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(54) **A ski with recess for a climbing skin**

Ski mit Ausnehmung für Steigfell

Ski avec creux pour loger une peau de phoque

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Description

Background of the invention

[0001] The invention relates a ski equipped with on a base of said ski mounted skin preventing gliding backwards of said ski, said base material being of plastic at least in the gliding portion, whereby said skin being placed on the base of the ski in a recess said recess being formed essentially in the middle portion of said base. In the ski base integrated skins have been used since hundreds of years. Mostly seal skins have been historically used.

Description of the Related Technology

[0002] Nowadays in the modem ski types in mountain use so called climbing skins which have been manufactured by textile techniques have been used. These skins are fitted in the ski base either via mechanical fittings or Velcro fitting when climbing on the mountain. On the mountain top the skins are loosened from the skis and packaged in the bag wherein the slope can be sled by means of gliding bases.

[0003] Nowadays it has been easygoing to elect a base plastic for a ski which is made of plate-like Polythene whose thickness is also elected so that when this plate-like base plastic is not mounted on the area intended for the base skin there is then formed suitable recess for mounting the skin. The ski has been also equipped with edges made of steel which edges protect the skin of its edges against wearing and tear. This kind of ski looks like alpine ski of its structure, except that the skin has been mounted in the middle area of the base formed recess having depth corresponding the thickness of the base plastic.

Summary of Certain Inventive Embodiments

[0004] In the ski according to present invention the fixedly mounted climbing skin has been embedded and permanently fixed in the base of the ski and embedded into such a depth that the skin, when sliding along furs forward as little as possible hinders the slide, but against furs backwards during kick effectively hinders sliding backwards.

[0005] When the main use of the ski according to invention is not alpine skiing but primarily to replace use of the snowshoes when moved in snow cover terrain, the skin based skis become too expensive manufactured by means of above described method and structure and also they have some unnecessary features.

[0006] In the skis according to invention the construction of the ski has been made simpler so, that separate gliding base of polythene plastic and the edges of steel have been left out. Instead of them the base has been shaped so that when the base is infused in a mould a recess is formed for the climbing skin in said base as well as edge rails to protect the climbing skin from the side. The gliding base itself is formed of fibre reinforced thermoplastic or thermoset plastic (Epoxy, Polyester or Polyurethane), which base is also of its surface layer reinforced by means of thin synthetic fibre manufactured nonwoven fabric layer. This coating produced in connection of the manufacturing of the skis extends as a uniform coating in the whole base area, as in the gliding areas, edge rails as in the recess of the climbing skin. By means of combination of nonwoven fabric and thermosetting resin excellent mechanical wearing resistance and thanks to smoothness of the surface good slide in all snow type can be achieved.

Brief Description of the Drawings

[0007]

Fig. 1 shows a ski according to prior art seen from base.
Fig. 2 shows a ski according to the invention seen from base.
Fig. 3 shows a ski (fig 1 and 2) from the side.
Fig. 4 shows a section view A - A of a ski according to fig. 1.
Fig. 5 shows a section view B - B of a ski according to fig. 2.
Fig. 6 shows a section view C - C of a ski according to fig. 1.
Fig. 7 shows a section view D - D of a ski according to fig. 2.

Detailed Description of Certain Inventive Embodiments

[0008] Figures 1, 4 and 6 shows how in a traditionally manufactured ski the depth of a recess c intended to a climbing skin s is formed to correspond the thickness of the base plastic a and the steel edges b. The body material layer e is placed between the surface plastic d and base plastic a.

[0009] Figures 2, 5 and 7 shows how in a ski according to the invention the recess c intended for the climbing skin is formed by infusing thermoset plastic or moulding thermoplastic in the mould so, that the surface structure f of the base extends seamless from the gliding area to the recess c intended for the climbing skin as well as to area of the edge rails h. In the front portion of the recess c the depth of the recess increases along a distance x which is about 5 - 10 cm to the depth which is 1,3 - 2 times deeper than the average depth along the recess c.

Claims

1. A ski (s) comprising a body layer (e) and a base, wherein the ski is equipped with a skin mounted on a base of said ski, said skin preventing gliding back-

wards of said ski, said base material being of plastic at least in the gliding portion, wherein said skin being placed on the base of the ski (s) in a recess (c), said recess being formed essentially in the middle portion of said base, wherein the base of said ski (s) comprises a surface structure (f) layer covering the base, **characterized in that** the surface structure (f) layer is adapted to extend seamless from the gliding portion of the base to the recess (c) intended for the skin and wherein said surface structure (f) layer is formed of a uniform plastic layer.

2. A ski (s) according to claim 1, **characterized in that** the base material is thermoset plastic or thermoplastic.

3. A ski (s) according to claim 1, **characterized in that** the recess (c) for the skin is adapted to become deeper when extending forward in the front portion of the recess (c) along the distance (x), wherein the depth of the recess (c) when the depth is as its deepest is about 1,3 - 2 times deeper than the average depth along the recess (c).

4. A ski (s) according to claim 1, **characterized in that** the base edge comprises rails (g) in the long sides of the ski (s), said rails being coated with the surface structure (f) layer.

5. A ski (s) according to claim 1, **characterized in that** the base of the ski (s) further comprises a base layer (h) located between the body layer (e) and the surface structure (f) layer.

Patentansprüche

1. Ski (s), umfassend eine Körperschicht (e) und eine Basis, wobei der Ski mit einer Haut ausgestattet ist, die auf einer Basis des Skis befestigt ist, wobei die Haut das Rückwärts-Gleiten des Skis verhindert, das Basismaterial mindestens in dem Gleit-Abschnitt aus Plastik ist, wobei die Haut auf der Basis des Skis (s) in einer Ausnehmung (c) angeordnet ist, die Ausnehmung im Wesentlichen in dem mittleren Abschnitt der Basis ausgebildet ist, wobei die Basis des Skis (s) eine Oberflächenstruktur (f)-Schicht, die die Basis bedeckt, umfasst, **dadurch gekennzeichnet, dass** die Oberflächenstruktur (f)-Schicht zum nahtlosen Ausdehnen von dem Gleit-Abschnitt der Basis zu der für die Haut vorgesehene Ausnehmung (c) eingerichtet ist, und wobei die Oberflächenstruktur (f)-Schicht aus einer gleichförmigen Plastikschicht gebildet ist.

2. Ski (s) nach Anspruch 1, **dadurch gekennzeichnet, dass** das Basismaterial Duroplast oder Thermoplast ist.

3. Ski (s) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Ausnehmung (c) für die Haut eingerichtet ist, um tiefer zu werden, wenn sie sich vorwärts in den VorderAbschnitt der Ausnehmung (c) entlang des Abstands (x) erstreckt, wobei die Tiefe der Ausnehmung (c), wenn die Tiefe am tiefsten ist, etwa 1,3-2 mal tiefer als die mittlere Tiefe entlang der Ausnehmung (c) ist.

4. Ski (s) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Basiskante in den langen Seiten des Skis (s) Schienen (g) umfasst, wobei die Schienen mit der Oberflächenstruktur (f)-Schicht beschichtet sind.

5. Ski (s) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Basis des Skis (s) weiterhin eine zwischen der Körperschicht (e) und der Oberflächenstruktur (f)-Schicht befindliche Basisschicht (h) umfasst.

Revendications

1. Ski (s) comprenant une couche (e) du corps et une base, dans le(s)quel(s) le(s)ski(s) est (sont) équipé(s) avec une peau montée sur une base du(des)ski (s), ladite peau empêchant ledit ski de glisser vers l'arrière, ledit matériau de la base étant en matière plastique au moins dans la partie de glisse, dans le(s)quel(s) ladite peau est placée sur la base du (des) ski (s) dans un renfoncement (c), ledit renfoncement étant formé essentiellement dans la partie médiane de ladite base, dans le(s)quel(s) la base du(des)dit(s)skis comprend une couche de la structure (f) de surface couvrant la base **caractérisé(s)** en ce que: la couche de la structure(f) de surface est adaptée pour s'étendre de façon ininterrompue depuis la partie de glisse de la base au renfoncement (c) destiné à la peau et dans le(s)quel(s) ladite couche de la structure (f) de surface est formée d'une couche de plastique uniforme.

2. Ski (s) selon la revendication 1, **caractérisé(s)** en ce que le matériau de la base est en matière plastique thermodurcissable ou thermoplastique.

3. Ski (s) selon la revendication 1, **caractérisé(s)** en ce que le renfoncement (c) pour la peau est adapté pour devenir plus profond lorsqu'il s'étend vers l'avant dans la partie avant du renfoncement (c) le long de la distance (x), dans le(s)quel(s) la profondeur du renfoncement (c) lorsque la profondeur est la plus profonde est d'environ 1,3 à 2 fois plus profonde que la profondeur moyenne le long du renfoncement (c).

4. Ski (s) selon la revendication 1, **caractérisé(s)** en ce que le bord de la base comprend des rails (g) sur les côtés longs du(des)ski(s), lesdits rails étant re-

couverts avec la couche de la structure(f) de surface.

5. Ski (s) selon la revendication 1, **caractérisé(s)** en ce que la base du(des)ski(s) comprend en outre une couche de la base (h) située entre la couche du corps (e) et la couche de la structure(f) de surface.

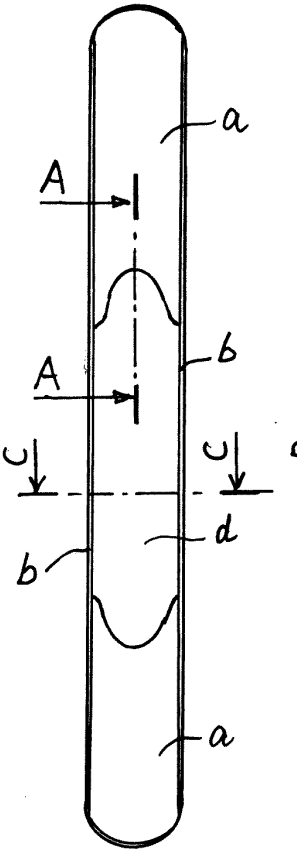

FIG. 1
PRIOR ART

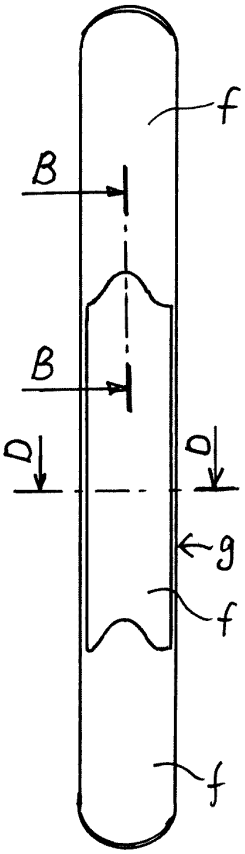

FIG. 2

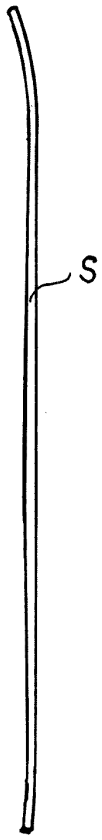

FIG. 3

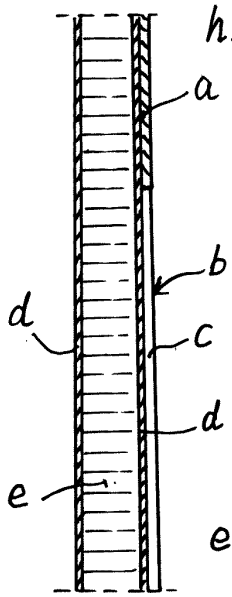

FIG. 4
PRIOR ART
A – A

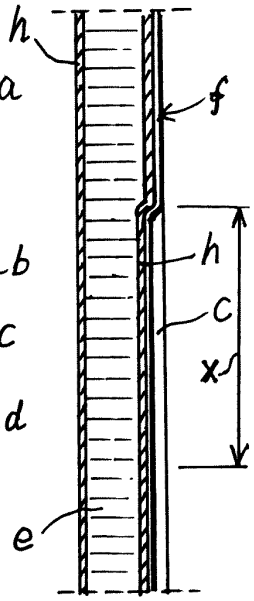

FIG. 5
B – B

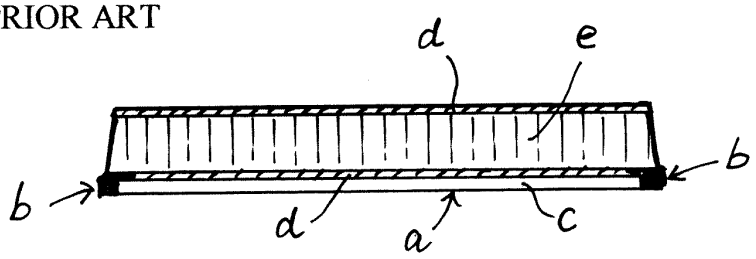

FIG. 6
PRIOR ART
C – C

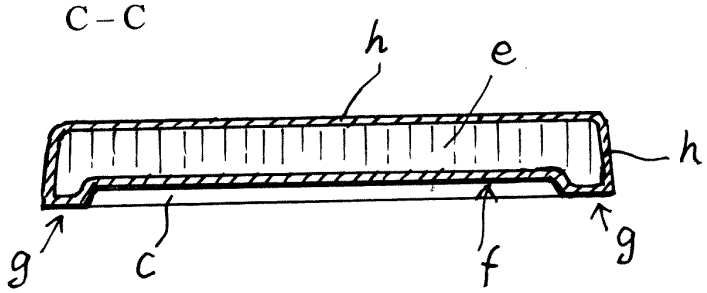

FIG. 7
D - D