

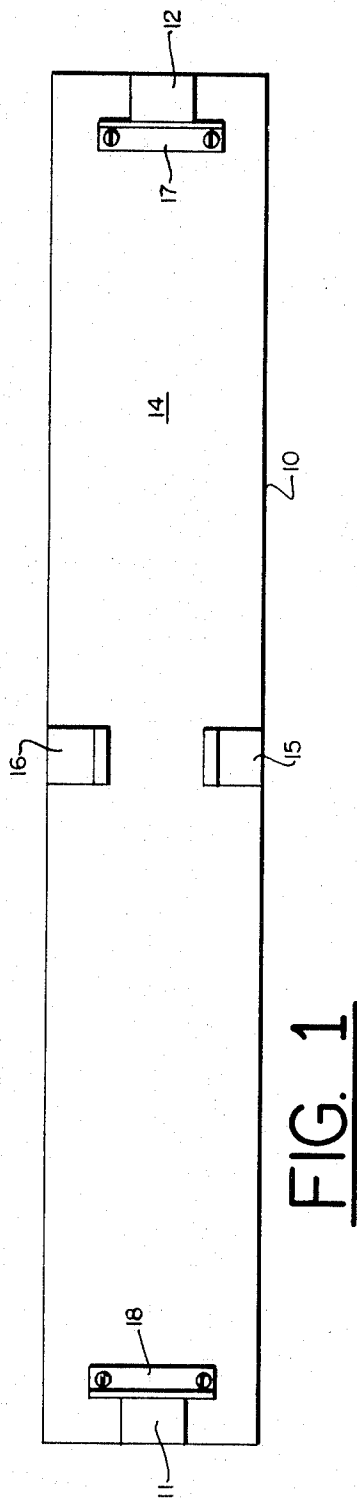
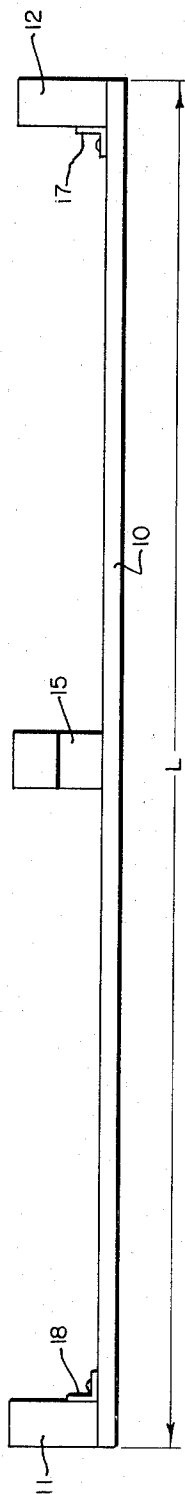
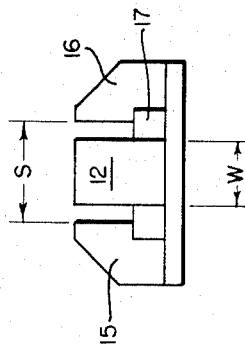
March 6, 1973

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SKI SHARPENING VISE

3,719,008

Filed May 26, 1971

2 Sheets-Sheet 1



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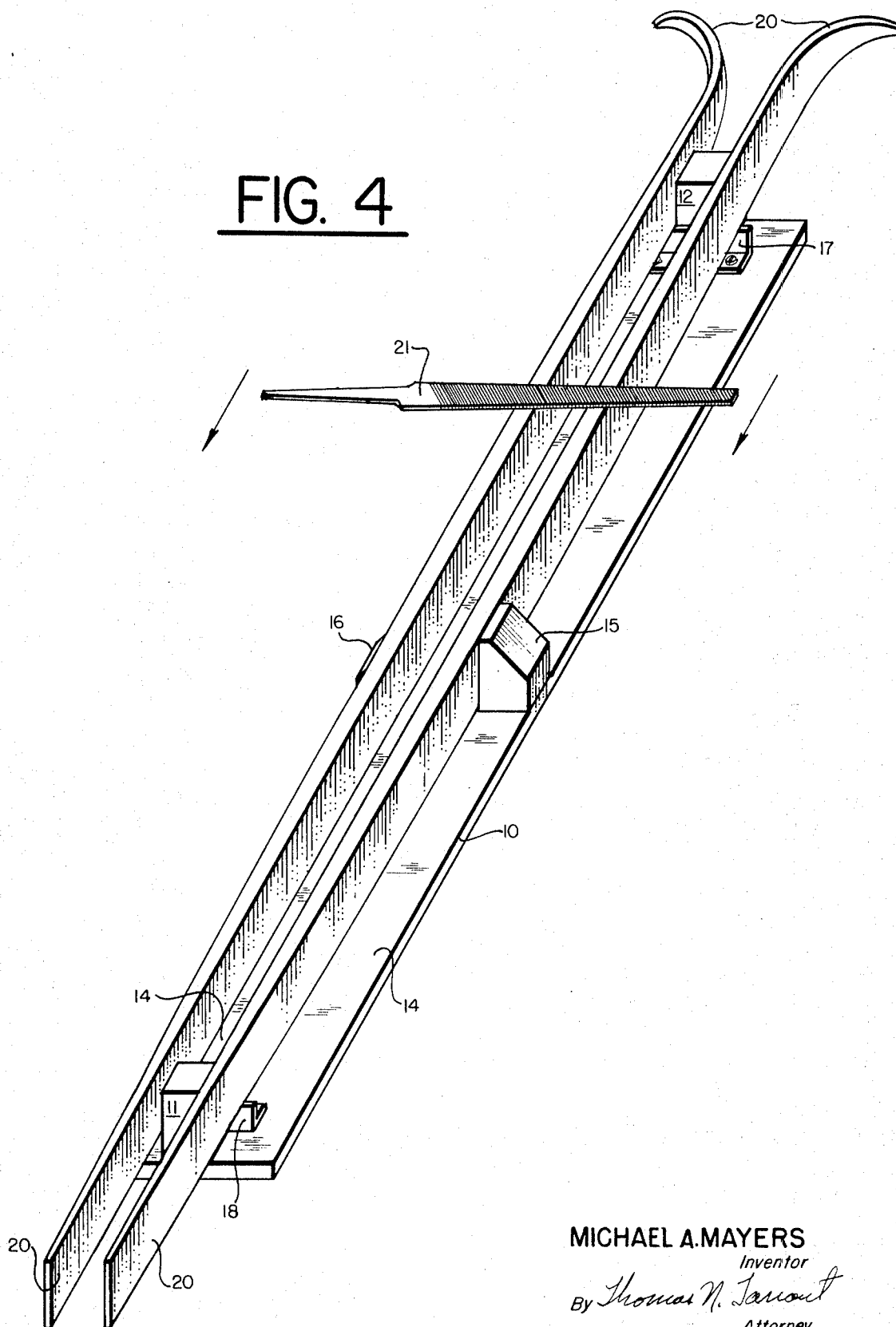
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FIG. 4



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SKI SHARPENING VISE

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Filed May 26, 1971, Ser. No. 146,892

Int. Cl. B24b 19/00; C22b 11/00

U.S. Cl. 51-228

2 Claims

ABSTRACT OF THE DISCLOSURE

A clamping arrangement for holding a pair of snow skis while sharpening in which a plurality of fixed uprights from an elongated base are arranged to distort the skis against their inherent elasticity with the skis spaced parallel and resting on edge; and a method for sharpening skis so held by abrading the exposed edges with an implement maintained at a predetermined angle to the exposed edges by virtue of the alignment guide presented by the two edges themselves.

BACKGROUND OF THE INVENTION

(1) Field of the invention

The invention relates to a device for holding snow skis in alignment to facilitate edge sharpening.

(2) Description of the prior art

The use of steel edges on skis has been common for about the last thirty years. The desire to dress or hone these edges to maintain their gripping power or icy slopes has increased over the last few years with the great increase in skiing enthusiasm and the resulting deterioration of conditions on the hard-traveled slopes. Sharpening of the steel edges has mostly been performed one at a time, usually held in a common bench vise. Both metal files and abrasive stones have been utilized. A common difficulty has been in maintaining the abrasive instrument at the exact constant angle for sharpening.

SUMMARY OF THE INVENTION

Now, in accordance with the present invention, a pair of skis are secured simultaneously with edges in spaced parallel relationship by means of a simple jiggling arrangement of an elongated support upon which blocking pieces are arranged to clamp the skis utilizing the inherent elasticity of the skis themselves.

A preferred embodiment uses two pairs of blocking elements in which one pair is spaced across the narrow dimension of the support to brace the center of a pair of skis together and the second pair is spaced along the long dimension of the support to brace the ends of a pair of skis apart.

Further, in accordance with the invention, ski edges are sharpened at an accurate angle by supporting a pair of skis with their edges in spaced parallel relation and using the edges themselves while so positioned to maintain a sharpening tool in accurate angular alignment.

Thus, it is an object of the invention to provide means to clamp a pair of skis simultaneously for edge sharpening;

It is a further object of the invention to provide a novel arrangement of an elongated support base and two pairs of blocking members to secure a pair of skis in spaced parallel relation.

Further objects and features of the invention will become apparent upon reading the following description together with the drawing.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a plan view of the invention ski vise;
FIG. 2 is a front elevation of the ski vise of FIG. 1;

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FIG. 3 is an end elevation of the ski vise of FIG. 1;
FIG. 4 is a view in perspective depicting ski sharpening according to the invention.

DESCRIPTION OF A PREFERRED EMBODIMENT

Four blocks secured to a base support provide a clamping means for holding a pair of snow skis in a rigid spaced parallel relationship for sharpening the edges. By clamping the two skis simultaneously in spaced relation, the edges themselves provide a guide for a file or abrasive stone to ensure sharpening at the correct angle. Thus in FIG. 1 a device for clamping skis according to the invention is depicted having support base 10.

Support base 10 is suitably a flat rigid member having a length, 1, (FIG. 2) in the range of 3 feet to 5 feet. A length of 4 feet has been found to be a good average. Longer base supports take up unnecessary space and are not readily usable with small childrens' skis. Shorter base supports do not permit enough distance between end clamping blocks 11 and 12 to support the ends of longer adult skis with the necessary firmness. Support base 10 is suitably of wood but can not be made of metal or plastic. A high resistance to warping is desirable since the skis must be clamped perfectly parallel for accurate sharpening.

End blocks 11 and 12 are secured to base 10 in the center of its top surface 14 at the extreme ends. While there is nothing critical about placing blocks 11 and 12 at the ends of base 10, greater stability is provided to the clamped skis with blocks 11 and 12 close to the ends of the skis.

End blocks 11 and 12 are suitably made of wooden blocks, approximately two inches square and approximately three inches high, fastened to the support board by a bonding cement, screws, nails, bolts or the like. Blocks 11 and 12 may also be made of plastic or metal and can take any shape or design suitable for bracing snow skis in accordance with the general configurations described.

The height of blocks 11 and 12 is not critical but should be slightly less than the width of skis to be sharpened so that the blocks will not interfere with the sharpening tool. The width, W, (FIG. 3) of blocks 11 and 12 is selected to give a separation to the skis that will provide a substantial alignment guide for the sharpening tool and also adequate to put strong pressure on the ends of the skis in combination with a restriction imposed at the center of the skis by blocks 15 and 16 for clamping. The width, W, of blocks 11 and 12 is preferably in the range of 1 to 3 inches to provide a desirable separation of the skis.

Blocks 15 and 16 are positioned substantially in the middle of top surface 14 of base 10, separated by a spacing, S, in the range of 2½ to 4½ inches. If spacing, S, is smaller than 2½ inches, many skis would not fit between blocks 15 and 16 and it is preferable to have this space large enough to provide a separation of the skis such that will provide substantial alignment for a sharpening tool.

Blocks 15 and 16 are suitably made of the same material as blocks 11 and 12 and may be secured to base 10 in the same manner.

Referring to FIG. 2, it has been found desirable to position clearance pieces 17 and 18 upon surface 14 of base 10 to raise the skis above base 10 providing clearance between protruding ski hardware and surface 14 of base 10. These pieces 17 and 18 are suitable metal plates or pieces of hard durable plastic and are depicted as pieces of angle iron. It has been found that pieces 17 and 18 are preferably at least ¾ inch thick to accommodate the protrusions that sometimes occur.

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In the depicted embodiment, pieces 17 and 18 are positioned adjacent to end blocks 11 and 12. However, the location of pieces 17 and 18 is not critical and any plurality of them may be used to keep ski edges away from surface 14. Since pieces 17 and 18 raise the skis above surface 14, blocks 11, 12, 15 and 16 should be commensurately higher with thicknesses of pieces 17 and 18 greater than $\frac{3}{4}$ inch.

Referring now to FIG. 3, it will be seen that the upper outer corners of blocks 15 and 16 are cut away to prevent interference with sharpening. It should be understood that the particular shape of blocks 11, 12, 15 and 16 is not critical as long as the range of the dimensions W and S are observed and adequate support strength is provided. For example, blocks 11 and 12 can suitably be made in the form of cylinders. It is also preferable, to the extent economically feasible, to round off all corners and edges to reduce the possibility of damage or injury to hands and ski surfaces.

In operation of the invention for sharpening skis as depicted in FIG. 4, a pair of skis 20 is placed on edge with bottoms facing so that the center portions are between blocks 15 and 16 and the ends are separated by blocks 11 and 12. The coaction between the separation effected by blocks 11 and 12 and the constriction by blocks 15 and 16 clamps skis 20 rigidly in place assisted by the camber and elasticity of the skis.

Since the ski edges are exposed and rigidly parallel, a file or sharpening stone 21, long enough to be manipulated while contacting the edges of both skis simultaneously, will be guided by the edges themselves to insure right angle sharpening.

While the invention has been described with relation to a specific embodiment, a number of modifications are possible. For example, some skiers prefer a slight angle other than a right angle in sharpening their ski edges. This is readily provided for in accordance with the invention by the use of wedges shaped shims or by angling the surfaces of blocks 11, 12, 15 and 16 to obtain the required angles.

It is also possible to design the ski vise so that the bottoms of the skis will face out rather than in, however

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this arrangement is complicated by the presence of the usual boot clamps or harnesses.

Thus it is intended to claim the invention broadly within the scope and spirit of the appended claims.

I claim:

1. A clamping device for holding a pair of skis for sharpening the edges thereof comprising:

(a) a flat support base having a top surface with a long and a short dimension;

(b) at least two side blocks substantially shorter than said base upstanding from said top surface substantially in the center of said long dimension and spaced facing each other across said short dimension;

(c) two end blocks upstanding from said top surface substantially in the center of said short dimension and facing each other across said long dimension, the spacing of said side blocks being greater than the thickness of said end blocks across said short dimension and such that a pair of snow skis placed on edge between said side blocks with their bottoms facing and their ends extending on opposite sides of said end blocks are clamped firmly in position by virtue of the camber and elasticity of the skis.

2. A clamping device according to claim 1 wherein clearance pieces are provided on said support base to raise said skis above the surface of said support base allowing for protruding hardware.

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U.S. Cl. X.R.

76—83; 269—40