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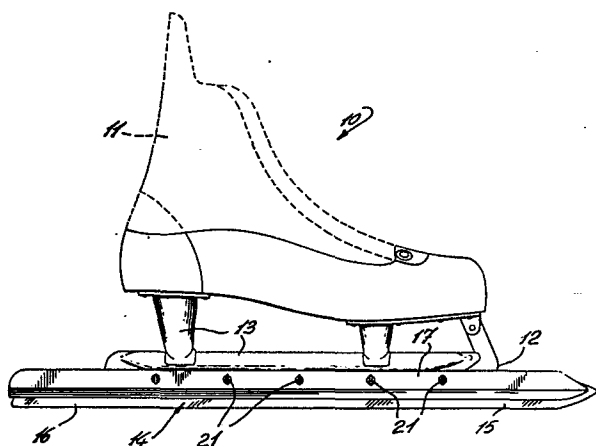
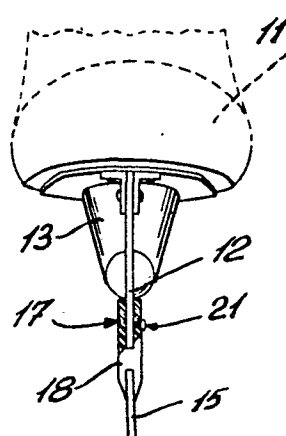
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⑤ Auxiliary ice skate blade.

⑦ An auxiliary ice skate blade for attachment to the skate blade secured to a skate boot. The auxiliary skate blade (14) comprises a narrow elongate blade (15) having an ice contacting edge (16) and a blade support member (18) secured to an upper part of the elongate blade (15) for detachable securement to the skate blade (12) secured to a boot (11).



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COMPLETE DOCUMENT



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BACKGROUND OF THE INVENTION:

(a) Field of the Invention

The present invention relates to an auxiliary skate blade for attachment to a skate blade already secured to a skate boot, and preferably, but not exclusively, to an auxiliary ice skate blade which is substantially longer than the blade which is secured to the boot.

(b) Description of Prior Art

It is known to affix auxiliary devices over an ice skate blade to permit the ice skate to be converted into a shoe lower surface whereby one can walk with the skate blade on floor surfaces or other surfaces without damage to the surface. Also, ski type runner attachment devices are known for securement to the skate blade support to convert the skate blade into a ski surface for displacing oneself on snow.

SUMMARY OF THE INVENTION:

The present invention relates to a novel auxiliary skate blade which is attachable to a skate blade already secured to a boot to convert the skate into a different type of skate such as a racing type skate

which is popularly utilized as a skate for excursions on lengthy ice surfaces.

A feature of the present invention is to provide an auxiliary skate blade which is easily securable and detachable to a skate blade secured to a skate boot.

Another feature of the present invention is to provide an auxiliary ice skate blade which is light, compact, and easily transportable, economical to manufacture, and easy to use.

According to the above features, from a broad aspect, the present invention provides an auxiliary ice skate blade for attachment to a skate blade secured to a skate boot. The auxiliary skate blade comprises a narrow elongated blade having an ice contacting edge and an upper elongated slot in a blade receiving upper part thereof for receiving at least a lower edge portion of the skate blade secured to the skate boot. Fastening means is provided to rigidly retain the skate blade of the boot in the slot.

BRIEF DESCRIPTION OF THE DRAWINGS:

The preferred embodiment of the present invention will now be described with reference to the accompanying drawings in which:

FIGURE 1 is a side view of a conventional skate showing the auxiliary ice skate blade secured to the blade thereof,

FIGURE 2 is a front view with the auxiliary ice skate blade, and the skate blade secured to the boot shown in cross-section, and

FIGURE 3 is an enlarged cross-section view of the auxiliary skate blade showing how it is attached to a skate blade of a conventional skate.

DESCRIPTION OF PREFERRED EMBODIMENTS:

Referring now to the drawings, and particularly to Figure 1, there is shown an ice skate 10 comprising a boot 11 to which an ice skate blade 12 is secured by a blade support structure 13. The auxiliary ice skate blade 14 of the present invention is herein shown secured to the skate blade 12. The auxiliary skate blade comprises essentially a narrow elongated blade 15 having an ice contacting edge 16 and an attachment means 17 in an upper part of the blade 15 for detachable securement to the skate blade 12.

As herein shown, the auxiliary skate blade 14 is substantially longer than the ice skate blade 12 which is secured to the boot 11 whereby to convert the standard type of hockey ice skate 10 to a racing type skate. The substantially longer length of the auxiliary blade permits one to attain higher speeds when skating and is less tiring and therefore desirable for long skating excursions.

Referring now additionally to Figures 2 and 3, there is shown the construction of the attachment means 17. It is constituted by a blade support member 18 which may be formed integral with the narrow elongated blade 15. However, as herein shown, the blade support member 18 is constituted by a molded piece formed of rigid material, such as rigid plastics, aluminum or other suitable materials. The blade support member 18 has a lower blade retention slot 19 for receiving the narrow elongated blade 15 therein. Suitable means is provided to secure the blade 15 within the retention slot 19 and it may be constituted by the use of adhesives, or fasteners extending through the lower part of the support member 18 and the upper part of the blade 15, as is well known in the art.

An upper elongated slot 20 is provided in the upper part of the support member 18 and extends in axial alignment with the blade 15 whereby to receive at least a lower edge portion of the skate blade 12 which is secured to the skate boot 11. Fastening means 21, herein constituted by two or more spaced apart screw-type fasteners 22, are provided in a side wall 23 of the upper part of the blade support member 18 adjacent the slot 20. The screw-type fasteners 22 have a threaded shaft portion 24 in threaded engagement with respective threaded bore 25 extending through the side wall 23.

The free end of the threaded shaft 24 constitutes a clamping surface 26. The other end of the threaded shaft portion 24 is provided with a finger gripping outer end 27 to impart rotation and torque to the fastener whereby the clamping surface 26 of each fastener will apply a retention axial force against the side face 27' of the blade 12 which is positioned in the slot 20 to clamp the blade 12 between the inner side wall 28 of the slot 20 and the clamping surfaces 26. Thus, the blade 12 is rigidly and immovably secured in the slot 20.

It is within the ambit of the present invention to provide any obvious modifications of the embodiment described herein, provided such modifications fall within the scope of the appended claims. For example, the inner side wall 28 of the slot 20 may have a rough surface texture or be provided with small vertical ribs therein to provide better friction retention with the side face of the skate blade positioned thereagainst. Also, the fasteners 21 may be of a different construction than screw-type and could be, for example, wedge clamps. Also, the auxiliary blade need not be longer than the conventional blade secured to the skate boot and could serve for the purpose of providing a sharp lower edge to the skate blade secured to the boot when that latter blade contacting edge becomes worn.

C L A I M S

1. An auxiliary ice skate blade for attachment to a skate blade (12) secured to a skate boot (11), said auxiliary skate blade comprising a narrow elongate blade (15) having an ice contacting edge (16) and an upper elongate slot (20) in a blade receiving upper part (18) thereof for receiving at least a lower edge portion of said skate blade (12) secured to said skate boot (11), and fastening means (21) to rigidly retain said skate blade (12) of said boot (11) in said slot (20).
2. An auxiliary ice skate blade as claimed in claim 1 wherein said fastening means (21) comprises two or more spaced apart fastening members (22) secured to said blade securing upper part (18) and having a clamping surface (26) displaceable against a side face (27') of said blade (12) in said slot (20) to rigidly clamp it therein.
3. An auxiliary ice skate blade as claimed in claim 2 wherein said fastening members (21) are screw-type fasteners (22) threaded in a side wall (23) of said blade securing upper part (18)

adjacent said slot (20), said fasteners (22) each having a free end constituting said clamping surface (26).

4. An auxiliary ice skate blade as claimed in
5 claim 3 wherein said screw-type fasteners (22) are received in threaded bores (25) in said side wall (23) of said blade securing upper part (18), each fastener (22) having a finger gripping outer end (27) to impart rotation and torque to said fastener
10 (22) whereby said free end of said fastener (22) applies a retention force against said side face (27') of said blade (12) in said slot (20) to clamp said blade (12) between an inner side wall (28) of said elongate slot (20) and said free end (26) of said
15 fasteners (22).

5. An auxiliary ice skate blade as claimed in claim 3 wherein said blade securing upper part is a blade support member (18) secured in a lower part to said narrow elongate blade, said elongate slot (20)
20 being in axial alignment with said narrow elongate blade (15).

6. An auxiliary ice skate blade as claimed in claim 5 wherein said blade support member (18) is formed integral with said narrow elongate blade (15).

7. An auxiliary ice skate blade as claimed
in claim 5 wherein said blade support member (18)
is a molded piece formed of rigid material, said
blade support member (18) having a lower blade
5 retention slot (19) for receiving said narrow
elongate blade (15) therein, and means to secure
said narrow elongate blade (15) in said retention
slot (19).

8. An auxiliary ice skate blade as claimed in
10 claim 1 wherein said elongate blade (15) is
substantially longer than said blade (12) secured
to a skate boot (11).

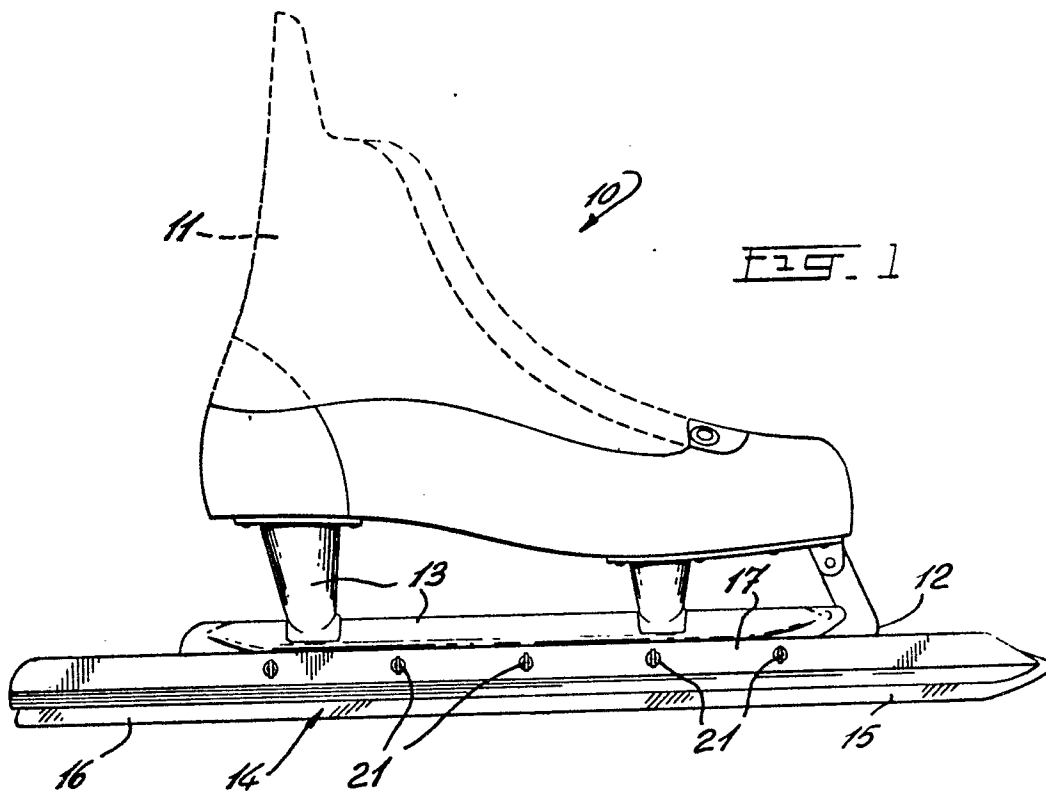


FIG. 2

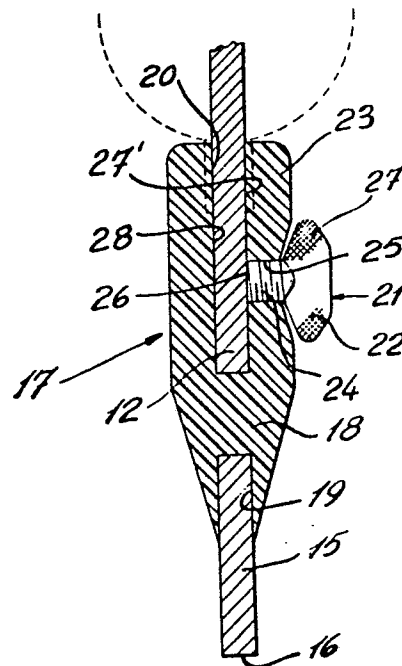
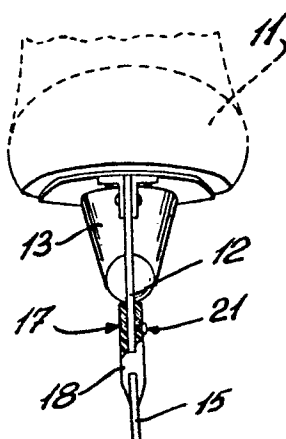


FIG. 3



European Patent
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EUROPEAN SEARCH REPORT

0060722

Application number

EP 82 30 1345

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. ³)
A	FR-A-2 046 028 (TRESAMINI) *Page 3, line 16 - page 4, line 16, figures 4-6*	1-3,5-7	A 63 C 3/00
A	FR-A- 438 071 (BEHR) *Page 1, lines 8-13; figures 1,2*	1-4	
A	US-A-2 187 629 (RHOADES) *Page 1, lines 36-48; figures 1,2*	3,4	
			TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
			A 63 C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 10-06-1982	Examiner SCHLESIER K.G.W.P.
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	