

[54] **SKI HAVING BASE BLOCKS FOR
SECURING BINDINGS**

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280/11.13 E, 11.35 C, 11.35 R, 11.35 T

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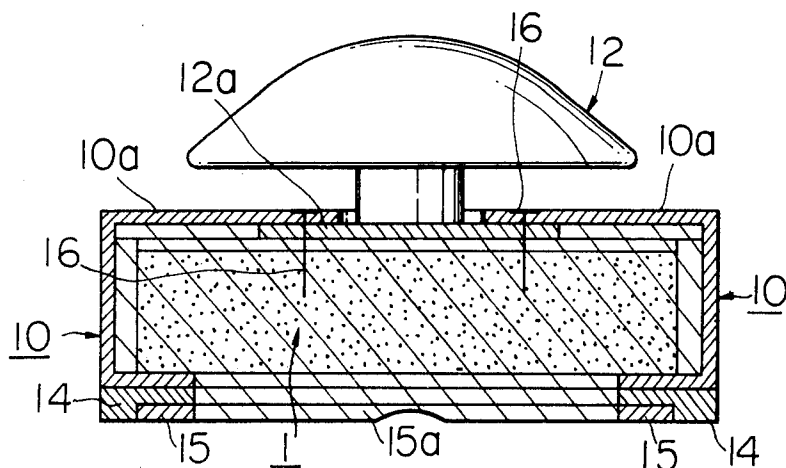
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[57] **ABSTRACT**

In a ski structure, surface cut-outs are provided on the main body in order to fixedly, detachably and adjustably accommodate base blocks for securing the ski-bindings.

The basic blocks are J-shaped in cross section and each abutts at least three surfaces of the main body of the ski.

5 Claims, 8 Drawing Figures



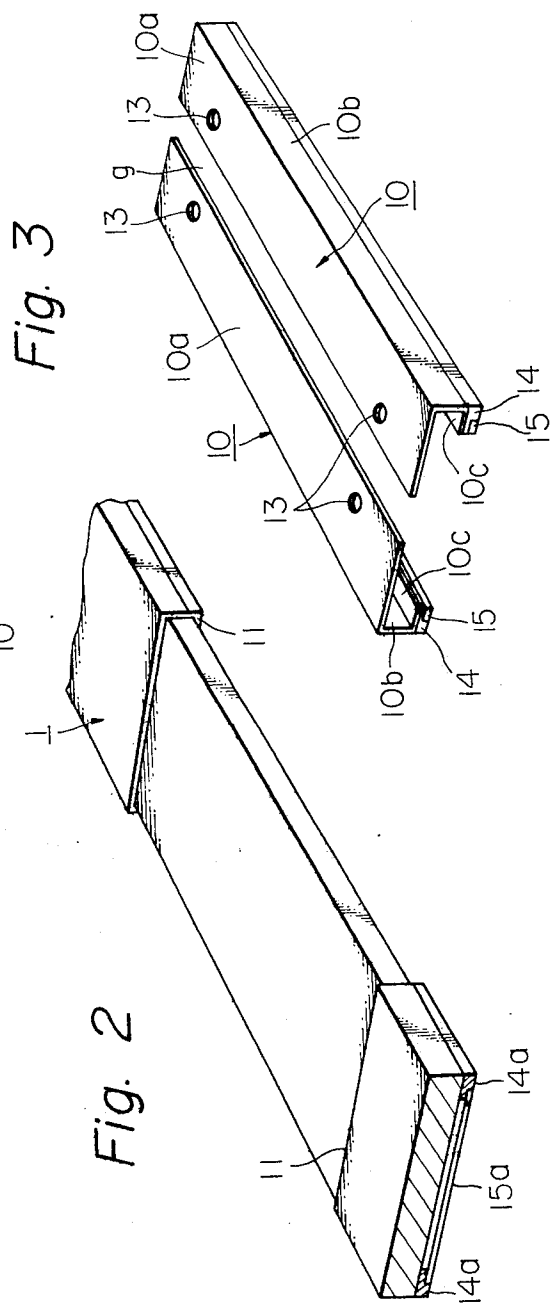
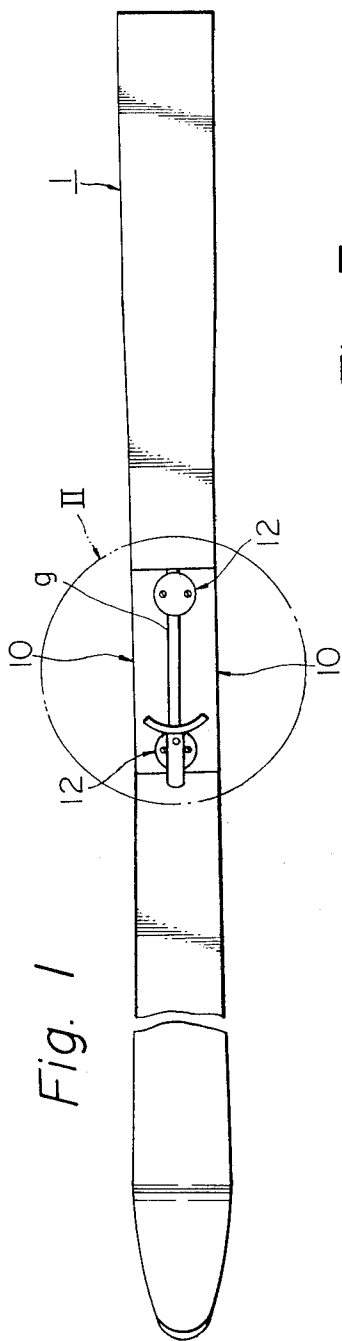


Fig. 4

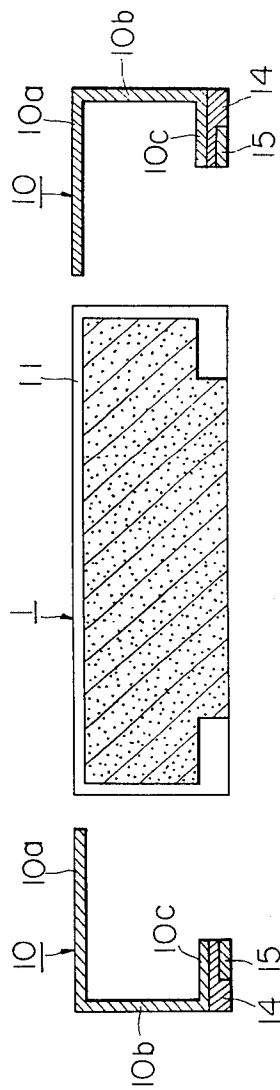


Fig. 6

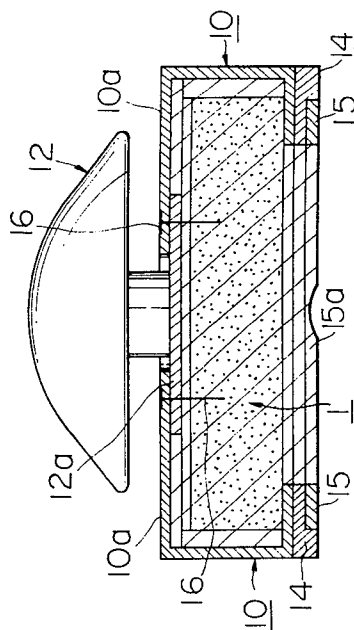


Fig. 5

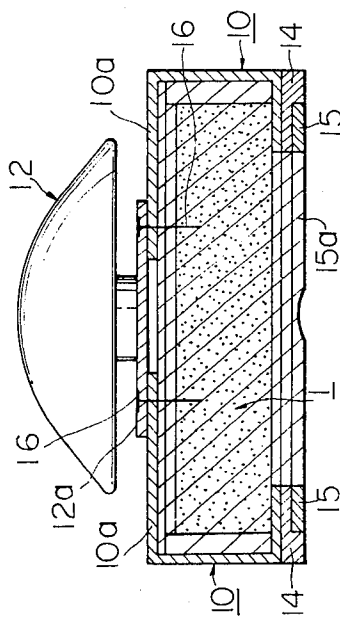


Fig. 7

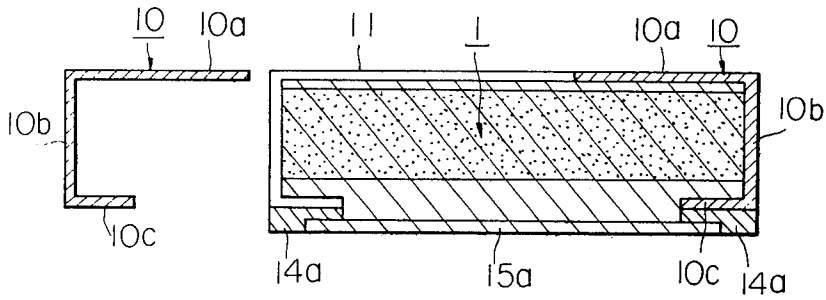
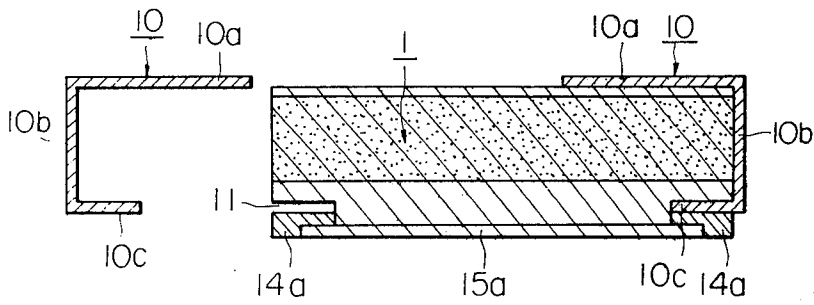


Fig. 8



SKI HAVING BASE BLOCKS FOR SECURING BINDINGS

The present invention relates to an improved ski; more particularly, this invention relates to a ski provided with intermediate means for securely attaching a ski-binding to the main body thereof.

In conventional skis, ski-bindings have to be fixed directly to the upper surface of the skis. However, because of such a direct mounting system of the ski-bindings, it is difficult to obtain reliably strong resistance against accidental looseness and/or, in extreme cases, separation of the attachment during the use of the conventional skis under severe conditions. Further, it is often most difficult to the users to set the ski-bindings in correct positions and/or to adjust the set positions thereof optimally in accordance with their various requirements.

It is a primary object of the present invention to provide a ski of a structure in which accidental looseness and/or separation of ski-bindings from ski bodies during the use thereof is effectively prevented.

It is another object of the present invention to provide a ski of a structure in which the difficulty in setting a ski-binding in a correct position and/or in adjustment of its set position is effectively eliminated.

In order to attain the above-described objects, the improved ski of the present invention includes special intermediate means for securely attaching the ski-binding to the main body of the ski, the intermediate means partially and fixedly embracing the main body.

Further features and advantages of the present invention will be made clearer from the following description, reference being made to the embodiments shown in the accompanying drawings, in which:

FIG. 1 is a top plan view of the ski according to the present invention;

FIG. 2 is a perspective plane view of a main part of an embodiment of the ski according to the present invention;

FIG. 3 is a perspective plane view of an embodiment of the base blocks used for the ski according to the present invention;

FIG. 4 is a transverse cross-sectional plane view of another embodiment of the ski according to the present invention, in a disassembled condition;

FIG. 5 is a transverse cross-sectional plane view of the ski shown in FIG. 4 in an assembled condition;

FIG. 6 is a transverse cross-sectional plane view of the other embodiment of the ski according to the present invention, and

FIGS. 7 and 8 are transverse cross-sectional plane views of further embodiments of the ski according to the present invention in partly disassembled conditions.

Referring to FIG. 1, there is shown a basic embodiment of the ski according to the present invention, in which the main body 1 of the ski has a ply-board structure comprised of an upper surface board, a decoration board, a core, a sole board and an under surface board inserted between the core and the sole board. Proper side boards may also be disposed on both sides of the main body 1. According to the present invention, a pair of base blocks 10 are mounted on the portion II of the main body 1 of the ski to which conventional ski-bindings 12 are normally attached.

In the illustrated embodiment of the invention, the main body 1 of the ski is provided with cut-outs 11

formed on the four side surfaces thereof in the region of the portion II as shown in FIG. 2. The depth of the cut-outs 11 is substantially equal to the thickness of the base blocks 10 so that, when the latter are fixed to the main body 1 of the ski, the outer surface levels of the base blocks 10 are almost even with the outer surface levels of the remaining portions of the main body 1 of the ski.

An embodiment of the base blocks 10 used for the ski of the present invention is shown in FIG. 3, in which each of the base blocks 10 is comprised of an upper plate part 10a, an under plate part 10c extending almost parallel to and in the same direction as the upper plate part 10a, and a side plate part 10b is connected integrally to the upper and under plate parts 10a and 10c almost at right angles thereto. The width of the upper plate part 10a, i.e., the size of the upper plate part 10a in a direction perpendicular to the longitudinal direction of the base block 10 in the plane of the ski, is so designed that, when the pair of base blocks 10 are attached to the main body 1 of the ski, an elongated gap *g* should be left between the inside fringes of the base blocks 10 as shown in FIG. 1.

A proper number of holes 13 for set screws 16 (see FIG. 5) are formed through the upper plate part 10a of the base block 10. On the other hand, the under plate part 10c of the base block 10 is provided with a partial sole edge 14 and a partial sole board 15 fixed to the undersurface thereof. In accordance with this arrangement, the main body 1 of the ski is provided with sole edges 14a and sole boards 15a fixed to the undersurfaces of the unrecessed portions thereof.

The base blocks 10 of the above described structure can be attached to the main body 1 of the ski in various ways. For example, in the case of the embodiment shown in FIGS. 4 and 5, the base blocks 10 are placed in the cut-outs 11 of the main body 1 of the ski from both sides, a base plate 12a of the ski-binding 12 is placed on the upper surfaces of the base blocks 10 with its holes for the set screws 16 meeting the holes 13 of the latter and both the base plate 12a and the base blocks 10 are fixed to the main body 1 of the ski by the set screws 16. In this condition, the undersurface levels of the partial sole edges 14 and the partial sole boards 15 of the base blocks 10 are almost even with those of the sole edges 14a and the sole boards 15a of the unrecessed portions of the main body 1 of the ski.

A modification of this embodiment is shown in FIG. 6, in which the base plate 12a of the ski-binding 12 is clamped tightly between the undersurfaces of the upper plate parts 10a of the base blocks 10 and the upper surface of the upper cut-outs 11 of the main body 1 of the ski by means of set screws 16.

A further modification may be made to this embodiment in order to make the insertion and removal of the ski-binding base plate easier. In such an embodiment, cut-outs are formed at selected positions in the confronting fringe area of the upper plate parts 10a of the base blocks 10. The profile of the cut-out thus formed is so designed that the side fringe parts of the ski-binding base plates 12a can smoothly escape upwardly therethrough. At the time of insertion, the ski-binding base plate 12a is inserted into the gap through the cut-outs, moved along the ski in the lengthwise direction, and fixed by the set screws. To remove the base plate, the set screws are loosened, the ski-binding base plate

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12a is brought to the position of the cut-outs and taken out upwardly through the cut-outs.

A further embodiment of the ski according to the present invention is illustrated in FIG. 7. In this embodiment, the sole board 15a of the main body 1 is wider than in the embodiments shown in FIGS. 5 and 6, and the base block 10 is not provided with the partial sole board 15. The inside parts of the partial sole edges 14a rest on the side fringe parts of the sole board 15a of the main body 1. In other words, the widened fringe parts of the sole board 15a of the main body 1 have replaced the partial sole boards 15 used in the foregoing embodiments.

A further modification of the ski according to the present invention is illustrated in FIG. 8, in which the cut-outs 11 are not formed on the side surfaces of the main body 1 of the ski. Specifically, the surface levels of the side plate parts 10b of the base blocks 10 extend beyond the side surface levels of the unrecessed portions of the main body 1 of the ski.

In the structures of the above-described embodiments of the ski according to the present invention, each base block 10 may be divided transversely of the ski into two pieces, one being suited for mounting the front ski clamp and the other being suited for mounting the rear ski clamp.

As is clear from the foregoing description, in the structure of the present invention, the ski-binding is fixed to the main body of the ski via an additional intermediate mounting arrangement, i.e., the base block, thereby assuring a reliable and stable mounting of the ski-binding onto the main body of the ski. In addition to this, since the set position of the ski-bindings are fixed in advance by the holes for set screws formed through the base blocks, the ski-bindings can be set in correct positions very easily. By forming multiple holes for set screws in the base blocks, set positions of the ski-bindings can be adjusted in accordance with the users requirement.

Further, because the ski main body is firmly clamped

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on both sides in the thickness direction, separation of the component parts from each other can be effectively restrained.

In the structure of the ski of the present invention, the ski-binding may be either fixed to or detachably disposed on its accompanying base plate or plates.

What is claimed is:

1. An improved ski comprising, in combination, an elongated main body having a substantially rectangular cross-section and being provided with surface cut-outs, said cut-outs forming walls substantially perpendicular to major surface areas of said main body, a pair of base blocks having J-shaped cross-sections in said surface cut-outs, said base blocks comprising upper plates and lower plates interconnected by side plates substantially perpendicular to said upper and lower plates, said upper plates being provided with substantially parallel confronting edges, said confronting edges of said upper plates forming a longitudinally elongated gap therebetween, said base blocks being further provided with end edges adjacent said confronting edges and confronting said cut-out walls, said base blocks each abutting at least three surfaces of said main body, and a base plate of a ski binding affixed to said upper plates of said base block.

2. An improved ski as claimed in claim 1 in which said base block is provided with at least one partial sole edge and a partial sole board fixed to the undersurface of said under plate part.

3. An improved ski as claimed in claim 1 in which said base plate of said ski-binding is fixed to the upper surfaces of said upper plate parts of said base blocks.

4. An improved ski as claimed in claim 1 in which said base plate of said ski-binding is fixedly clamped between said upper plate parts of said base blocks and the upper surface of the upper cut-out of said main body.

5. An improved ski as claimed in claim 1 in which set positions of said base blocks in said cut-outs of said main body are adjustable along the length of said ski.

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