

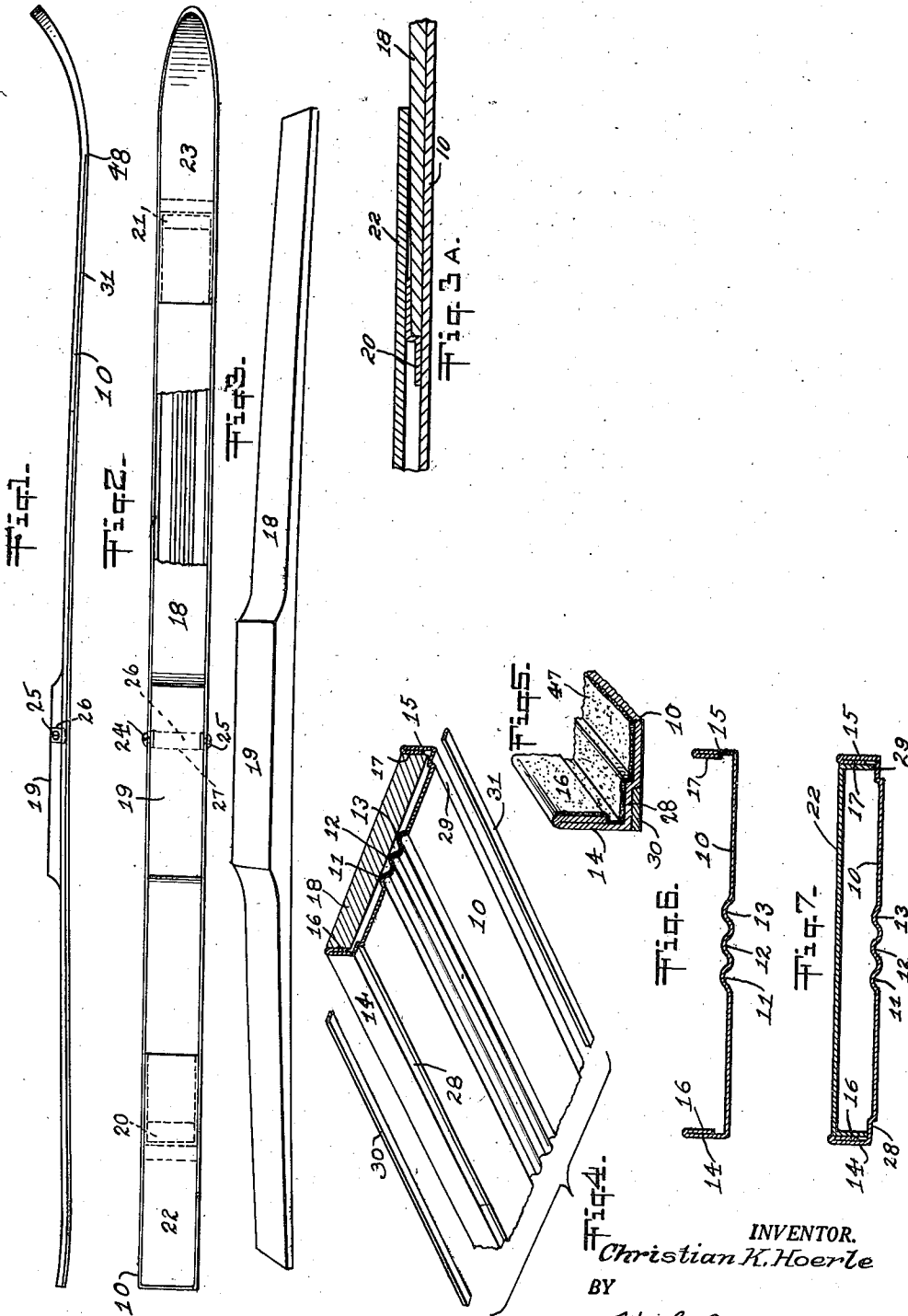
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METAL SKI

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METAL SKI

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This invention relates to skis, and more particularly to a ski provided with a hollow metal base having bottom side grooves in which a pair of wear-proof steel edges are permanently welded.

One object of the present invention is to provide a ski of the above nature in which the metal base is made U-shaped and is adapted to embrace an upper foot-supporting filler block.

A further object is to provide a metallic ski base of the above nature having a coating of sound-deadening material on the inner surface thereof.

A further object is to provide a ski of the above nature which will be simple in construction, inexpensive to manufacture, easy to assemble, compact, ornamental in appearance, and very efficient and durable in use.

With these and other objects in view, there has been illustrated on the accompanying drawing one form in which the invention may conveniently be embodied in practice.

In the drawing,

Fig. 1 represents a side view in elevation of a ski embodying the present invention.

Fig. 2 is a top plan view of the same.

Fig. 3 is a perspective view of the foot-supporting filler block located within the metallic base of the ski.

Fig. 3A is a fragmentary longitudinal sectional view showing the shape of the rear anchor member.

Fig. 4 is an exploded perspective view partly in section of the improved ski showing the appearance of the same before the wear-proof steel edges have been welded in place.

Fig. 5 is a detailed perspective view of one side of the ski base after the wear-proof edge has been welded in position.

Fig. 6 is a transverse sectional view of the U-shaped metallic base of the ski as it appears before forming the edge-receiving grooves therein.

Fig. 7 is a sectional view similar to Fig. 6 showing the appearance of the ski base after the edge-receiving grooves have been formed, and also showing the filler block and rear cover therefor.

Referring now to the drawing in which like reference numerals denote corresponding parts throughout the several views, the numeral 10 indicates a flexible flat-bottomed hollow ski base which is U-shaped in cross section, and constructed of any suitable corrosion-resistant metal such as stainless steel. The base 10 is provided in the center of its bottom surface with three longitudinal grooves 11, 12, 13, as shown, and said base is also provided with a pair of upturned

side flanges 14, 15 which are integrally connected with a pair of downturned inner wings 16, 17 located in flat contact with said flanges 14, 15, as clearly shown in Figs. 4 to 8.

Provision is also made of a foot-supporting filler block 18 seated in the U-shaped base 10 and embraced by the downturned wings 16, 17. The filler block 18 is provided with a raised foot rest section 19 located slightly to the rear of the midpoint of the ski base 10 (see Figs. 1, 2, and 3).

The filler block 18 is adapted to be held securely upon the base 10 by means of a pair of Z-shaped anchor members 20, 21, shown in dotted lines in Fig. 2. The upper flanges of said anchor members are adapted to overlie and engage the flat ends of the filler block 18 so as to hold the latter tightly in operating position.

The rear portion of the filler block 18 and the rear anchor member 20 are adapted to be embraced by a U-shaped cover member 22 having downturned edges which are fitted within the wings 16, 17 at the rear portion of the ski. The rear cover member 22 is secured rigidly in place by welding or soldering to the downturned inner wings 16, 17 (see Fig. 7).

At the front of the ski, provision is made of a curved cover member 23, similar to the cover member 22, which is adapted to embrace the forward part of the filler block 18 and the Z-shaped anchor member 21. The forward cover member 23 is also secured, as by welding or soldering, to the downturned wings 16, 17 at the forward part of the ski base 10.

The filler block 18 is adapted to be detachably connected to a foot harness (not shown) by means of a pair of horizontal headed screws 24, 25, driven into opposite sides of the raised section 19 of the filler block 18.

For the purpose of reinforcing the headed harness-attaching screws 24, 25, provision is made of a narrow U-shaped thin metal bracket 26 lying in a transverse slot 27 formed in the undersurface of the filler block 18.

The construction heretofore described is similar to that disclosed in a prior application by the present applicant, Serial No. 512,865, filed December 4, 1943, entitled "Composite wood and metal ski," which matured into Patent No. 2,434,851, dated January 20, 1948.

The hollow metallic base 10 of the ski is provided on its underside with a pair of longitudinal side grooves 28, 29, which are adapted to receive a pair of wear-resistant elongated thin steel edge members 30, 31, of rectangular cross section, as clearly shown in Figs. 4 and 5.

In order to prevent the occurrence of undesirable noises which might otherwise be caused by the flexing of the ski as it travels over snow, provision is made of a coating 47 of sound-absorbing and deadening material applied to the inner surface of the metal base 10. The coating 47 may consist of any suitable material such as sponge rubber, asbestos, plastic material, cork, or fibrous composition, and may be either cemented, painted, or sprayed upon the metal base, as desired.

The sound-deadening material 47 will be applied to the inside of the ski base 10, and to complete the assembly, the filler block 18, the Z-shaped anchor members 20, 21, the U-shaped bracket 26, and the rear and front cover plates 22, 23 will then be inserted and welded in assembled position.

While there has been disclosed in this specification one form in which the invention may be embodied, it is to be understood that this form is shown for the purpose of illustration only, and that the invention is not to be limited to the specific disclosure, but may be modified and embodied in various other forms without departing from its spirit. In short, the invention includes all the modifications and embodiments coming within the scope of the following claims.

Having thus fully described the invention, what is claimed as new, and for which it is desired to secure Letters Patent, is:

1. In a metal ski, a flat metal base having grooves rolled in both sides of the undersurface thereof, and a pair of wear-resistant metallic edges welded into said grooves.

2. In a metal ski, a flat metal base having grooves formed in both sides of the undersurface thereof, and a pair of wear-resistant metallic edges welded into said grooves.

3. In a metallic ski, a flat metal base having grooves formed on both sides of the undersurface thereof, and a pair of steel wear-resistant edges permanently secured in said grooves.

4. In a metallic ski, a flat metal base having grooves formed on both sides of the undersurface thereof, and a pair of continuous steel wear-resistant edges permanently secured in said grooves.

5. In a metallic ski, a flat metal base having grooves formed on both sides of the undersurface thereof, and a pair of steel wear-resistant edges permanently spot-welded in said grooves.

6. In a ski, a U-shaped metallic base having upstanding sides, a foot-supporting filler block fitted into said base between said sides, and an adherent coating of sound-deadening material covering the interior surface of the sides and bottom of said base.

7. In a ski, a U-shaped metallic base having upstanding sides, and a filler block secured to said base within said sides, the interior surface of said base and sides being coated with a fibrous sound-deadening material.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,551,620	Ricke	Sept. 1, 1925
1,552,990	Hunt	Sept. 8, 1925
1,585,354	Zabriskie	May 18, 1926
2,008,654	Clarvoe	July 16, 1935
2,164,604	Whiteford	July 4, 1939
2,242,156	Wallace	May 13, 1941
2,245,319	Beerli	June 10, 1941
2,264,535	Klemm	Dec. 2, 1941

FOREIGN PATENTS

Number	Country	Date
62,069	Norway	Feb. 19, 1940
168,471	Switzerland	June 16, 1934
649,182	Germany	Aug. 17, 1937