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(54) **Blade for ice hockey skate.**

(57) A blade (10) for ice hockey skates comprising a plurality of slanted slots (20). The slots (20) are symmetrically arranged on the top edge of the blade (10). Each slot (20) has an opening (21) facing upward and toward the center line of the blade (10). The outer tips (22),(23) of the openings (21) are alternately angled to the left and to the right. The blade (10) is embedded in plastic material (30) so that stress concentration of the blade (10) and plastic material (30) can be avoided, so that the blade (10) can endure higher impact forces than a normal blade.

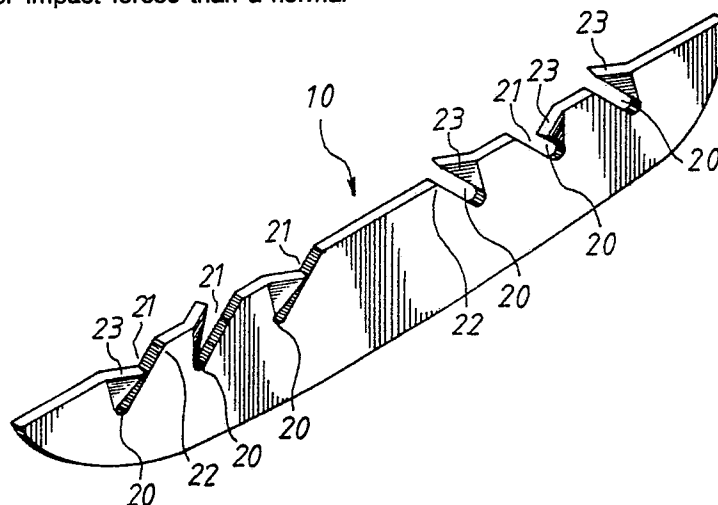


FIG. 1

BLADE FOR ICE HOCKEY SKATE

The present invention relates to ice hockey skate blades and more particular to blades which are embedded in a supporting body of plastic material which is fixed to the boot of the skate.

Ice skates have always had to endure high impact forces. In order to keep skates from cracking, they should be provided with a high strength plastic in the support position for the blade. Furthermore, the blade should be provided with shrinkage space so as to avoid stress concentration around the blade, so that the blade can endure high impact forces.

Some examples of conventionally practiced methods of construction in ice hockey skates arrangements have been found in patents such as U.S. Pat. No. 4,336,948, issued June 29, 1982 to Couture and U.S. Pat. No. 4,223,900, issued September 23, 1980 to Olivieri. However, the Couture patent provides poor setting between the blade and the plastics support material. Olivieri, on the other hand, provides for a good setting between the blade and the support material, but it fails to solve the weakness of the blade and plastics material. Furthermore, both of these previous designs waste too much material, both steel and plastics, during the manufacturing process, thereby making them uneconomical.

It is a primary objective of the present invention to provide a blade for ice hockey skates which has a plurality of slanted slots so as to prevent stress concentrations around the blade and increase the setability of the blade and plastic material.

It is a further objective of the present invention to provide a jagged notch at the opening of each slot to make the plastics material set with to the blade tightly.

The invention may be carried into practice in various ways and one embodiment will now be described with reference to the accompanying drawings in which:

Fig. 1 is a perspective view of the blade according to the invention.

Fig. 2 is a top view of the blade in Fig. 1.

Fig. 3 is a frontal view of the blade in Fig. 1.

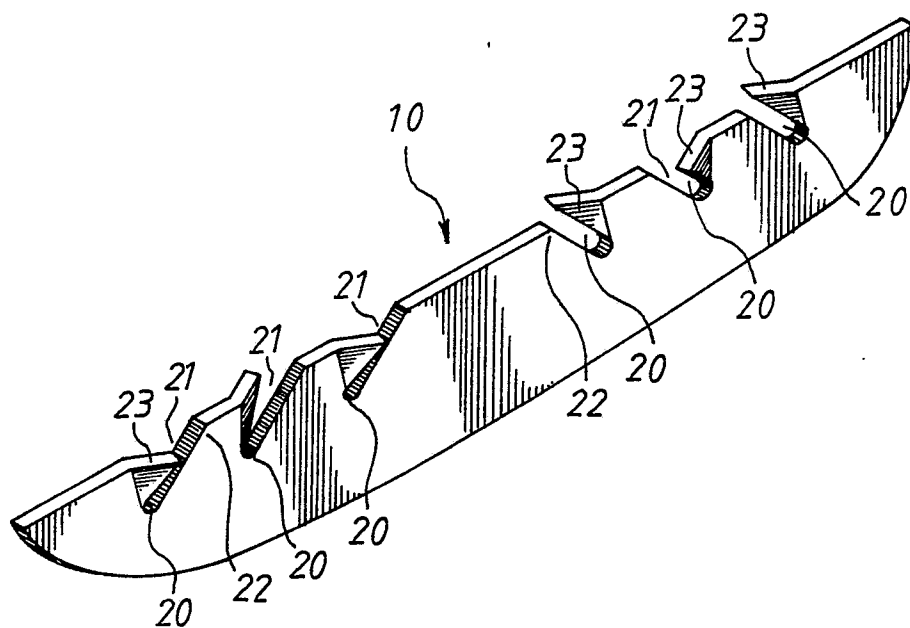
Fig. 4 shows how the skate blade is embedded in the plastic material.

Referring to Fig. 1, it can be seen that the blade (10) of the present invention comprises a plurality of slots (20). The blade (10) can be considered to be divided into front and rear portions. The slots (20) are symmetrically arranged on the top edge of the blade (10). The front portion and the rear portion of the blade (10) have the same number of the slots (20). The slots (20) are slanted

slots and the openings (21) of the slots (20) face upward and toward the centre line of the blade (10). Each opening (21) of the slots (20) comprises two tips (22) and (23), one being an inner tip (22) and the other being outer tip (23). The outer tips (23) are bent alternately to the left or to the right as shown in Fig. 3. Since the blade (10) is arranged with slots (20), stress concentration around the blade (10) can be avoided while manufacturing. Further, the slots (20) are slanted and opened upward and the outer tips (23) of the openings (21) are bent, therefore providing a high strength of combination (a good setting) between the blade (10) and plastics material (30) (as seen in Fig. 2 and Fig. 4). Even if the ice hockey skate sustains a high impact force, the plastics material (30) around the blade (10) will not crack. The slots (20) of the blade (10) help to provide shrinkage space as the plastics material (30) cools to combine with the blade (10). Moreover, the present invention provides a blade (10) which wastes very little material so as to provide for more economic manufacturing than was previously available.

Claims

1) A blade for ice hockey skates comprising a plurality of slots which are slanted slots symmetrically arranged on the top edge of the blade, each opening of the slots facing upward and toward the centre line of the blade, the outer tips of the openings alternately being bent leftward or rightward such that the blade can be embedded in a supporting body of plastics material to be affixed at a skate boot in order to prevent the stress concentration on the plastics material around the blade.

**FIG. 1**

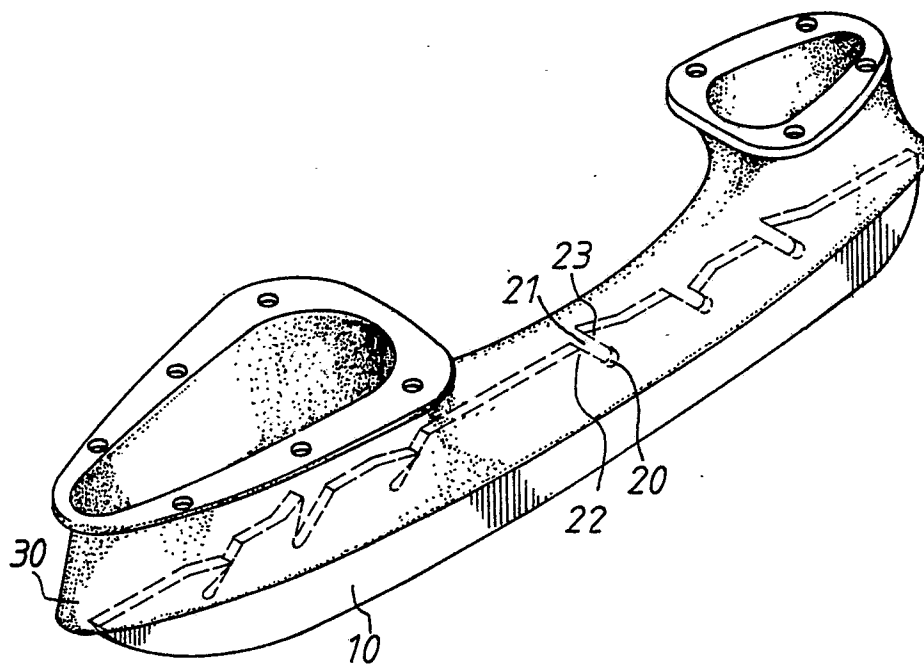


FIG. 2

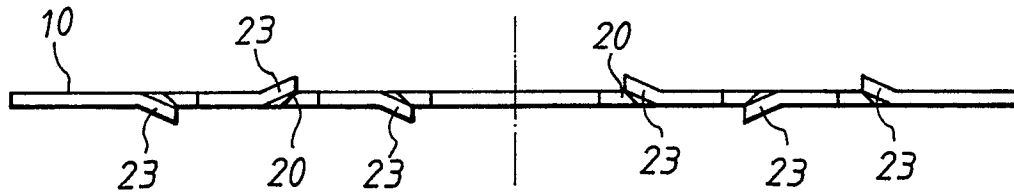


FIG. 3

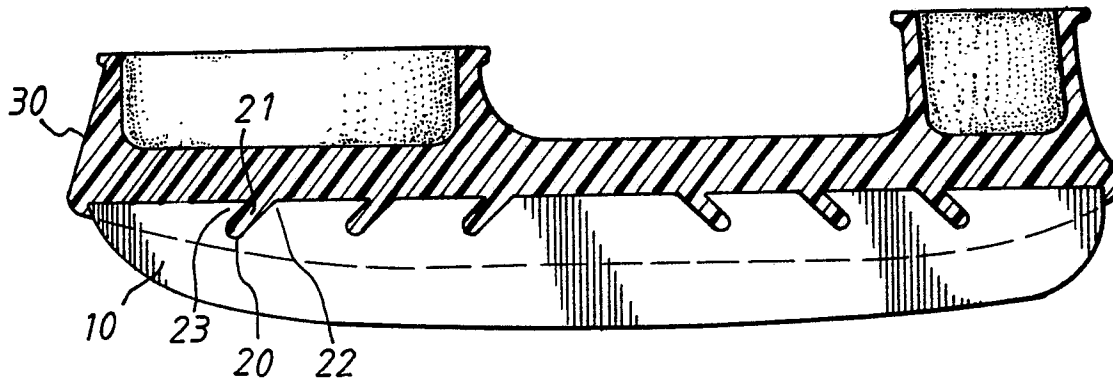


FIG. 4



EP 86 30 4453

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ⁴)
A	DE-A-3 326 154 (EMME EMME S.R.L.) * claims 1-7; page 7, lines 8-22; figure *	1	A 63 C 1/32
A	--- DE-A-2 823 564 (ICESLJ AG) * claims 1,5; page 9, lines 15-26; figures 4,5 *	1	
A	--- US-A-4 251 086 (WOOLLEY) * claim 1; column 3, lines 28-31; figure 2 *	1	
A	--- GB-A- 953 308 (FLORJANCIC et al.) * claim 1; page 2, column 2, lines 22-39; figures 5-7 *	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl. ⁴)
			A 63 C 1/00
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 20-01-1987	Examiner PAPA E.R.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	