(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 441 318 A2**

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **91101515.4**

(51) Int. Cl.[5]: **A63C 11/00**, G09F 3/10

(22) Date of filing: **05.02.91**

(30) Priority: **05.02.90 YU 214/90**

(43) Date of publication of application:
14.08.91 Bulletin 91/33

(84) Designated Contracting States:
AT DE FR IT

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(54) Ski with a permanent identification label.

(57) A ski with a permanent identification label according to the invention is characterized in that into one of glue layers 12 of the ski 1 an identification plate 2 with a magnetically readable identification label, e.g. with a magnetic bar code, is placed advantageously along the median line S of the layer 12; in a known way, the ski core 11 is surrounded by reinforcing layers 13, a cover 14 and a sliding cover 15, which are glued together by the glue layers 12.

The identification plate 2 is placed into one of the glue layers 12 already at the very beginning of the manufacture of the ski, i.e. when assembling layers 11, ... 15 of the ski 1. Thus the ski can be tracked during the whole process of its manufacture, which can thus be automatically controlled. At finishing the ski surface, the identification plate 2 cannot be mechanically damaged. The identification plate is hidden but it can be read out at any time by an appropriate reader.

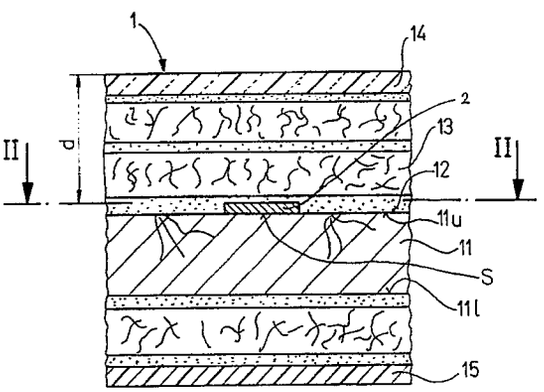

Fig.1

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SKI WITH A PERMANENT IDENTIFICATION LABEL

Technical Field

This application relates generally to the marking of skis.

Background of the Invention

There have been known skis with a metal identification label plate, which is both provided with a serial number of the ski and protects the ski tail or the ski tip. Disadvantageously, the label may not be legible after polishing the ski or after further steps of assembling the ski by gluing or providing the ski with a protective cover. For those reasons there cannot be reliably ascertained the quality of single steps and points within the technological process of manufacturing skis.

Further, there is commonly known the marking of skis by impressing serial numbers onto the side faces of the ski. An identification of the ski marked in this way is only feasible after its manfucaturing process has been finished, the label, however, is not abrasion-proof.

Recently, some producers have been marking skis with an optical bar code that considerably simplifies the automatization of the ski identification. In this way, however, only final products can be marked and no continuous checking of the manufacturing process is possible.

Summary of the Invention

In accordance with the foregoing background discussion, an object of this invention is to provide a ski with a simple and reliable identification labelling already during the entire manufacturing process of the ski as well as at storing, selling and at possible complaints or theft thereof, and the identification label of the ski proposed by the invention has to be abrasion-proof and safe from mechanical damages.

With the foregoing objects in view, the ski with a permanent identification label in accordance with the invention is characterized by features of the characterizing portions of claims 1,2 and 3.

An advantage of the ski with the permanent identification label proposed by the invention is that the identification plate is placed into one of the glue layers when assembling all layers of the ski, i. e. at the very beginning of the manufacturing of the ski. Thus the ski can be tracked during the whole process of its manufacture, which therefore can be automatically controlled. At finishing the ski surface, the identification plate cannot be damaged and it is also well protected against any future mechanical damaging of the ski surface. The identification plate is hidden and it can be read out at any time by an appropriate reader.

Other objects, advantages and features of the invention will be apparent from the following detailed description of the embodiment thereof, when read in conjunction with the accompanying drawings.

Brief Description of the Drawings

In the drawings

- Fig. 1 is a transversal cross section of a construction of a ski with a permanent identification label according to the invention,
- Fig. 2 is a top view of the identification plate in the cross section along the line II-II in Fig. 1,
- Fig. 3 is a transversal cross section of the identification plate across the line III-III in Fig. 2.

Detailed Description

Referring in detail to the drawings and particularly to Fig. 1, there is illustrated a transversal cross section of a ski with a permanent identification label. Naturally, the invention also relates to skis with a different mutual placing of their component layers. In the ski 1, for example, to both sides of a wooden or a plastic ski core 11 there are alternately placed glue layers 12 and reinforcing layers 13. The reinforcing layers 13 comprise reinforcing glas fibres or fibres made of carbon or kevlar. The last reinforcing layer 13 at the top of the ski 1 is covered by a glue layer 12 and by a top cover 14. The last reinforcing layer 13 at the bottom of the ski 1 is covered by a glue layer 12 and by a sliding cover 15. When assembling the layers 11, 12, 13, 14 and 15 of the ski 1, the identification plate 2 with a magnetically readable identification code is placed into one of the glue layers 12. The plate 2 is placed along the median line S of the glue layer 12.

In the disclosed embodiment, the ski 1 of the invention is provided with an identification plate 2 using a magnetic bar code as an identification label. The identification plate 2 is represented in Fig. 2 as viewed from the top and in Fig. 3 as viewed in its transversal cross section. Along a non-magnetic plate 21 in the form of a strip, e. g. from polyester, magnetic bands 22a, ..., 22n are applied. The bands 22a, ... are mutually parallel and mutually distant for a multiple of a distance

modulus D. The distance modulus D, whose value is between 5 and 10 mm, may be equal or exceed the distance d between the top cover 14 and the identification plate 2. The bands 22a,... are oriented transversally with respect to the ski 1. The magnetic bands 22a, ..., 22n are some 100 μm thick and are made of a polymer matrix, in which grains of a ferromagnetic material, e. g. of a granulated alloy Sm-Co with a high remanence and with a high coercitivity, are dispersed in epoxy resin. The grains of the ferromagnetic material are oriented by a strong magnetic field with the magnetic flux density 0.1 T during polymerization. Finally, this magnetic code is magnetized in a strong magnetic field with the magnetic flux density 2.5 T. In the case of identification by magnetic means, the cover 14 may be of non-ferromagnetic sheet metal, e. g. aluminum.

The ski in accordance with the invention and of the presented embodiment is identified by an appropriate reader of the magnetic bar code. The magnetic bar code reader is scanned close to the cover 14 along the identification plate 2.
Reference signs in the claim are intended for better understanding and shall not limit the scope.

Claims

1. A ski with a permanent identification label, in which ski 1 to both sides of a ski core 11 there are placed alternately glue layers 12 and reinforcing layers 13, the last one reinforcing layer at the top and at the bottom of the ski 1 being covered by a glue layer and a cover 14 and by a sliding cover 15, respectively, characterized in
that into one of the glue layers (12) an identification plate (2) with a magnetically readable identification label is placed.

2. A ski as recited in claim 1, characterized in
that the plate (2) is placed along the median line (S) of the layer (12).

3. A ski as recited in claim 1 or 2, characterized in
that on a non-magnetic plate (21) of the identification plate (2) along the ski (1) there are applied mutually parallel magnetic bands (22a, ..., 22n), which are mutually distant for a multiple of a distance modulus (D) and transversally oriented with respect to the ski (1), the modulus (D) exceeding the distance (d) between the top cover (14) and the identification plate (2).

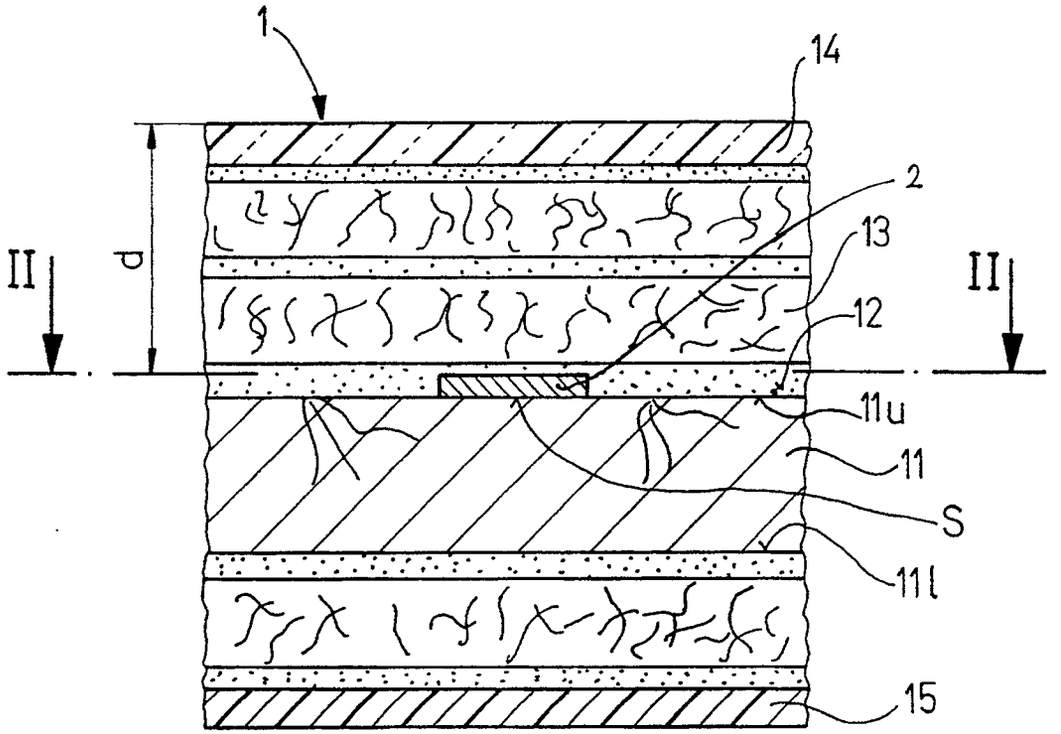

Fig.1

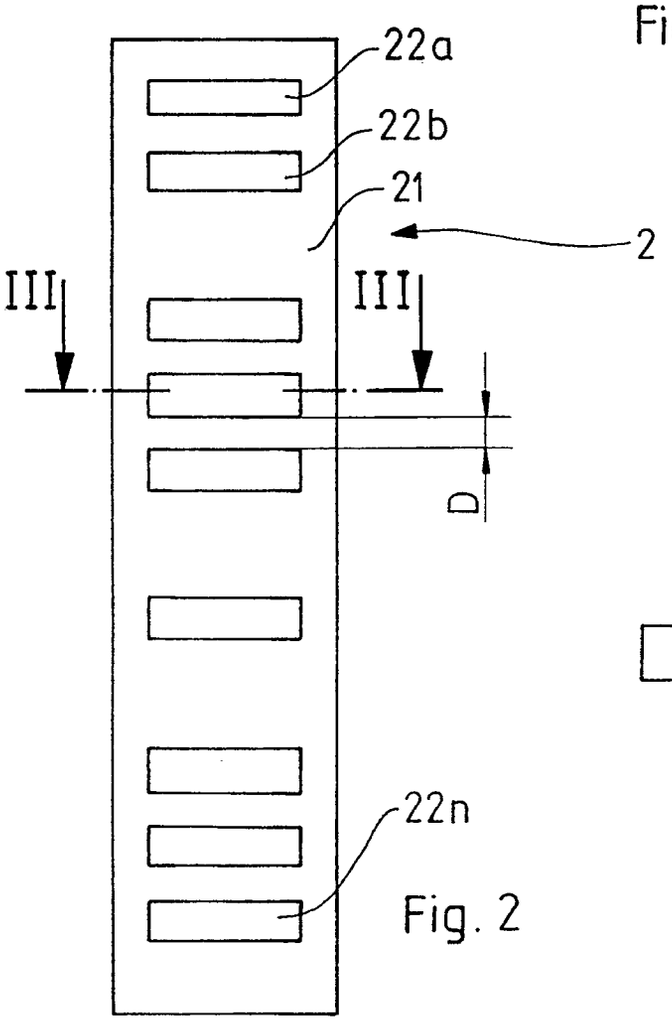

Fig. 2

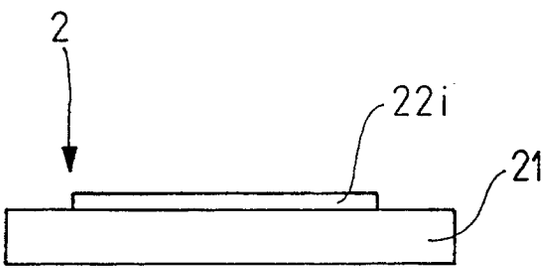

Fig. 3