpening device defined in claim **1** wherein said file member is secured to the underside of the handle by a lock screw.

3. The sharpening device defined in claim **1** wherein the underside of said handle contains shoulders raised above the upper surface of the base portion, the upper work surface of the file member being secured against said shoulders.

4. The sharpening device defined in claim **3** wherein the shoulders on the underside of the handle are disposed at right angles to the sides of the handles so that the upper work surface of the file member will be disposed at right angles to the sides of the handle and guide portion.

5. The sharpening device defined in claim **3** wherein the underside of the handle has recessed portions between said shoulders to facilitate removal of filings from the upper work surface of the file member.

6. The sharpening device defined in claim **1** wherein the handle member is transversely offset from the base portion to expose different transverse widths of said elongated opening to facilitate sharpening different widths of metal edges on skiis by the upper working surface of said file member.

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