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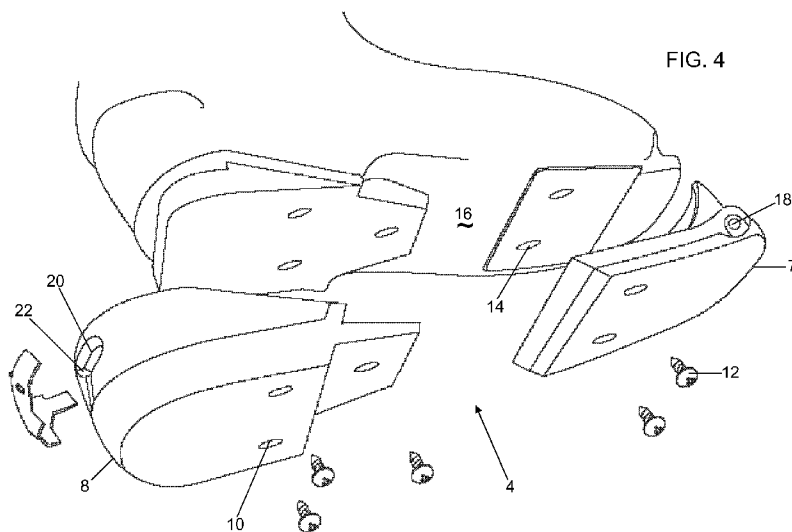
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(54) **Title:** SKI BOOT FOR ALPINE AND TOURING SKI



(57) **Abstract:** An improved ski boot comprising a shell (2) provided with a fastening device and internally housing an insole of soft material and at least two sets (5,6; 7,8) of front jaw/heel fixing unit portions removably securable to the sole (16) of the boot, characterized in that the first set (5,6) is of a form satisfying the regulations for alpine skiing and the second set (7,8) is of a form satisfying the regulations for ski mountaineering, the front jaw (7) of the second set laterally comprising holes (18) for engagement by a fork of a dynafit binding and the heel fixing unit comprising at its rear a seat (20) for engaging the heel fixing unit of the dynafit binding.

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SKI BOOT FOR ALPINE AND TOURING SKI

The present invention relates to an improved ski boot.

Ski boots are known: they generally comprise a rigid shell of plastic material, provided with lever fastening devices and internally housing an
5 inshoe of soft material.

The front jaw and the heel fixing unit for the sole are generally constructed in accordance with international regulations to adapt to different manufacturers' bindings. For example, in the case of boots for alpine skiing the regulations establish the characteristics of the toe and heel (dimensions,
10 radius of curvature, degree of sole roughness, etc.) to ensure that the heel and toe are inserted perfectly into the ski binding and that, in the case of a fall with leg twisting, the boot is immediately released from the binding.

In the case of boots for ski mountaineering, the toe and heel of the boot are generally shaped differently depending on the type of binding used.
15 In the case of the dynafit binding in which the front jaw consists of a fork and the heel fixing unit consists of two levers, both secured to the ski, the boot comprises two holes at the toe for engagement by the front jaw, the rear of the sole being provided with a notch into which the levers are inserted.

In the case of boots for ski mountaineering with a touring binding, in
20 which the front jaw and heel fixing unit are mounted on a plate hinged to the ski, the regulations require the rear circumferential rim of the heel fixing unit to be substantially smooth.

The object of the invention is to provide an improved ski boot which can be used both for alpine skiing and for ski mountaineering, and which in
25 the case of ski mountaineering can be used with both types of binding, i.e. dynafit and touring.

This object is attained according to the invention by an improved ski boot as described in claim 1.

The present invention is further described hereinafter with reference to the accompanying drawings, in which:

- 5 Figure 1 is a front perspective view of a boot in the configuration for ski mountaineering,
Figure 2 shows it in the same view as Figure 1, in front view,
Figure 3 shows it in front perspective view in the configuration for alpine skiing, and
10 Figure 4 shows it in rear view.

As can be seen from the figures, the ski boot according to the invention comprises substantially a shell 2 of rigid plastic material housing internally a soft material inshoe (not shown in the drawings) and two sets 3, 4 of front jaw/heel fixing units, namely 5, 6 for alpine skiing and 7, 8 for ski
15 mountaineering respectively.

In particular the front jaws 5, 7 and heel fixing units 6, 8 are provided with holes 10 for the application of screws 12 which likewise engage corresponding holes 14 provided in the boot sole 16.

In the embodiment shown in Figures 3 and 4 the front jaw 7 comprises
20 laterally two seats 18 for engagement by the fork of a binding according to dynafit regulations, the heel fixing unit 8 presenting at its rear a seat 20 partially occupied by a metal insert 22 able to be engaged by the heel fixing unit of the regulation dynafit binding.

The invention also comprises a further insert 24 of plastic material, the
25 shape and dimensions of which correspond exactly to those of the seat 20 so that, when the insert 22 has been removed, it can be applied to this seat in

order to change the sole heel fixing unit to a substantially smooth conformation to adapt it to touring regulations.

Passage from one to the other configuration is achieved by removing the screws 12 and replacing the heel fixing unit/front jaw set by that required.

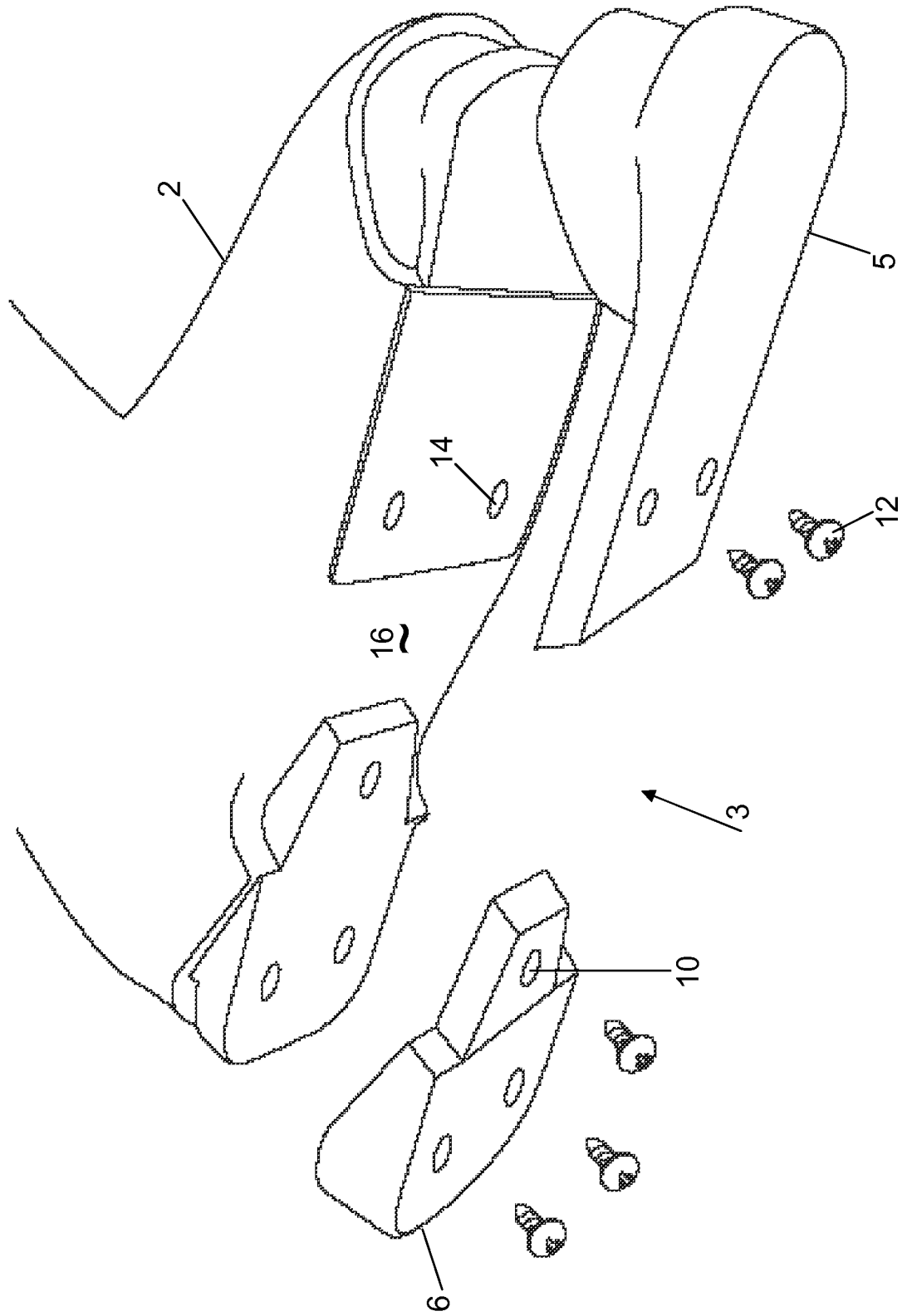
- 5 From the foregoing it is apparent that the ski boot of the invention can be used both for alpine skiing and for ski mountaineering, and in this case with both the regulatory bindings.

C L A I M S

1. An improved ski boot comprising a shell (2) provided with a fastening device and internally housing an inshoe of soft material and at least two sets (5,6; 7,8) of front jaw/heel fixing unit portions removably securable to the sole
5 (16) of the boot, characterized in that the first set (5,6) is of a form satisfying the regulations for alpine skiing and the second set (7,8) is of a form satisfying the regulations for ski mountaineering, the front jaw (7) of the second set laterally comprising holes (18) for engagement by a fork of a dynafit binding and the heel fixing unit comprising at its rear a seat (20) for engaging the heel
10 fixing unit of the dynafit binding.
2. A boot as claimed in claim 1 characterised in that it also comprises a removable insert (24) of shape and dimensions corresponding to those of the seat (20).
3. A boot as claimed in claim 2, characterised in that the insert (24) is
15 made of plastic material.

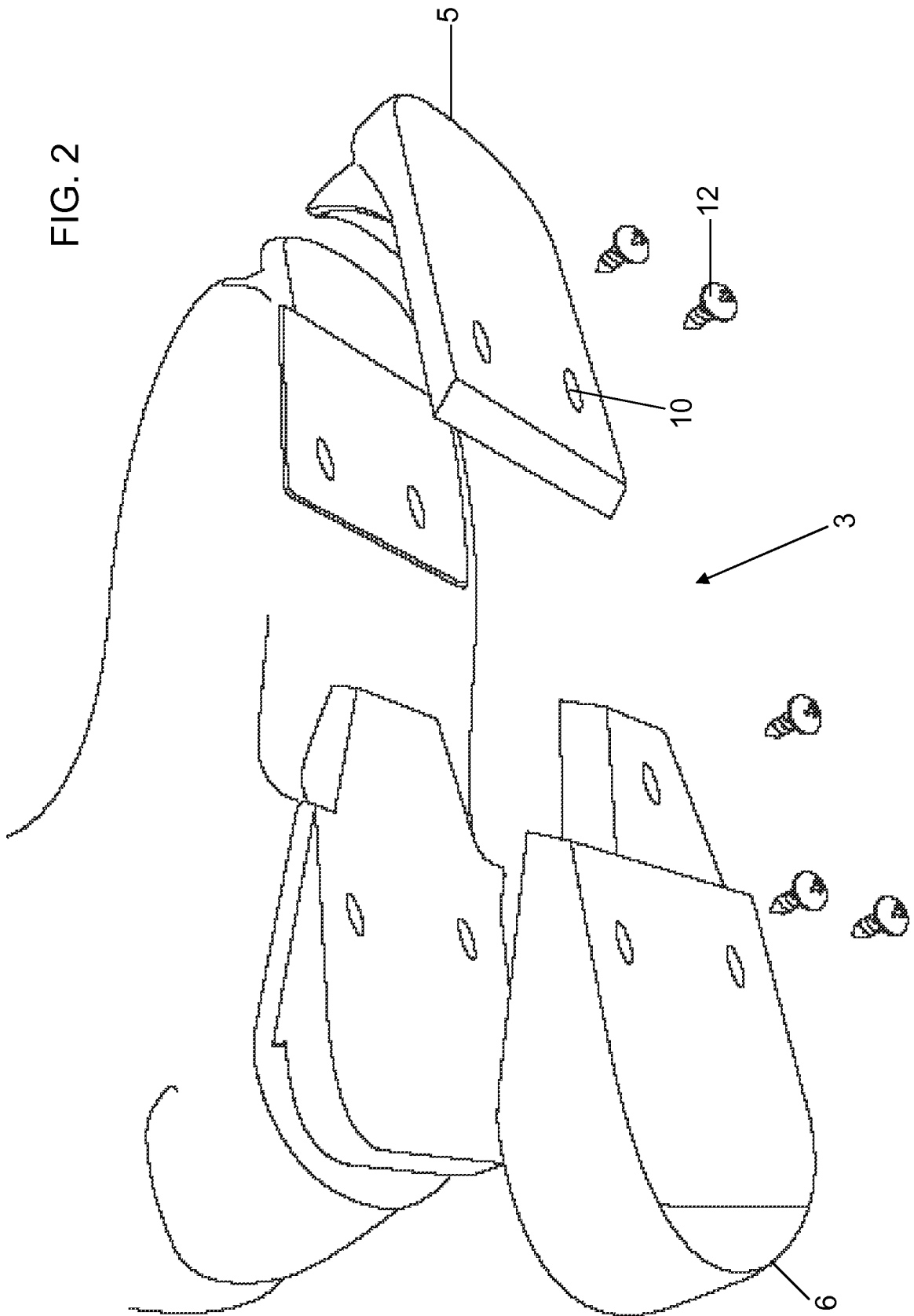
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FIG. 1



2/4

FIG. 2



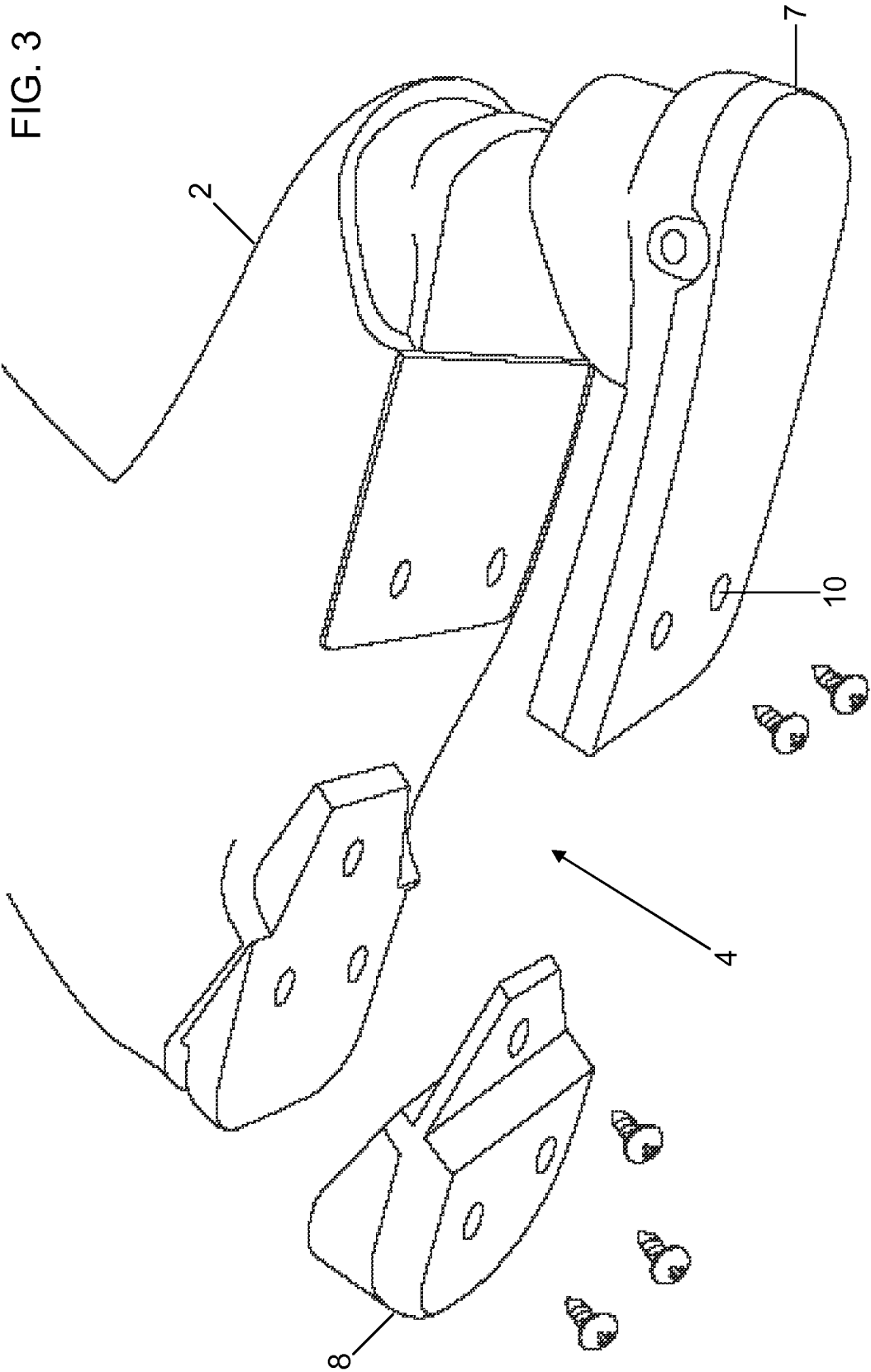
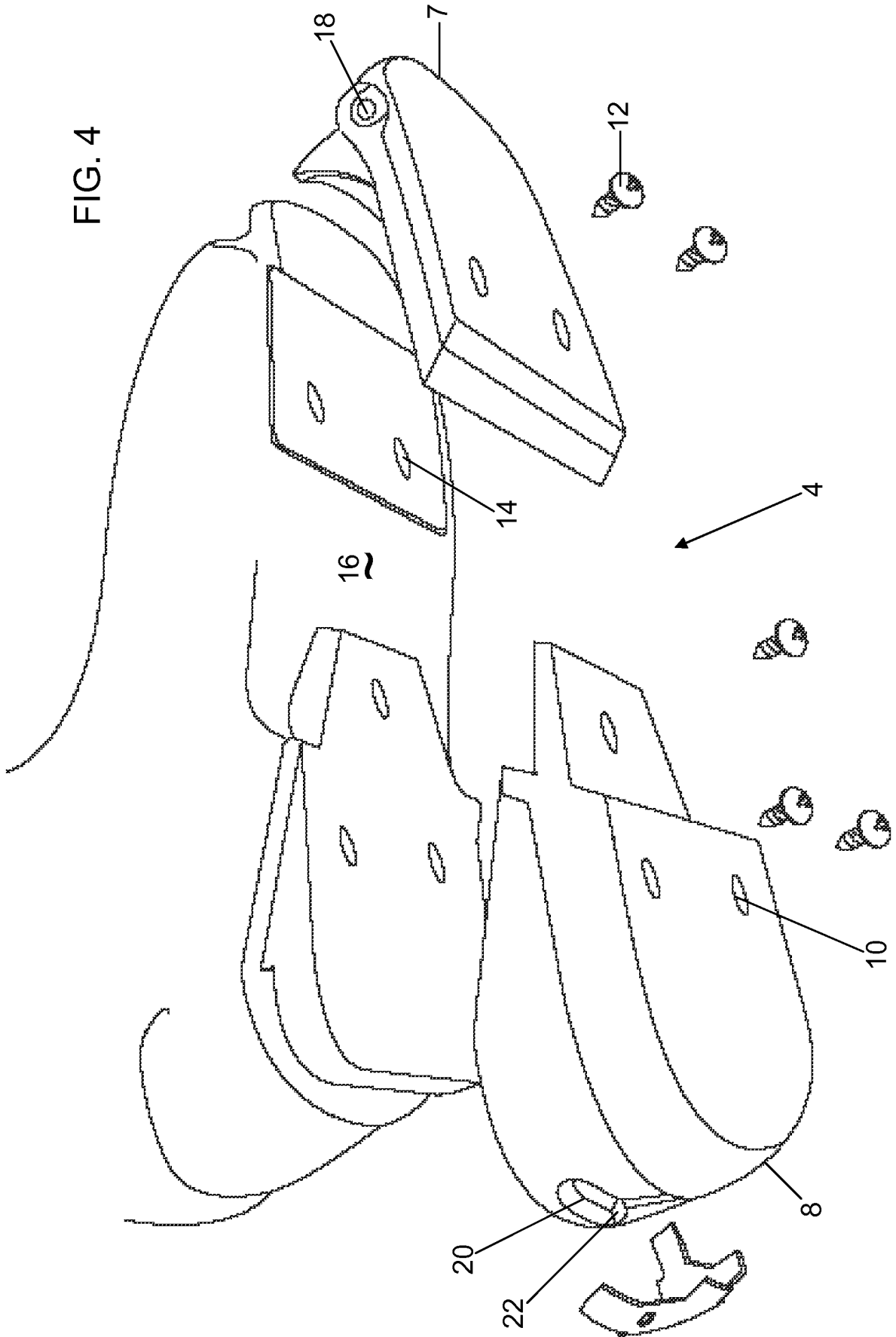


FIG. 4



INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. A43B3/24 A43B5/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A43B A63C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal; WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Y	EP 0 933 034 A (SALOMON SA [FR]) 4 August 1999 (1999-08-04) paragraphs [0001] - [0004], [0023] - [0027], [0037]; claim 1; figures	1-3
Y	EP 0 199 098 A (BARTHEL FRITZ) 29 October 1986 (1986-10-29) the whole document	1-3
A	US 4 351 120 A (DALEBOUT MELVIN W) 28 September 1982 (1982-09-28) column 2, lines 61-65 column 3, line 68 - column 4, line 6	1
P,A	US 2007/204486 A1 (FENATO PIERO [IT]) 6 September 2007 (2007-09-06) the whole document	1-3
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Further documents are listed in the continuation of Box C.

See patent family annex.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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