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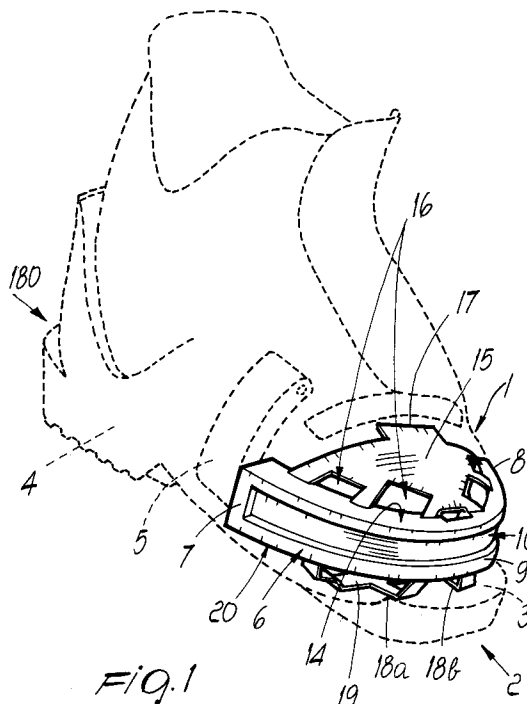
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Lever protection band.

The lever protection band is shaped like a cage (1) and has a grip wing (17) for a mold inside which a shell (4) is molded in place. The structure can be positioned at the tip (3) of the shell (4). The band allows to achieve optimum protection of a securing lever (5), preserving it from any accidental impacts which would open or damage it.



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The present invention relates to a lever protection band.

Bands applied by glueing or riveting to the front outer region of a shell at its tip are currently known.

Said known bands slightly protrude from the lateral surface of the shell.

The essential condition which said known bands must meet is the protection of a securing lever, which is applied at the shell, against any accidental blows or impacts.

However, said known bands have some problems: first of all, the known methods which are used to fix the bands to the shell do not allow them to fully perform their task, i.e. lever protection.

The use of fixing means such as pins, screws, snap-together couplings or adhesives allows said band to partially or totally detach if it is subjected to accidental impacts, thus losing its protective function.

Secondly, a further manufacturing step is required during the shell production in order to anchor the band, said anchoring not being satisfactory at all times.

The aim of the present invention is therefore to eliminate the problems described above in known types by providing a protection band which allows to achieve optimum protection for a lever against accidental impacts.

Within the scope of the above aim, an important object is to provide a protection band which is free from partial or total separations and malfunctions during its use and particularly in the case of accidental impacts against blunt bodies.

Another object is to provide a protection band which can be positioned optimally with respect to the shell.

Another important object is to provide a protection band which is structurally simple, easy to industrialize, reliable and safe in use, and has modest manufacturing costs.

This aim, these objects and others which will become apparent hereinafter are achieved by a lever protection band characterized in that it has a cage-like structure, having at its inside at least one centering hole and/or at least one guide and/or at least one grip wing for a mold for the molding in place of a shell.

Advantageously, said structure can be positioned at the tip of said shell.

Further characteristics and advantages of the invention will become apparent from the detailed description of a particular embodiment, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 is a perspective view of the lever protection band;

figure 2 is a top view of the band;

figure 3 is a bottom view of the band;

figure 4 is an inside view of the band;

figure 5 is a sectional view, taken along the plane V-V of figure 4, of the band included in the tip of a shell.

With reference to the above figures, the lever protection band, generally designated by the reference numeral 1, is transversely associable at the front region 2 of the tip 3 of a shell 4, and its function is to provide protection for a lever 5 arranged transversely to said shell 4.

Said lever protection band 1 is cage-like and comprises an arc-like central body 6 whose first end 7 has a larger cross-section than the second end 8.

A recess 10 is defined on the central body 6 at the lateral surface 9 which faces away from the shell 4.

A surface 11 is provided on the opposite side with respect to said recess, and a pair of holes 12a and 12b for the centering of a mold for the molding in place of the shell 4 is defined on said surface 11 approximately symmetrically or specularly with respect to the transverse median axis.

A plurality of transverse depressions 13 are provided at the surface 11 and allow anchoring to the shell 4.

A connecting surface 15 is provided at the upper perimetric edge 14 of the central body 6, and a plurality of variously shaped openings 16 is defined on said surface.

Said connecting surface 15 is centrally provided with a wing 17 for gripping the shell 4 which is directed toward the heel region 180.

Two guides 18a and 18b for gripping the sole of the shell protrude on the opposite side with respect to the connecting surface 15 approximately at right angles to the lateral surface 9.

Said guides are arranged mutually parallel and are transversely connected by a bridge 19.

Said lever protection band 1 can be positioned inside a mold within which the shell 4 is obtained by molding in place.

Advantageously, the pair of holes 12a and 12b, the surface 15 for connecting to the upper perimetric edge 14 of the central body 6, the grip guides 18a and 18b and the bridge 19 allow to achieve optimum centering with respect to said shell 4.

The perfect inclusion of the lever protection band 1 in said shell 4 is thus achieved, obtaining a monolithic unit.

Said lever protection band 1 is arranged at the region of the tip 2 of said shell 4 and only its first end 7 protrudes from the lateral surface of said shell.

Said first end is arranged at the outward-facing part of the foot and is arranged in front of

said lever 5 so as to protect it.

The second end 8 is instead flush with the lateral surface of said shell 4, similarly to part of the upper perimetric edge 14 and of the lower perimetric edge 20 of the central body 6.

The use of said invention is as follows: once it has been inserted in an appropriate mold, it is centered optimally by virtue of the presence of the pair of holes 12a and 12b, by virtue of the grip guides 18a and 18b and of the bridge 19.

Once molding in place has been performed, optimum grip on the shell is obtained also by virtue of the presence of the connecting surface 15, of the openings 16 and of the grip wing 17.

Advantageously, during downhill skiing, if said boot collides with natural or artificial obstacles such as stones or slalom poles, the levers can be protected by virtue of the lever protection band 1, which is the first to collide against the obstacle and thus bears its impact.

It has thus been observed that the lever protection band has achieved the above described aim and objects, optimum protection of said securing lever having been achieved, protecting it against accidental impacts which would open it or break it.

The lever protection band according to the invention is naturally susceptible to numerous modifications and variations, all of which are within the scope of the same inventive concept.

Naturally, the materials and the dimensions of the individual elements which constitute the structure may be the most appropriate according to the specific requirements.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

Claims

1. Lever protection band, characterized in that it has a cage-like structure (1) inside which one or more centering holes (12a,12b) and/or one or more guides (18a,18b) and/or one or more grip wings (17) for a mold for the molding in place of a shell (4) are provided.
2. Lever protection band according to claim 1, characterized in that said molding in place is located at the tip (3) of said shell (4).
3. Lever protection band according to claim 1, characterized in that it comprises an arc-like central body (6) which has a first end (7)

whose cross-section is greater than that of a second end (8), a recess (10) being defined on said central body (6) at a lateral surface (9) of said body (6), which faces away from said shell (4).

4. Lever protection band according to claims 1 and 3, characterized in that it is arranged at the tip region (2) of said shell (4), only said first end (7) protruding from the lateral surface of said shell (4), said first end (7) being arranged at the outer part of the foot and being arranged in front of a lever (5) so as to protect it.
5. Lever protection band according to claims 1 and 4, characterized in that on the opposite side with respect to said recess (10) there is a surface (11) on which a pair of centering holes (12a,12b) for a mold for the molding in place of said shell (4) is defined approximately specularly with respect to the transverse median axis, a plurality of transverse depressions (13) suitable to allow anchoring to said shell (4) being provided in said surface (11).
6. Lever protection band according to claims 1 and 4, characterized in that said second end (8) is arranged flush with the lateral surface of said shell (4), similarly to part of the upper (14) and lower (20) perimetric edges of said central body (6).
7. Lever protection band according to claims 1 and 5, characterized in that a connecting surface (15) is provided at the upper perimetric edge (14) of said central body (6), a plurality of variously shaped openings (16) being defined on said surface (15), said connecting surface (15) being centrally provided with a wing (17) for gripping said shell (4), said wing (17) being directed toward the heel region (180).
8. Lever protection band according to claims 1 and 6, characterized in that one or more mutually parallel guides (18a,18b) for gripping said shell (4) protrude approximately at right angles on the side opposite to said connecting surface (15), said one or more guides (18a,18b) being transversely connected by at least one bridge (19).
9. Lever protection band according to one or more of the preceding claims, characterized in that said pair of holes (12a,12b), said surface (15) for connecting to said upper perimetric edge (14) of said central body (6), said one or more grip guides (18a,18b) and said bridge

(19) constitute means for centering and/or anchoring with respect to said shell (4).

10. Lever protection band according to one or more of the preceding claims, characterized in that it can be arranged inside a mold within which said shell is obtained by molding in place.

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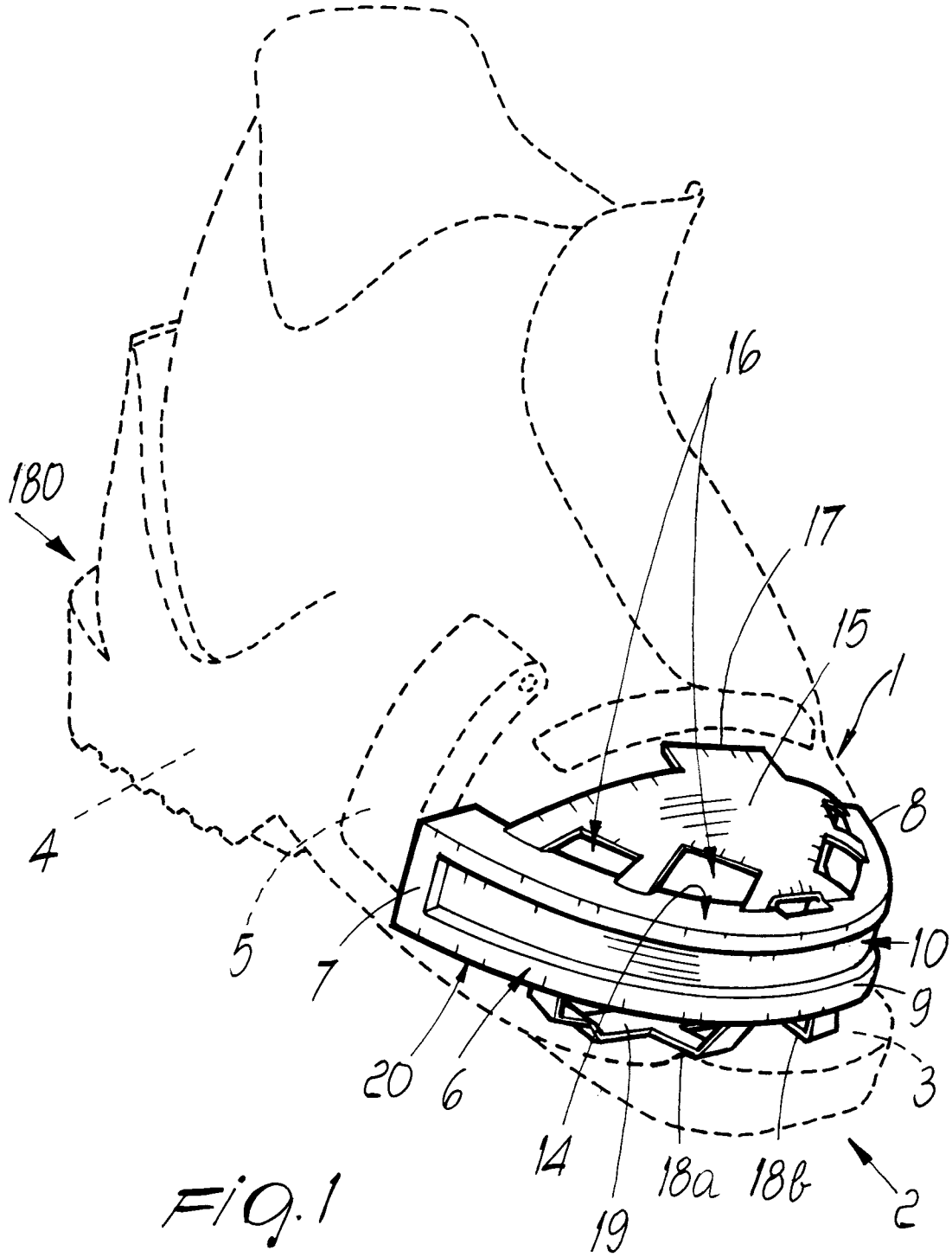
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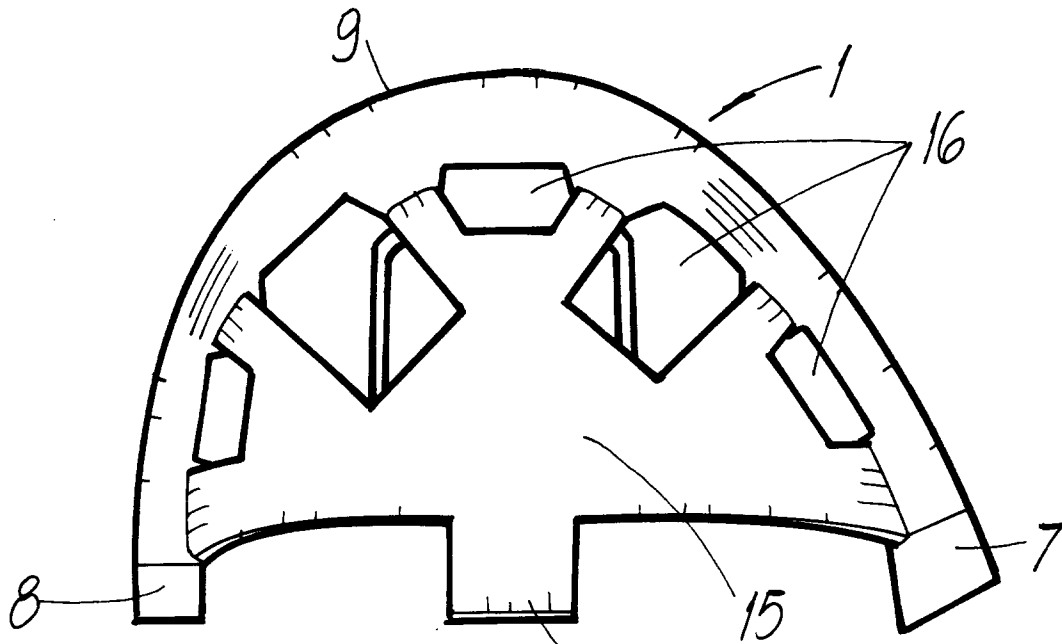


FIG. 2 17

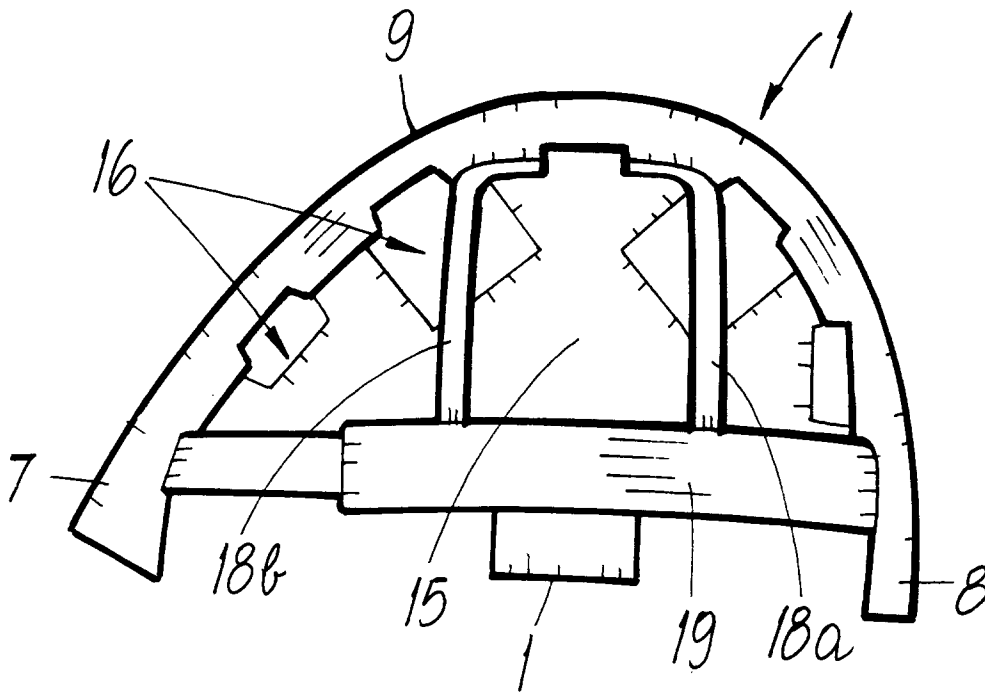


FIG. 3

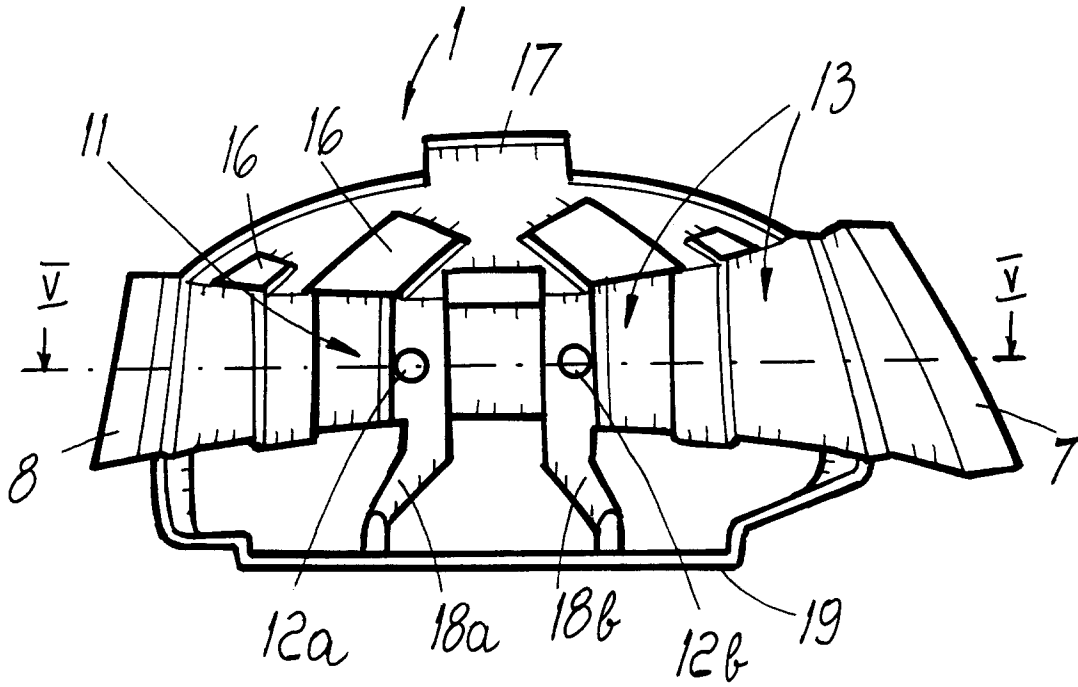


FIG. 4

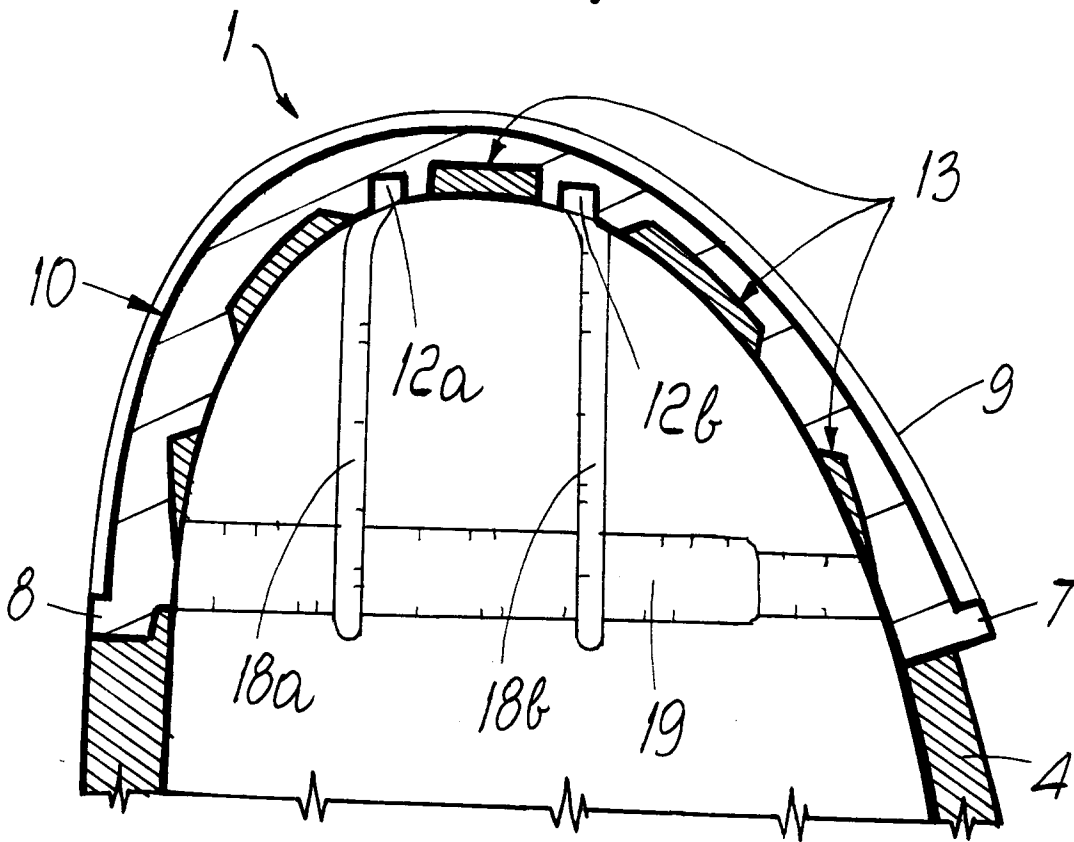


FIG. 5



| 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.5) |
| A | US-A-4 811 501 (K. OKAYASU) * the whole document * --- | 1 | A43C13/14 A43B5/04 |
| A | US-A-4 995 174 (M-C. HONG) * the whole document * --- | 1 | |
| A | US-A-3 206 874 (R. ELLIS) * the whole document * ----- | 1 | |
| | | | TECHNICAL FIELDS SEARCHED (Int. Cl.5) |
| | | | A43C A43B |
| The present search report has been drawn up for all claims | | | |
| Place of search THE HAGUE | | Date of completion of the search 17 FEBRUARY 1993 | Examiner DECLERCK J.T. |
| 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 | |