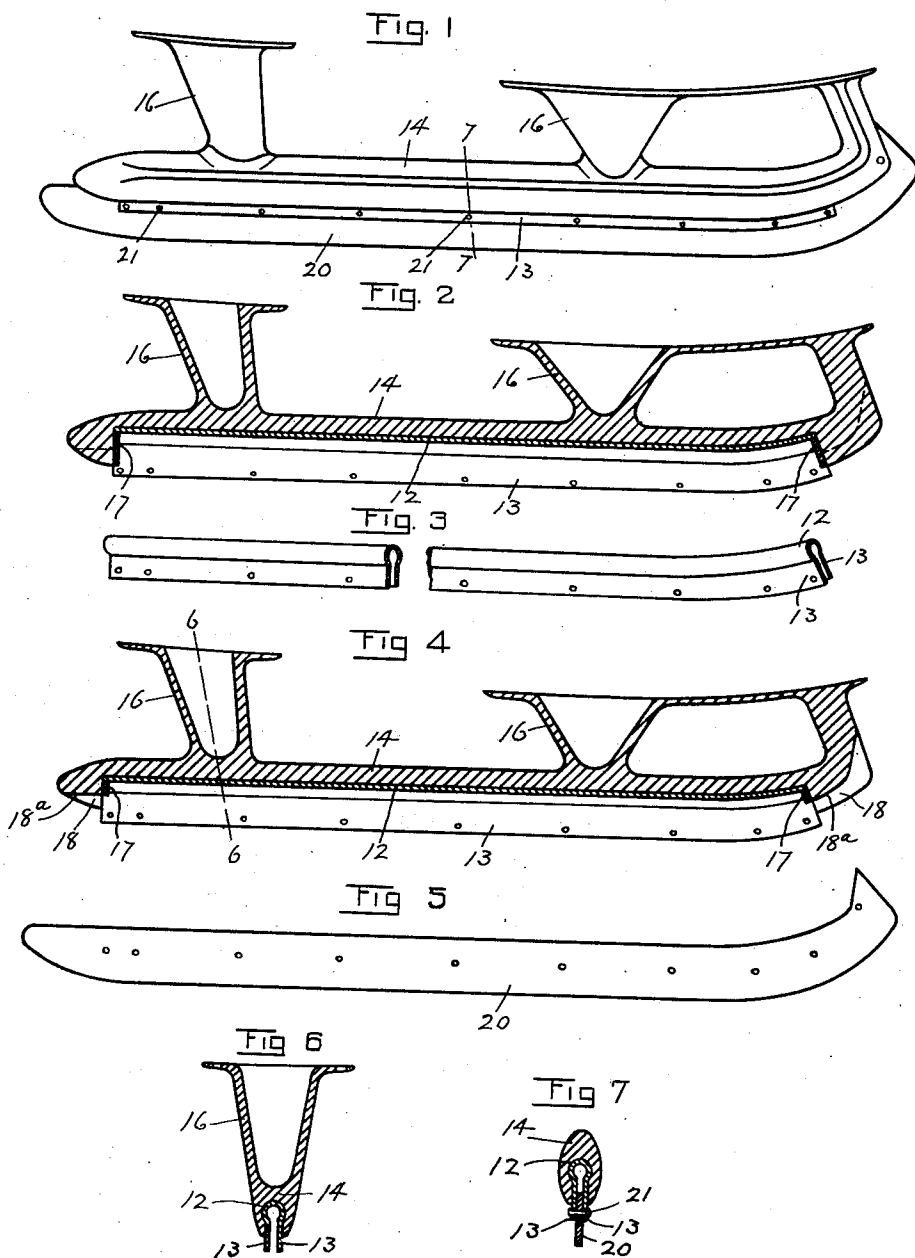


C. B. DREVITSON.
SKATE.
APPLICATION FILED MAY 20, 1920.

1,371,609.

Patented Mar. 15, 1921.



INVENTOR

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UNITED STATES PATENT OFFICE.

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SKATE.

1,371,609.

Specification of Letters Patent.

Patented Mar. 15, 1921.

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To all whom it may concern:

Be it known that I, CARL B. DREVITSON, a citizen of the United States, residing at Somerville, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Skates, of which the following is a specification.

This invention relates to an ice skate which includes a one-piece casting, composed of metal, such as aluminum, or an alloy of which aluminum forms a considerable part, said casting including a base portion and upstanding foot supports integral therewith, as in the skate disclosed by my Patent No. 1,115,790, dated November 3, 1914, the base portion containing the upper edge portion of the steel skate runner. In the skate shown by said patent the base portion of the casting is cast directly on the runner, the strength of the bond between the base portion and runner being dependent entirely on the strength of the cast metal base portion.

One object of the present invention is to strengthen the cast metal base portion and the bond or union between the latter and the runner.

Another object is to minimize the quantity of the metal required for the casting, thus reducing expense and weight.

To these and other related ends the invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings forming a part of this specification,—

Figure 1 is a side elevation of a skate embodying the invention.

Fig. 2 is a longitudinal section, showing the casting and the reinforcing member partially completed.

Fig. 3 is a perspective view, showing the reinforcing member by itself.

Fig. 4 is a view similar to Fig. 2, showing the casting and reinforcing member completed and ready for application to the runner.

Fig. 5 is a side view of the runner by itself.

Fig. 6 is a section on line 6—6 of Fig. 4.

Fig. 7 is a section on line 7—7 of Fig. 1.

The same reference characters indicate the same parts in all of the figures.

In carrying out my invention, I form upon an elongated sheet-metal runner-en-

gaging member, which is substantially U-shaped in cross section, a one-piece casting, which includes an elongated base portion cast upon said member, and upstanding foot-supporting standards integral with the base portion, the reinforcing member forming a downwardly opening groove in the base portion of the casting, and having exposed edge portions projecting below the base portion. The structure which includes the reinforcing member and the casting is formed before its application to the steel runner of the skate, the runner being subsequently inserted in the said groove and bonded to the exposed edge portions of the reinforcing member.

In the drawings, I have shown the reinforcing member as made from a single piece or blank of sheet metal, preferably steel, and relatively thin, said member being substantially U-shaped in cross section, and including a hollow neck portion 12 and spaced apart flanges 13, projecting downwardly from the neck, and forming the sides of a runner-receiving groove. I have shown the one-piece casting as including an elongated base portion 14, cast upon the reinforcing member and interlocked with the neck 12 thereof, as shown by Fig. 7, and upstanding foot-supporting standards 16 integral with the base portion.

In practice, the ends of the reinforcing member are closed by heads or plugs 17, before the base portion 14 is cast on the reinforcing member, said heads being formed to exclude the molten metal from the interior of the reinforcing member. It will be understood that the reinforcing member having the heads 17 is suitably applied to a mold, adapted to form the one-piece casting upon the reinforcing member in such manner that the edge portions of the flanges 13 project from the base portion 14, as shown.

After the removal of the casting and reinforcing member from the mold, the portions of the casting which project from opposite ends of the reinforcing member are cut by any suitable instrumentality, to form slots 18, the metal removed including the lower portions of the plugs 17, as may be seen by comparing Fig. 4 with Fig. 2. The slots 18 receive the end portions of the runner 20. the bottoms 18^a of said slots form-

ing faces which are seated directly on the end portions of the upper edge of the runner.

The structure which includes the reinforcing member and the casting, being completed, as shown by Fig. 4, the runner 20 is inserted in the groove formed by the flanges 13 and the slots 18, and the upper edge portion of the runner is then bonded to the exposed edge portions of the flanges 13 by suitable means, such as rivets 21, or by electric spot welding, the material of the reinforcing member being such as to permit the bonding of the reinforcing member with the steel runner by spot welding.

It will be seen that the sheet metal reinforcing member enables the one-piece casting to be securely connected with the runner, after the completion of the casting, so that there is no liability of softening or annealing the runner by heat.

The reinforcing member occupies a considerable portion of the interior of the base 14 of the casting, so that the quantity of cast metal is reduced to the minimum, and the casting is made correspondingly light, without sacrificing strength. In case the runner is secured to the flanges 13 by rivets, it is feasible to replace either a broken runner, or a broken casting, by removing the rivets and substituting a new part for the broken one.

I claim:

1. A skate comprising an elongated sheet metal runner-engaging member, substantially U-shaped in cross section, a one-piece casting including an elongated base portion cast upon said member, and upstanding foot-supporting standards integral with the base portion, said member forming a downwardly opening groove in the base portion, and having exposed edge portions projecting below the base portion, and a runner inserted in said groove and bonded to said edge portions.

2. A skate comprising an elongated hollow sheet metal member, substantially U-shaped

in cross section, and including a hollow neck and spaced apart flanges projecting downwardly from the neck and forming the sides of a runner-receiving groove, a one-piece casting including an elongated base portion cast upon said member and interlocked with the said neck, and upstanding foot-supporting standards integral with the base portion, the said flanges having exposed edge portions projecting below the base portion, and a runner inserted in said groove and bonded to said edge portions below the base portion.

3. A skate comprising an elongated hollow sheet metal member, substantially U-shaped in cross section, and including a hollow neck and spaced apart flanges projecting downwardly from the neck and forming the sides of a runner-receiving groove, a one-piece casting including an elongated base portion cast upon said member and interlocked with the said neck, and upstanding foot-supporting standards integral with the base portion, the said flanges having exposed edge portions projecting below the base portion, and a runner inserted in said groove and bonded to said edge portions below the base portion, the metal of said casting being excluded from the interior of said member to reduce the quantity of cast metal.

4. A skate comprising an elongated sheet metal runner-engaging member, substantially U-shaped in cross section, a one-piece casting including an elongated base portion cast upon said member, and upstanding foot-supporting standards integral with the base portion, said member forming a downwardly opening groove in the base portion, and having exposed edge portions projecting below the base portion, and a runner inserted in said groove and bonded to said edge portions, the said base being extended at its ends beyond the said reinforcing member, and provided with faces seated directly on the end portions of the runner.

In testimony whereof I have affixed my signature.

CARL B. DREVITSON.