



(11)

EP 1 661 607 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
31.05.2006 Bulletin 2006/22

(51) Int Cl.:
A63C 1/00 (2006.01)

(21) Application number: **04292779.8**

(22) Date of filing: **25.11.2004**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LU MC NL PL PT RO SE SI SK TR**
Designated Extension States:
AL HR LT LV MK YU

(72) Inventors:
• **Labonté, Ivan**
H2G 2G4 Montreal (CA)
• **Langevin, Chris**
J0R 1P0 Prévost, Quebec (CA)

(71) Applicant: **Bauer Nike Hockey Inc.**
St-Jérôme,
Québec J7Y 5G2 (CA)

(74) Representative: **Burbaud, Eric**
Cabinet Plasseraud
65/67 rue de la Victoire
75440 Paris Cedex 09 (FR)

(54) **Clear ice skate blade holder**

(57) A blade holder (12) for holding an ice skate blade (10) and for attachment to a skate boot (16). The blade holder comprises a body (13) having a top portion (20) for attachment to a skate boot and a bottom portion (22) for receiving an ice skate blade. The body is at least partly

made of clear material and defines a cavity (30, 32). The blade holder also comprises a graphical element (34, 36) inside the cavity and visible through the clear material. An ice skate (10) comprising such a blade holder and a method of customizing the appearance of the blade holder are also provided.

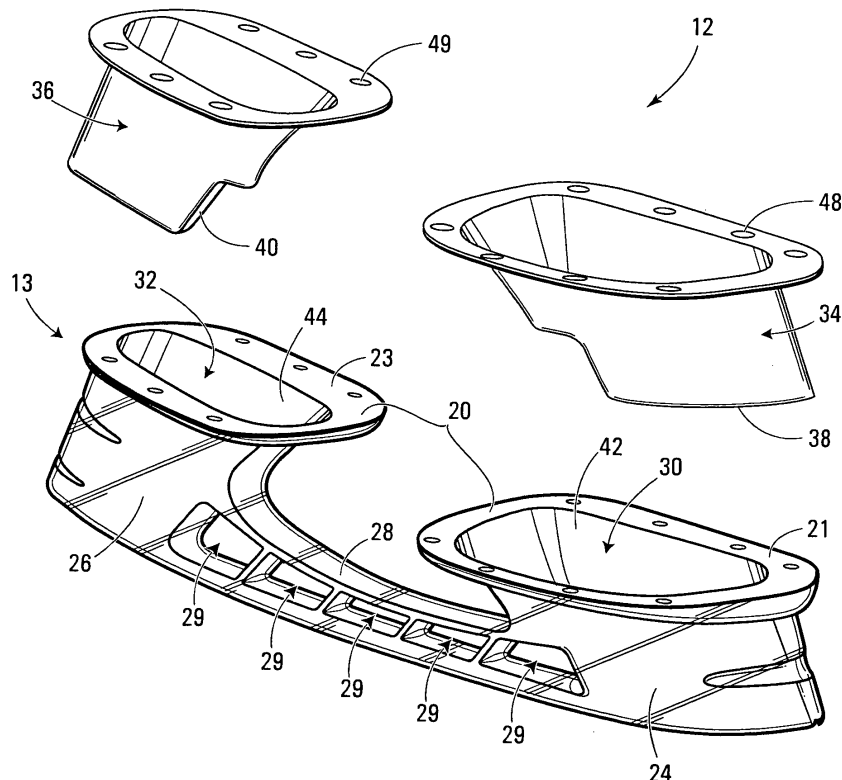


FIG. 3

Description

Field of the invention

[0001] The present invention relates to a clear blade holder for an ice skate.

Background of the invention

[0002] An ice skate typically includes a skate boot for receiving a foot of a user, an ice skate blade for engaging an ice surface, and a blade holder holding the ice skate blade and attached to the skate boot.

[0003] A blade holder is usually made of a rigid polymeric material and is hollow in construction, for weight considerations. Normally, a blade holder is opaque and of a specific color such as black or white. Some blade holders have been made of transparent material but have enjoyed limited success in the industry.

[0004] Accordingly, there is a need in the industry for improvements in the appearance of ice skate blade holders and, more particularly, for a clear ice skate blade holder with customizable visual characteristics.

Summary of the invention

[0005] In accordance with a first broad aspect, the invention provides a blade holder comprising a body having a top portion for attachment to a skate boot and a bottom portion for receiving an ice skate blade. The body is at least partly made of a clear material and defines a cavity. The blade holder also comprises a graphical element inside the cavity and visible through the clear material.

[0006] In accordance with a second broad aspect, the invention provides a blade holder comprising a body at least partly made of a clear material and comprising a front pedestal with a front inner surface, a rear pedestal with a rear inner surface, and a bridge portion interconnecting the front and rear pedestals. The front and rear inner surfaces define respective front and rear cavities. The blade holder also comprises a graphical element inside one of the front and rear cavities, the graphical element being visible through the clear material.

[0007] In accordance with a third broad aspect, the invention provides a method of customizing a blade holder. The method comprises providing to a customer a blade holder body being at least partly made of a clear material and defining a cavity. The method also comprises providing to the customer a plurality of graphical elements, and selecting a graphical element from the plurality of graphical elements. The method further comprises mounting the graphical element inside the cavity of the blade holder body such that the graphical element is visible through the clear material.

[0008] In accordance with a fourth broad aspect, the invention provides a method of customizing a blade holder. The method comprises providing to a customer a blade holder body being at least partly made of a clear

material and comprising a front pedestal with a front inner surface, a rear pedestal with a rear inner surface, and a bridge portion interconnecting the front and rear pedestals, the front and rear inner surfaces defining respective front and rear cavities. The method also comprises providing to the customer a plurality of graphical elements, and selecting a graphical element from the plurality of graphical elements. The method further comprises mounting the graphical element inside one of the front and rear cavities such that the graphical element is visible through the clear material.

[0009] In accordance with a fifth broad aspect, the invention provides a method of customizing a blade holder. The method comprises providing to a customer a blade holder body being at least partly made of a clear material and comprising a front pedestal with a front inner surface, a rear pedestal with a rear inner surface, and a bridge portion interconnecting the front and rear pedestals, the front and rear inner surfaces defining respective front and rear cavities. The method also comprises providing to the customer a plurality of graphical elements, and selecting a graphical element selected from the plurality of graphical elements. The method further comprises affixing the graphical element on one of the front and rear surfaces such that the graphical element is visible through the clear material.

[0010] In accordance with a sixth broad aspect, the invention provides a method of customizing a blade holder. The method comprises providing to a customer a blade holder body being at least partly made of a clear material and comprising a front pedestal with a front inner surface, a rear pedestal with a rear inner surface, and a bridge portion interconnecting the front and rear pedestals, the front and rear inner surfaces defining respective front and rear cavities. The method also comprises providing to the customer a plurality of graphical elements, and selecting a graphical element from the plurality of graphical elements. The method further comprises painting the graphical element on one of the front and rear surfaces such that the graphical element is visible through the clear material.

[0011] These and other aspects and features of the present invention will now become apparent to those of ordinary skill in the art upon review of the following description of specific embodiments of the invention in conjunction with the accompanying drawings.

Brief description of the drawings

[0012] A detailed description of embodiments of the present invention is provided herein below, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of an ice skate including a blade holder in accordance with an embodiment of the present invention;

Figure 2 is a perspective view of the blade holder shown in Figure 1;

Figure 3 is a perspective exploded view of the blade holder shown in Figure 2;

Figure 4 is a top view of the blade holder shown in Figure 2;

Figure 5 is a side elevation view of the blade holder shown in Figure 2;

Figure 6 is a bottom view of the blade holder shown in Figure 2;

Figure 7 is a front elevation view of the blade holder shown in Figure 2; and

Figure 8 is a rear elevation view of the blade holder shown in Figure 2.

[0013] In the drawings, the embodiments of the invention are illustrated by way of examples. It is to be expressly understood that the description and drawings are only for the purpose of illustration and are an aid for understanding. They are not intended to be a definition of the limits of the invention.

Detailed description

[0014] Figure 1 shows an ice skate 10 having a blade holder 12 in accordance with an embodiment of the invention. The blade holder 12 has an ice skate blade 14 and is attached to a skate boot 16 of the ice skate 10.

[0015] Referring to Figures 2 to 8, the blade holder 12 comprises a body 13 having a top portion 20 for attachment to the skate boot 16 and a bottom portion 22 for receiving the ice skate blade 14. The body 13 has a front portion 24, a rear portion 26, and a bridge portion 28 interconnecting the front portion 24 and the rear portion 26. In the illustrated embodiment, the front portion 24 is configured as a front pedestal, the rear portion 26 is configured as a rear pedestal, and the bridge portion 28 has a plurality of apertures 29 for reducing the weight of the body 13 of the blade holder 12. The upper edges of the apertures 29 follow a concave imaginary line while the lower edges of the apertures 29 follow a generally straight imaginary line.

[0016] The top portion 20 has a front top portion 21 located on the front portion 24 and a rear top portion 23 located on the rear portion 26. Each one of the front top portion 21 and the rear top portion 23 is adapted to be attached to a sole of the skate boot 16 using fasteners such as rivets, bolts, or other suitable fasteners. The bottom portion 22 has a longitudinal slot 25 for receiving the ice skate blade 14.

[0017] It is to be understood that multiple other configurations are possible for the body of the blade holder

without departing from the scope of the invention.

[0018] The front portion 24 is made of a clear material and defines a front cavity 30. The rear portion 26 is also made of the clear material and defines a rear cavity 32. In fact, in the illustrated embodiment, the entire body 13 of the blade holder 12 is made of the clear material. However, it is to be understood that, in other embodiments, only certain portions of the body 13 of the blade holder 12 may be made of a clear material while other portions may not be made of a clear material. For example, in a specific embodiment, each one of the front portion 24 and the rear portion 26 may be made of a clear material while the bridge portion 28 may not be made of a clear material.

[0019] The clear material is a material capable of being seen through. The clear material can be colorless or colored. Also, the clear material can include a first region characterized by a first degree of transparency and a second region characterized by a second degree of transparency different from the first degree of transparency. The different degrees of transparency can be achieved, for instance, by a different surface finish or thickness of the first and second regions. The clear material may be a polymeric material such as, Acrylic, clear polymer or polycarbonate.

[0020] The body 13 of the blade holder 12 can be manufactured using known processes, including but not limited to an injection molding process.

[0021] The blade holder 12 also comprises a front graphical element 34 inside the front cavity 30 and visible through the clear material of the front portion 24, and a rear graphical element 36 inside the rear cavity 32 and visible through the clear material of the rear portion 26. More specifically, the front graphical element 34 is characterized by at least one of a colored area, a mark, a symbol, and a logo visible through the clear material of the front portion 24. Similarly, the rear graphical element 36 is characterized by at least one of a colored area, a mark, a symbol, and a logo visible through the clear material of the rear portion 26.

[0022] In the illustrated embodiment, the front graphical element 34 is a front insert 38 disposed inside of the front cavity 30, and the rear graphical element 36 is a rear insert 40 disposed inside of the rear cavity 32. The front insert 38 may have a contour following an inner surface 42 of the front portion 24 defining the front cavity 30. The front insert 38 may also have a flange 48 that at least partially overlies the front top portion 21 such that attachment of the front top portion 21 to the sole of the skate boot 14 secures the front insert 38 inside the front cavity 30. Alternatively, the front insert 38 may be affixed, for instance by being glued, to the inner surface 42 of the front portion 24. Similarly, the rear insert 40 may have a contour following an inner surface 44 of the rear portion 26 defining the rear cavity 32, and may have a flange 49 that at least partially overlies the rear top portion 23 such that attachment of the rear top portion 23 to the sole of the skate boot 14 secures the rear insert 40 inside the

rear cavity 32.

[0023] The front insert 38 may be of a first color, while the rear insert 40 may have a second color different from the first color. As noted previously, various other visual characteristics can be included on each one of the front and rear inserts 38 and 40 without departing from the scope of the invention.

[0024] Each one of the front and rear inserts 38, 40 may be made of a polymeric material such as, polyethylene, polystyrene, polyurethane or polypropylene, polycarbonate. These front and rear inserts 38, 40 may also be made of carbon, fiberglass, titanium, aluminum, Kevlar, paper, cardboard or foam. Alternatively, each one of the front and rear inserts 38, 40 may be made of a composite material or any other suitable material. The inserts 38, 40 may be manufactured using known processes, including but not limited to thermoforming, blow molding or injection molding.

[0025] In other embodiments, the front graphical element 34 is applied directly on the inner surface 42 defining the front cavity 30. Similarly, the rear graphical element 36 is applied directly on the inner surface 44 of the rear portion 26 defining the rear cavity 32. In a specific embodiment, each one of the front and rear graphical elements 34, 36 is implemented as paint applied to the inner surfaces 42, 44. For instance, the paint can be applied using a paintbrush or can be spray-paint. In another embodiment, the front graphical element 34 is a sticker affixed to the inner surface 42 and, similarly, the rear graphical element 36 is a sticker affixed to the inner surface 44. The sticker affixed to each one of the inner surfaces 42, 44 can be any type of sticker, including an ink transfer sticker which is initially applied on a surface and subsequently removed in order to leave a design on the surface.

[0026] In other embodiments, the front and rear graphical elements 34, 36 may be colored foam injected in the respective front and rear cavities 30, 32. In fact, the front and rear graphical elements may be made of a material that can be catalyzed to a liquid foamed state and which will cure relatively rapidly. One such material is polyurethane.

[0027] Although the above description and Figures 2 to 8 illustrate specific embodiments of the front and rear graphical elements 34, 36, it is to be understood that various other embodiments of the front and rear graphical elements 34, 36 are possible without departing from the scope of the invention.

[0028] In view of the foregoing, it will be appreciated that the combination of the clear material and the front and rear graphical elements 34, 36 allows the blade holder 12 to be imparted with various colors and/or other visual characteristics. Furthermore, the front and rear graphical elements 34, 36 are protected from abrasion and deterioration due to impacts since they are respectively located inside the front and rear cavities 30, 32.

[0029] Each one of the front and rear graphical elements 34 and 36 permits a customization of the appear-

ance of the blade holder 12. A hockey store can therefore provide to a customer a blade holder body being at least partly made of a clear material and comprising a front pedestal with a front inner surface, a rear pedestal with a rear inner surface and a bridge portion interconnecting said front and rear pedestals, the front and rear inner surfaces defining respective front and rear cavities. The hockey store can also provide to the customer a plurality of graphical elements to be mounted into the front and rear cavities or the store may receive from the customer an indication of the graphical elements that are desired to be present on the blade holder. For example, the graphical elements that are desired to be present on the blade holder can include the main color(s) associated with the hockey team, the logo of the hockey team, and the number of the player on the hockey team. Based on the selected graphical elements, the store can provide the front and rear graphical elements such that the front graphical element includes a colored area containing the main color(s) associated with the hockey team as well as the logo of the hockey team, and the rear graphical element includes a colored area containing the main color(s) associated with the hockey team as well as the number of the hockey player. The graphical element may be affixed to the inner surface of the cavity or may be painted on this inner surface.

[0030] Although various embodiments have been illustrated, this was for the purpose of describing, but not limiting, the invention. Various modifications will become apparent to those skilled in the art and are within the scope of the present invention, which is defined more particularly by the attached claims.

Claims

1. A blade holder (12) comprising a body (13) having a top portion (20) for attachment to a skate boot (16) and a bottom portion (22) for receiving an ice skate blade (14), said body being at least partly made of a clear material and defining a cavity (30, 32); **characterized in that** said blade holder comprises a graphical element (34, 36) inside said cavity (30, 32) and visible through said clear material.
2. A blade holder as defined in claim 1, wherein said graphical element is **characterized by** at least one of a colored area, a mark, a symbol, and a logo.
3. A blade holder as defined in claim 2, wherein said graphical element is an insert.
4. A blade holder as defined in claim 3, wherein said cavity has an inner surface and said insert has a contour following said inner surface.
5. A blade holder as defined in claim 4, wherein said insert has a flange that at least partially overlies said

top portion such that attachment of said top portion to the skate boot secures said insert inside said cavity.

6. A blade holder as defined in claim 4, wherein said insert is affixed to said inner surface.
7. A blade holder as defined in claim 2, wherein said insert is made by injection molding, blow molding or thermoforming.
8. A blade holder as defined in claim 2, wherein said insert is made of a material selected from the group consisting of polyethylene, polystyrene, polyurethane, polypropylene, polycarbonate, carbon, fiberglass, titanium, aluminum, Kevlar, paper, cardboard and foam.
9. A blade holder as defined in claim 2, wherein said cavity has an inner surface, said graphical element being constituted of paint applied to said inner surface.
10. A blade holder as defined in claim 2, wherein said cavity has an inner surface, said graphical element being a sticker affixed to said inner surface.
11. A blade holder as defined in claim 1, wherein said graphical element comprises colored liquid foam injected in said cavity.
12. A blade holder as defined in claim 1, wherein said clear material comprises a first region with a first degree of transparency and a second region with a second degree of transparency different from said first degree of transparency.
13. A blade holder as defined in claim 12, wherein said first region has a first surface finish and said second region has a second surface finish different from said first surface finish.
14. A blade holder as defined in claim 1, wherein said clear material is colored.
15. A blade holder as defined in claim 1, wherein said clear material is a material selected from the group consisting of Acrylic, clear polymer and polycarbonate.
16. A blade holder comprising a body (13) at least partly made of a clear material and comprising a front pedestal (24) with a front inner surface (42), a rear pedestal (26) with a rear inner surface (44) and a bridge portion (28) interconnecting said front and rear pedestals, said front and rear inner surfaces defining respective front and rear cavities (30, 32) **characterized in that** said blade holder comprises

a graphical element (34, 36) inside one of said front and rear cavities (30, 32), said graphical element being visible through said clear material.

17. A blade holder as defined in claim 16, wherein said one of said front and rear cavities is said front cavity and said graphical element is a front graphical element, said blade holder further comprising a rear graphical element inside said rear cavity.
18. A blade holder as defined in claim 17, wherein said front and rear pedestals comprise respective front and rear top portions for attachment to a skate boot.
19. A blade holder as defined in claim 18, wherein said body comprises a bottom portion having a longitudinal slot for receiving an ice skate blade.
20. A blade holder as defined in claim 18, wherein said body comprises a bottom portion having a longitudinal slot, said blade holder further comprising an ice skate blade received in said slot.
21. An ice skate comprising a blade holder as defined in claim 20.
22. A blade holder as defined in claim 16, wherein said graphical element is **characterized by** at least one of a colored area, a mark, a symbol, and a logo.
23. A blade holder as defined in claim 22, wherein said graphical element is an insert.
24. A blade holder as defined in claim 18, wherein said front and rear graphical elements are front and rear inserts having a contour following said respective front and rear inner surfaces.
25. A blade holder as defined in claim 24, wherein said front and rear inserts comprise respective front and rear flanges that at least partially overlie said respective front and rear top portions such that attachment of said front and rear top portions to the skate boot secures said front and rear inserts inside said front and rear cavities.
26. A blade holder as defined in claim 23, wherein said insert is affixed to one of said front and rear inner surfaces.
27. A blade holder as defined in claim 23, wherein said insert is made by injection molding, blow molding or thermoforming.
28. A blade holder as defined in claim 23, wherein said insert is made of a material selected from the group consisting of polyethylene, polystyrene, polyurethane, polypropylene, polycarbonate, carbon,

fiberglass, titanium, aluminum, Kevlar, paper, cardboard and foam.

29. A blade holder as defined in claim 16, wherein said graphical element is constituted of paint applied to one of said front and rear inner surfaces. 5
30. A blade holder as defined in claim 16, wherein said graphical element is a sticker affixed to one of said front and rear inner surfaces. 10
31. A blade holder as defined in claim 18, wherein one of said front and rear graphical elements comprises colored liquid foam injected in one of said front and rear cavities. 15
32. A blade holder as defined in claim 16, wherein said clear material comprises a first region with a first degree of transparency and a second region with a second degree of transparency different from said first degree of transparency. 20
33. A blade holder as defined in claim 32, wherein said first region has a first surface finish and said second region has a second surface finish different from said first surface finish. 25
34. A blade holder as defined in claim 16, wherein said clear material is colored. 30
35. A blade holder as defined in claim 16, wherein said clear material is a material selected from the group consisting of Acrylic, clear polymer and polycarbonate. 35
36. A blade holder as defined in claim 16, wherein said bridge portion comprises an aperture for reducing the weight of said blade holder. 40
37. A blade holder as defined in claim 16, wherein said bridge portion comprises a plurality of apertures for reducing the weight of said blade holder, said apertures being disposed such that their upper edges collectively follow an imaginary concave line. 45
38. A blade holder as defined in claim 1, wherein said cavity is a front cavity and said graphical element is a front graphical element, said body defining a rear cavity and said blade holder further comprising a rear graphical element inside said rear cavity and visible through said clear material. 50
39. A blade holder as defined in claim 38, wherein said body comprises a front pedestal with a front inner surface defining said front cavity, a rear pedestal with a rear inner surface defining said rear cavity, and a bridge portion interconnecting said front and rear pedestals. 55

40. A method of customizing a blade holder, comprising:

- (a) providing to a customer a blade holder body being at least partly made of a clear material and defining a cavity;
- (b) providing to the customer a plurality of graphical elements;
- (c) selecting a graphical element from the plurality of graphical elements; and
- (d) mounting the graphical element inside the cavity of the blade holder body such that the graphical element is visible through the clear material.

41. A method of customizing a blade holder, comprising:

- (a) providing to a customer a blade holder body being at least partly made of a clear material and comprising a front pedestal with a front inner surface, a rear pedestal with a rear inner surface and a bridge portion interconnecting said front and rear pedestals, the front and rear inner surfaces defining respective front and rear cavities;
- (b) providing to the customer a plurality of graphical elements;
- (c) receiving from the customer an indication of a certain graphical element selected from the plurality of graphical elements; and
- (d) mounting the certain graphical element inside one of the front and rear cavities such that the certain graphical element is visible through the clear material.

42. A method of customizing a blade holder, comprising:

- (a) providing to a customer a blade holder body being at least partly made of a clear material and comprising a front pedestal with a front inner surface, a rear pedestal with a rear inner surface and a bridge portion interconnecting said front and rear pedestals, the front and rear inner surfaces defining respective front and rear cavities;
- (b) providing to the customer a plurality of graphical elements;
- (c) selecting a graphical element from the plurality of graphical elements; and
- (d) affixing the graphical element on one of the front and rear surfaces such that the graphical element is visible through the clear material.

43. A method of customizing a blade holder, comprising:

- (a) providing to a customer a blade holder body being at least partly made of a clear material and comprising a front pedestal with a front inner surface, a rear pedestal with a rear inner surface and a bridge portion interconnecting said front and rear pedestals, the front and rear inner sur-

faces defining respective front and rear cavities;
(b) providing to the customer a plurality of graphical elements;
(c) selecting a graphical element from the plurality of graphical elements; and
(d) painting the graphical element on one of the front and rear surfaces such that the graphical element is visible through the clear material.

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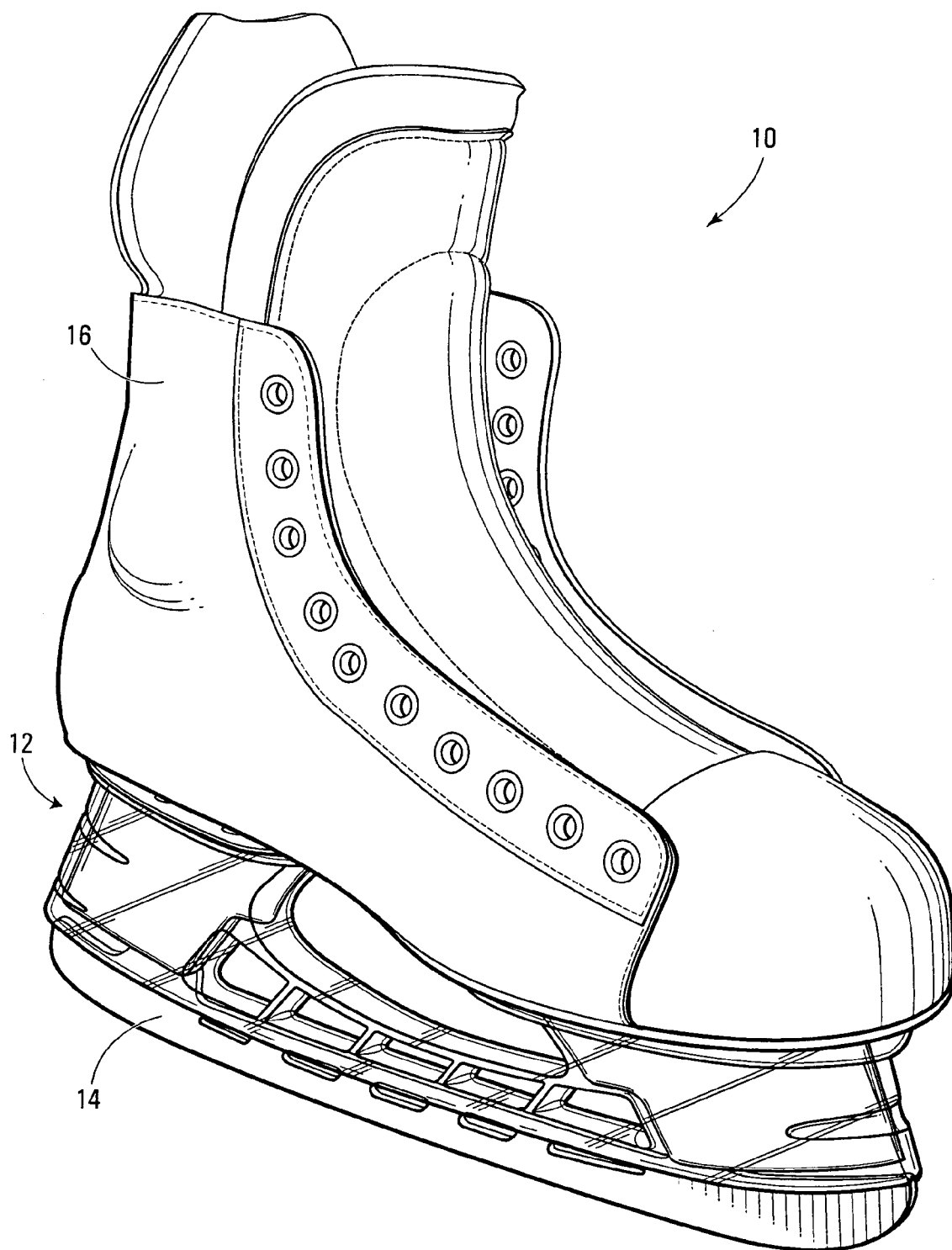


FIG. 1

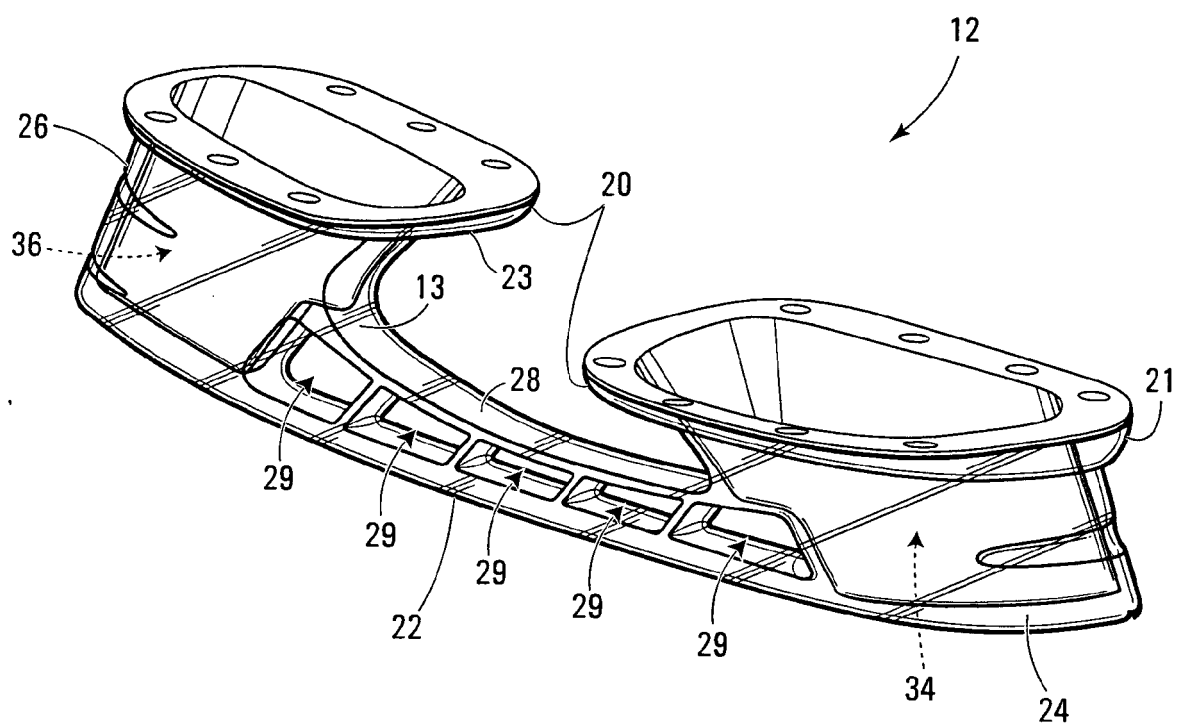


FIG. 2

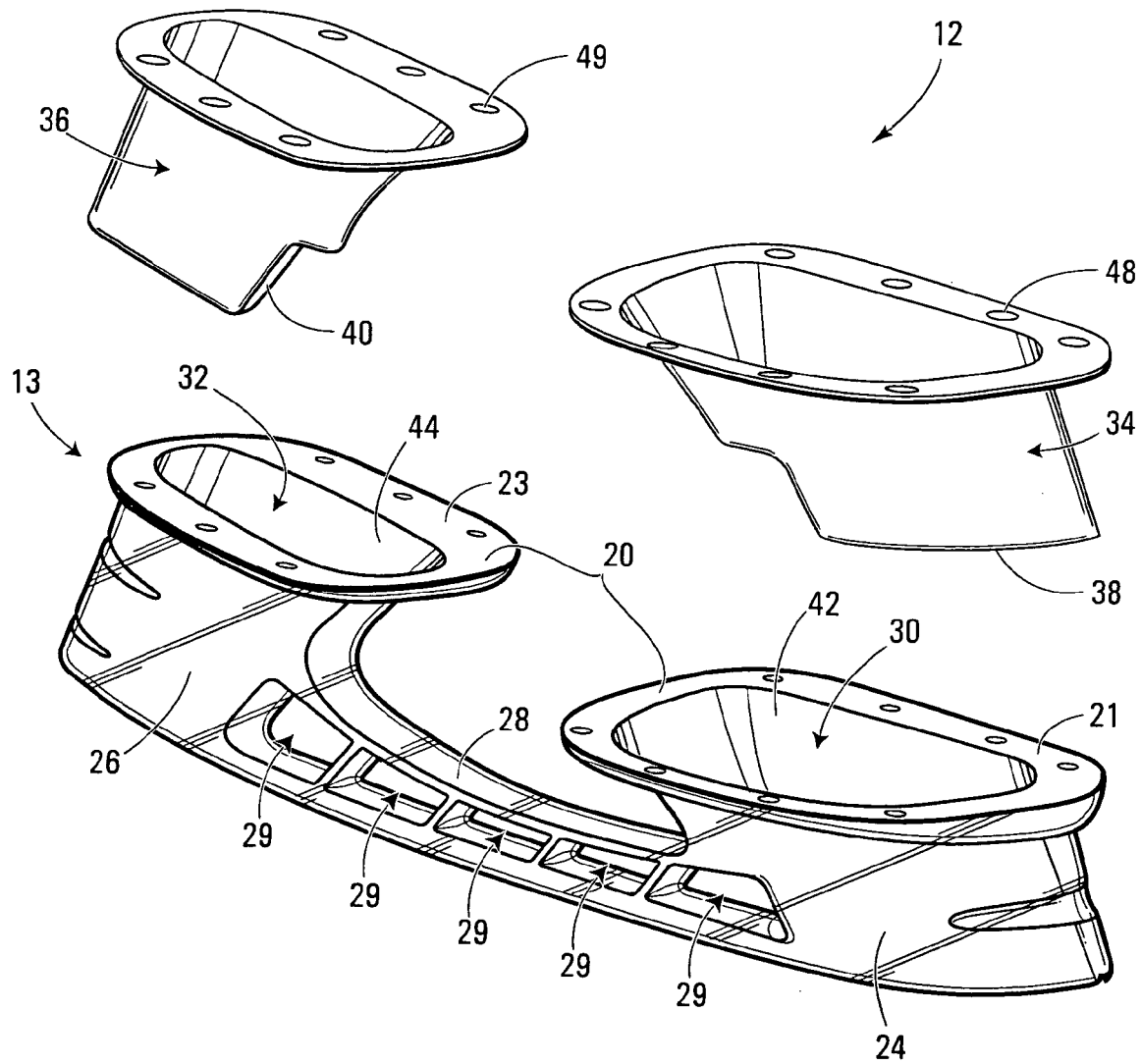


FIG. 3

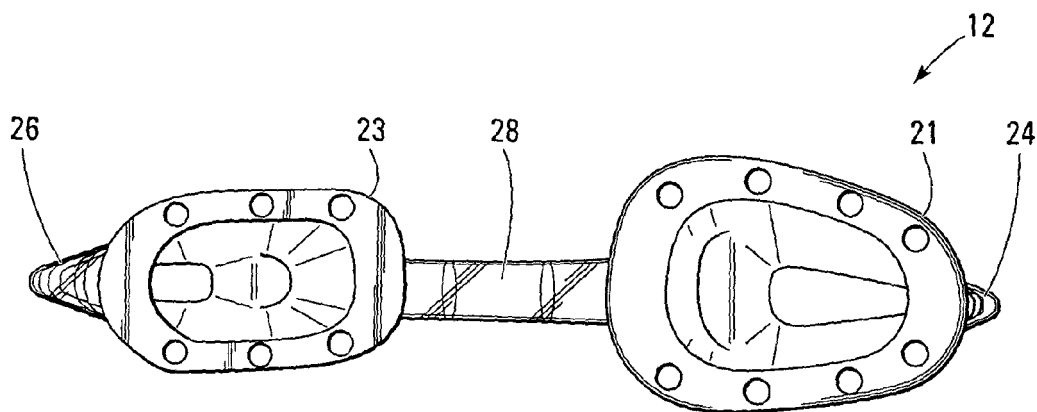


FIG. 4

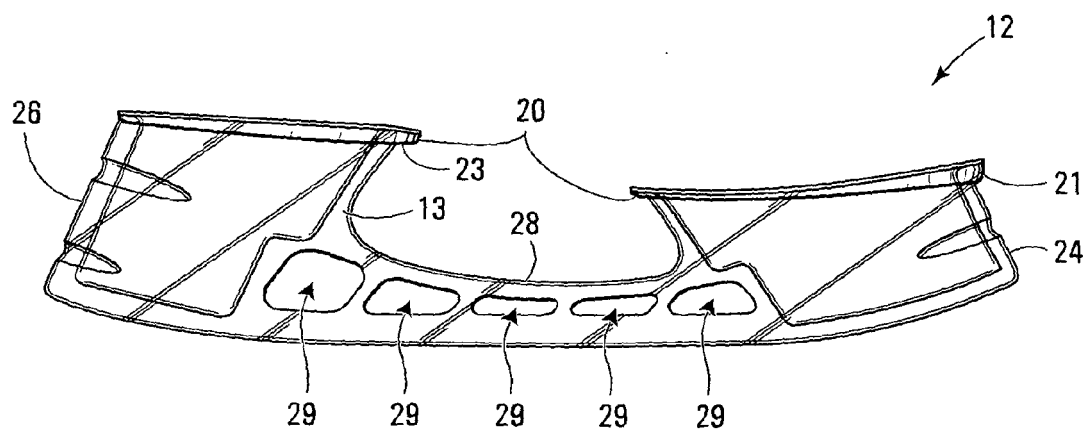


FIG. 5

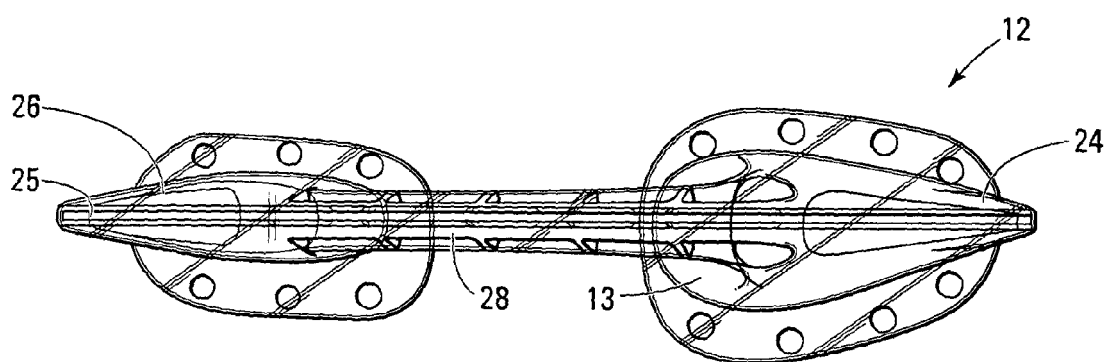


FIG. 6

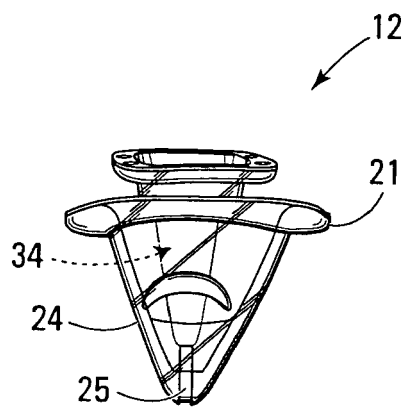


FIG. 7

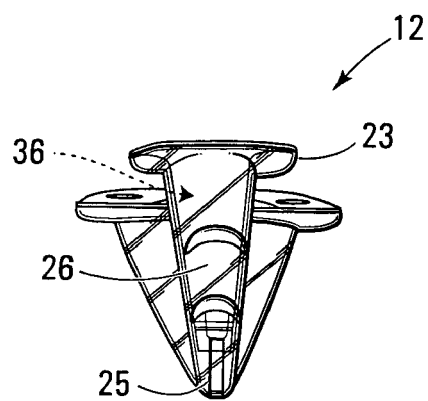


FIG. 8



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 29 2779

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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 11 April 2005	Examiner Murer, M
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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