

[54] FILE FOR SHARPENING SKI-EDGES

[76] Inventor: **Peter Weninger**, Karl-Schönherrstr.
1, 6410 Telfs, Austria

[22] Filed: **Nov. 28, 1972**

[21] Appl. No.: **309,975**

[30] Foreign Application Priority Data

Nov. 29, 1971 Austria 10230/71

[52] U.S. Cl. **29/78, 51/204, 76/82,**
280/11.37 T

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

[58] Field of Search 29/78, 80; 76/82, 82.1,
76/82.2, 88; 51/204, 211, 214; 280/11.37,
11.37 T

[56] **References Cited**

UNITED STATES PATENTS

71,491	11/1867	Jacobs	76/82.2
185,286	12/1876	Brooks	51/214
438,271	10/1890	Johnson	29/80
624,485	5/1899	Herman	29/78

1,594,246	7/1926	Dechort	76/82
3,391,946	7/1968	Luff	280/11.37 T
3,497,932	3/1970	Freehauf	51/204 X

FOREIGN PATENTS OR APPLICATIONS

137,773	1/1920	Great Britain	76/88
---------	--------	---------------------	-------

Primary Examiner—Harrison L. Hinson
Attorney, Agent, or Firm—Kemon, Palmer &
Estabrook

[57] ABSTRACT

A file for sharpening ski-edges consisting of a hand held body member with a file plate mounted therein. The file plate is provided with a cutting surface that projects outwardly from said body member and a guiding ledge secured to said body member overlies said file plate for holding it in the body member with portions of the cutting surface of the file plate being disposed on opposite sides of the guiding ledge.

10 Claims, 7 Drawing Figures

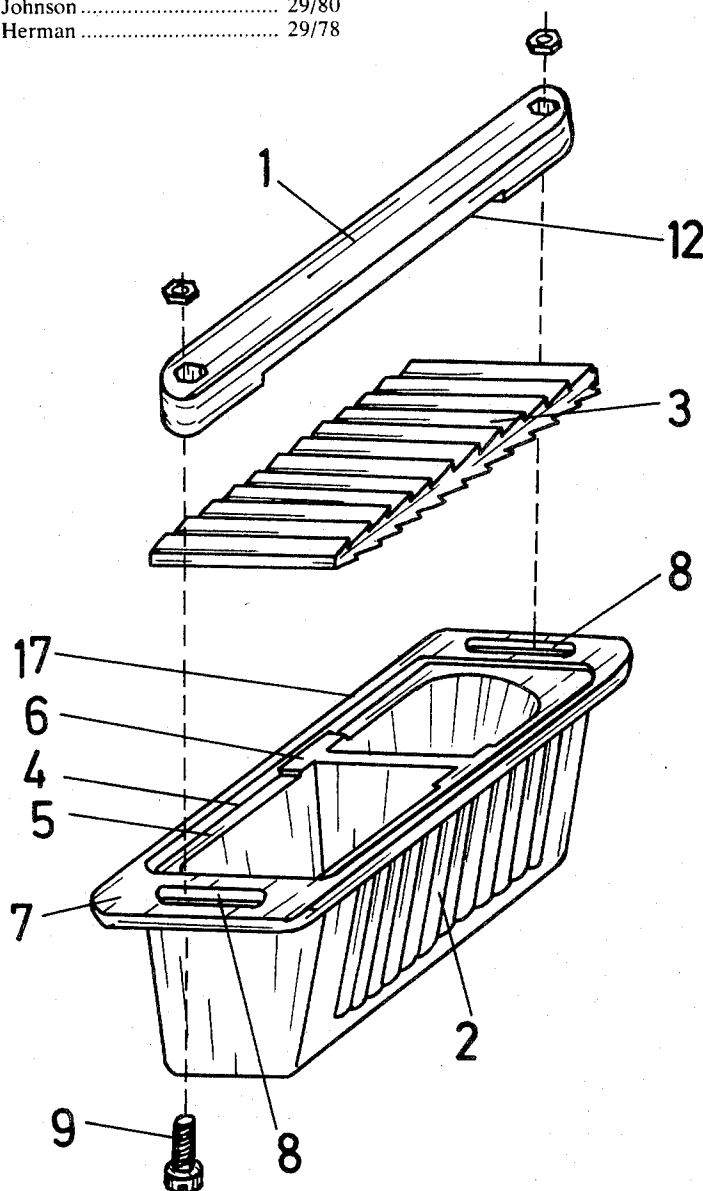


Fig. 1

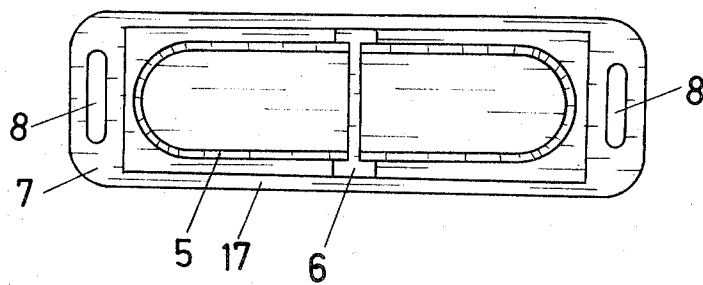


Fig. 2

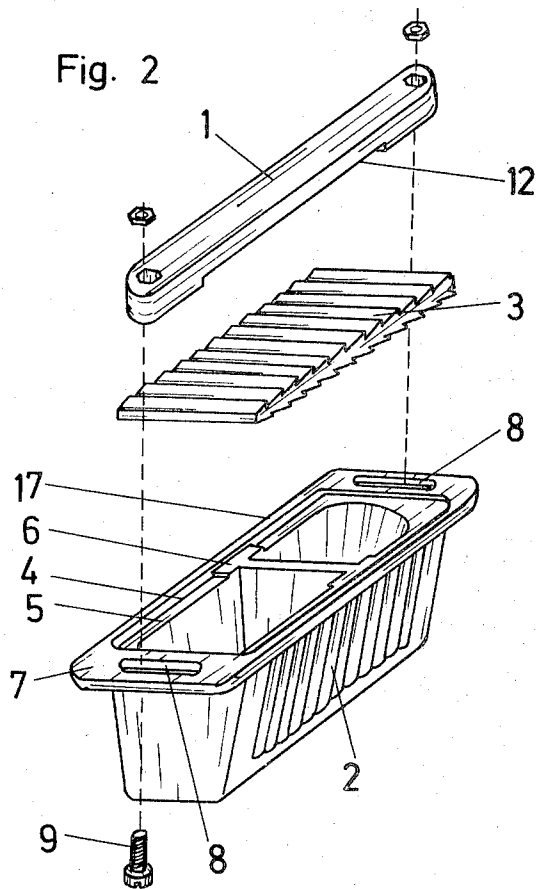


Fig. 3

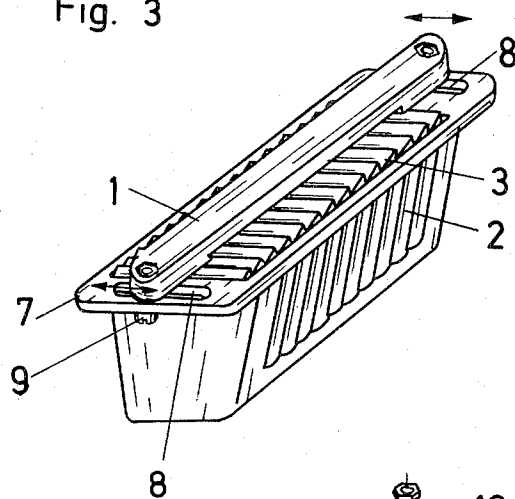


Fig. 4

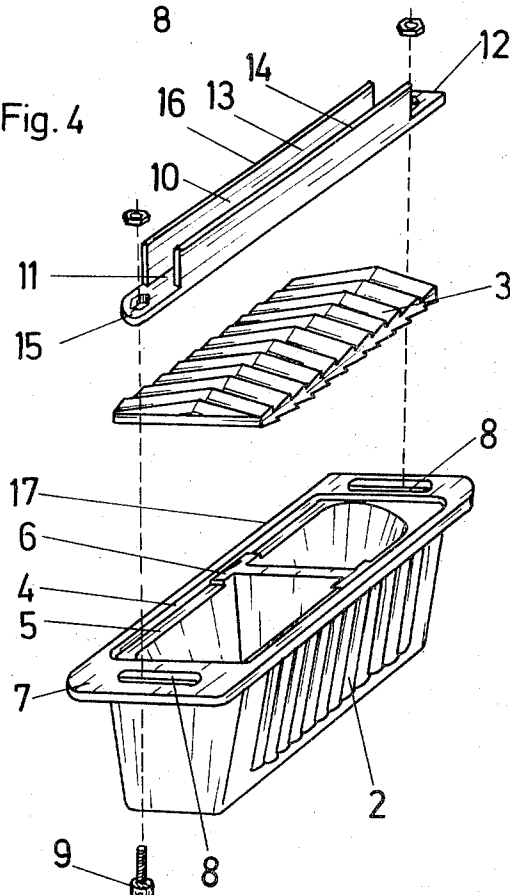


Fig. 5

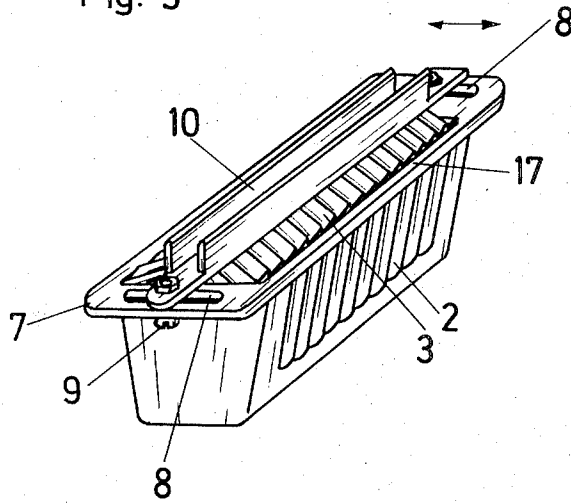


Fig. 6

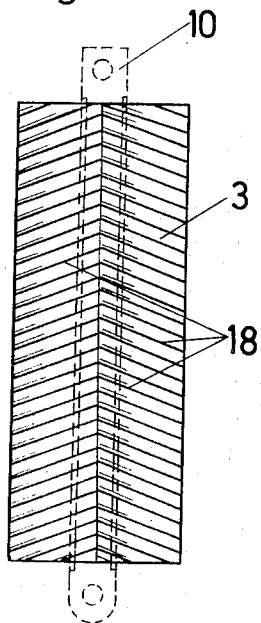
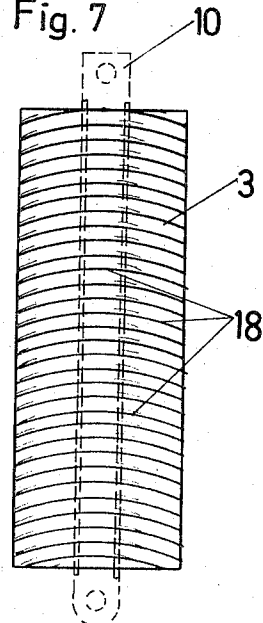


Fig. 7



FILE FOR SHARPENING SKI-EDGES

This invention relates to a file for sharpening ski edges with a grip holding the sharpener.

The known tools for sharpening ski edges have guides sliding on the running surface of the ski and file-like elements which represent the actual tool.

With these tools the edges of one side of the ski can only be filed and mostly they are not handy and therefore almost exclusively usable in work-rooms. Sharpening knives with partly overlapping edges similar to the known tools for sharpening knives which make it possible to treat not only the edges but also the running surfaces of the steel edges in one process of work have already been proposed. It is true that such tools are more handy and can be taken along by the skier but the sharpening knives are requiring careful handling and become soon worn out and blunt so that they cannot be used any longer. Moreover such knives do not guarantee an even cutting with a regular contour because they lack an exact guide.

There are ski edges whose edges are not disposed at right angles but at acute angles to provide a biting edge ensuring a good grip especially on icy places.

It is impossible at least for uninitiated persons to sharpen such edges with the known tools because the angle between the cutting and guiding surfaces cannot be adjusted with these tools.

All known tools of this kind are only proper to sharpen edges and do not serve to treat the grooves or the running surfaces of the ski, e.g., to clear them of dirt, ice, wax and the like.

It is therefore the object of the present invention to provide a sharpener to be easily handled by everybody and which does not have the above mentioned insufficiencies. It shall be appropriate not only to treat both surfaces of the steel edges but also to provide a correct sharpening of surfaces disposed at acute angles. Moreover such a device shall offer the possibility to work the running surfaces and grooves of a ski.

The invention therefore proposes to fix a removable guide in the grip, e.g., a slidable guiding ledge whose angle towards the sharpening surface of the file plate is adjustable and which holds the file plate projecting at both sides of the guide in the grip. With the present embodiment of a file for sharpening ski edges also an uninitiated person is able to sharpen a steel edge on both surfaces without any difficulty whereby he is able to treat afterwards the opposed edge without having to turn over the ski. As the guiding ledge is slidable it is not only possible to adjust the cutting surface of the file plate to the needed breadth but also to utilize the cutting surface fully because the parts in the middle of the surface are also usable. As the angle of the guiding ledge towards the sharpening surface is also adjustable it is also possible to sharpen ski edges with surfaces being not disposed at right angles.

In a preferred embodiment of the invention the file plate is inserted in a corresponding recess of the grip whereby a projection or a curved surface is provided in the grip underneath the middle of the file plate on which is set the flexible grinding plate curved to its ends by means of a guide in form of a guiding ledge. The slightly curved file plate is well adapted to the camber of the ski such that it sits close to the surface of the edge.

A further advantageous embodiment of the invention consists in that the grip on the narrow sides of its basis comprising the file plate has extensions with oblong holes extending transversally to its longitudinal direction in which the guiding ledge may be adjusted in parallel with the sharpening surface in any position desired whereby in each position the file plate is projecting at both sides of the guiding ledge. This adjustability of the guiding ledge has the advantage that the file for sharpening ski edges according to the invention can easily be conducted past the steel edge beyond the zone of the binding in particular with the guiding edge being adjusted diagonally to the longitudinal direction of the grip.

The guiding ledge preferably is constructed as an U-shaped profile guide open to the top. In this embodiment one or both of the parallel running sides of the guide can be bent down to the exposed surface of the file plate to sharpen also edges which are not disposed at right angles. As the file plate preferably is slightly curved to the top it is advantageous that the base of the profile guide resting on it is curved according to the camber of the clamped file plate. In order to be able to clean the grooves of the running surface of the ski from dirt or wax with the device according to the invention the ends of the base of the profile guide are provided with extensions which are beveled and/or half-round.

The straight-lined cuttings of the file plate are preferably directed such that they are extending at an angle to each other from the longitudinal median plane of the file plate. They may, however, also be disposed symmetrically curved towards their longitudinal center line.

Other objects and advantages of the present invention will readily become apparent from a detailed consideration of the following description when taken in conjunction with the accompanying drawing in which:

FIG. 1 is a top plan view of the grip construction of the file for sharpening ski edges according to the invention,

FIG. 2 is an exploded view of the grip embodying the present invention,

FIG. 3 is perspective view of the grip when assembled,

FIG. 4 is an exploded view of the grip of the present invention showing a modified cutting plate;

FIG. 5 is a perspective view of the grip of FIG. 4 in assembled condition;

FIGS. 6 and 7 show modifications of the cutting surfaces of the file plate.

The grip 2 preferably made of synthetic material is provided with extensions 7 on the narrow sides of its base 17, extensions in which are set oblong holes 8. The base 17 is provided with a recess 4 corresponding in its extent and depth to the file plate 3 resting on it whose cutting surface or area protrudes slightly above the base 17 of the grip 2. A projection 6 protruding slightly from the base 5 of the recess 4 is provided in the transversal middle portion of the grip 2. In setting the guiding ledge 1 of the file plate 3 and fixing it to the grip 2 by means of the screw bolts 9 put through the oblong holes, the file plate 3 is not only held in the grip 2 but is also slightly curved in the middle because of the projection 6 provided underneath such that a perfect adaptation to the camber of the ski is ensured. Instead of a

projection 6 a curved surface or the like may be provided in the grip underneath the file plate 3.

The guiding ledge is adjustable in order to use the parts of the file plate not being worn out for sharpening. For the sharpening operation the parts of the device according to the invention at both sides of the guiding ledge are to be used, as the cutting surface of the file plate is projecting at both sides. During the sharpening operation the surface of the guiding ledge 1 extending vertically is set on the border of the ski and drawn down the steel edge. The same process may be carried out on the other border of the ski without having to turn over the ski.

In FIG. 4 and 5 the guiding ledge is designed as a U-shaped profile-guide 10. One or both of its parallel running sides may be bent down in direction of the file plate 3 to sharpen also ski edges with an acute angle. The top edges 16 of the sides 13, 14 are beveled such that they may serve to treat the running surfaces of the ski, e.g., to scrape off wax.

Both ends of the base 11 of the guiding ledge are provided with extensions 12, 15, one being beveled, the other half-round. They serve to clean the grooves which usually are either beveled or half-round.

FIG. 6 and 7 show file plates 3 with different dispositions of the cuttings 18 extending in a fishbone-shaped disposition as shown in FIG. 6 and in a curved disposition as shown in FIG. 7. In these embodiments the removed chips are shoved towards the longitudinal middle of the ski such that in contrast to the known grinding machines for ski edges the formation of burrs is avoided which have to be cleaned off in order to maintain the qualities of the ski.

It is evident that various changes of the described examples are possible within the scope of the present invention. All these possibilities may be embodied within the extent of protection.

I claim:

1. A hand operated device for sharpening ski edges comprising a hand gripping base member having outwardly projecting extensions at the ends thereof, a file plate having a cutting surface formed thereon positioned on said base member intermediate said extensions, an elongated guiding ledge positioned upon said file plate and extending in the longitudinal direction of said cutting surface to overlie said extensions and

means provided in said extensions to facilitate the fastening of said guiding ledge thereto contemporaneous with the positioning of said guiding ledge upon said file plate.

2. A hand operated device of the type as called for in claim 1 wherein said base member is formed with a recess of a size commensurate with that of said file plate, a projection positioned in said recess and extending transversely of the longitudinal axis of said base member, said file plate being positioned in said recess and being caused to curve over said projection upon said guiding ledge being fastened to said extensions.

3. A hand operated device of the type as set forth in claim 1 wherein said extensions are formed with elongated openings extending in a direction normal to the longitudinal axis of said base member to permit the adjustable mounting of said guiding ledge upon said file plate with the cutting surface of said file plate radiating outwardly from both sides of said guiding ledge.

4. A hand operated device as set forth in claim 1 wherein said guiding ledge is of channel shape with the base thereof engaging the cutting surface of said file plate.

5. A hand operated device of the type as set forth in claim 4 wherein the sides of said channel shape guiding ledge are bent downwardly towards the cutting surface of said grinding plate.

6. A hand operated device of the type as set forth in claim 4 wherein said base is curved to conform to the curvature of the cutting surface of said file plate.

7. A hand operated device of the type as set forth in claim 4 wherein the base of said guiding ledge terminates in a beveled and a half-round extension.

8. A hand operated device of the type as set forth in claim 4 wherein the top edges of the side portions of said channel shape guiding ledge are defined as sharpened edges for scraping a ski surface.

9. A hand operated device as set forth in claim 1 wherein the cutting surface of said file plate constitutes cutting surfaces extending at an angle to each other from the longitudinal median plane of said file plate.

10. A hand operated device as set forth in claim 1 wherein the cutting surface of the file plate constitutes cutting surfaces that are curved symmetrically with respect to the longitudinal axis of said file plate.

* * * * *

50

55

60

65