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

(11) Publication number: **0 150 801**
A1

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **85100634.6**

(22) Date of filing: **23.01.85**

(51) Int. Cl.⁴: **A 43 B 5/04**

(30) Priority: **25.01.84 IT 2063684 U**

(43) Date of publication of application: **07.08.85**
Bulletin 85/32

(84) Designated Contracting States: **AT CH DE FR LI**

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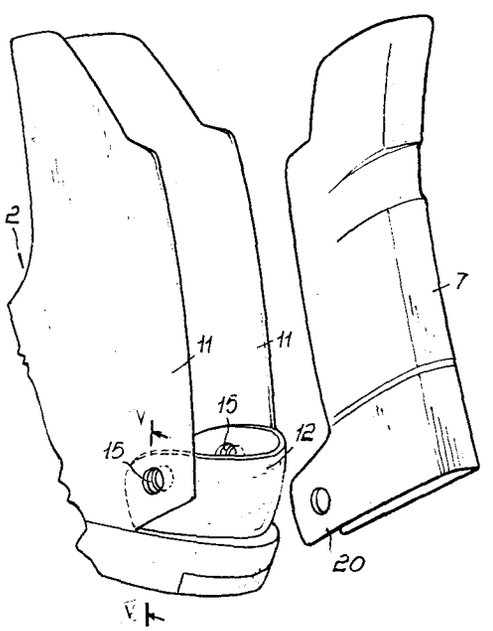
(54) Rear entry ski boot structure.

(57) A rear entry ski boot comprising a first part (2) which defines, as a unitary construction, the shell (3) and front quarter (5), and a second part consisting of the rear quarter (7) which is pivotally connected to the first part (2). Said first part (2) has, at its area of pivotal connection to the second part (7), recesses which are formed between side flaps (11) of the shell (3) and a rear band (12). The cited recesses accommodate protuberances (20) of the second part (7).



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"REAR ENTRY SKI BOOT STRUCTURE"

This invention relates to a rear entry ski boot structure.

As is known, long available in the market have been rear entry ski boots which, broadly speaking, include a shell spanning substantially the foot part and having, pivotally connected thereto, a front quarter and a rear quarter of varying height, which practically hold the leg part firmly secured.

Such ski boots pose no functional problems, but are uneconomical to manufacture in that they comprise three separate elements to be assembled together, which elements are to be formed in three molds.

Other prior approaches provide a shell which has the front quarter formed integrally therewith, the rear quarter being connected pivotally thereto.

Such other approaches have proved, however, generally unreliable both on account of the problem of providing a satisfactory coupling of the rear quarter to the rest of the shell and of the ski boot being uncapable of withstanding the flexural stresses imposed by the leg in the forward direction, thus resulting in the ski boot being readily damaged.

Accordingly, this invention is aimed at obviating such prior deficiencies by providing a rear entry ski boot structure of a low cost design, which comprises only two component parts, namely a first part which includes the shell and front quarter, and a second part including a laterally hinged rear quarter, the

latter being, however, firmly coupled to the boot so as to prevent snow from getting in between and ensure at all times proper articulation to the shell.

Within the above aim, it is a particular object of the invention to provide a ski boot wherein the stresses which are generated on the front quarter as the leg is leaned forward can be spread over a much larger area, thus preventing breakage of or damage to the ski boot.

A further object of this invention is to provide a ski boot structure which can be assembled in a quick and simplified manner on account of the component part assembly time being much reduced.

Another object of this invention is to provide a rear entry ski boot which can be readily formed from commonly available materials in the market, and is of very low cost.

The above aim, as well as these and other objects such as will be apparent hereinafter, are achieved by a rear entry ski boot structure, according to the invention, comprising a first part defining, in an integral construction, both a boot shell and a front quarter with a rear band formation and with side flaps, and a second part including a rear quarter connected pivotally to said first part, characterized in that said first part has, at the area of pivotal connection to said second part, recesses defined between said side flaps of the boot shell and said rear band formation, at least one portion of said second part being receivable in said recesses.

Further features and advantages will be apparent from the following detailed description of a rear entry ski boot structure according to the invention, with reference to the accompanying illustrative, but not limitative, drawing, where:

Figure 1 is an exploded perspective view showing diagramatically the first and second parts composing the ski boot of this invention;

Figure 2 illustrates the step of assembling the first and second parts together;

Figure 3 is a side view of the ski boot in the closed position thereof;

Figure 4 is a side view of the ski boot in the open position thereof; and

Figure 5 is a fragmentary section according to line V-V of Figure 1.

Making reference to the drawing figures, this rear entry ski boot structure, which is generally designated with the reference numeral 1, comprises a first part, indicated at 2, which is composed of a boot shell 3 associated with a substantially rigid sole 4 and forming a unitary construction with a front quarter 5.

Pivotally connected to the cited first part 2 is a second part comprising a rear quarter 7.

It is a peculiar aspect of the invention that at the area of pivotal connection between the first and second parts there are practically defined recesses R which facilitate installation of the pins or bosses 10 forming the hinge axis.

The cited recesses R are defined by side flaps 11 of the shell 3 in cooperation with a rear band 12 which extends in practice from the heel portion of the sole 4 and spans the foot heel region over a certain distance.

Thus, in practice, an area of clearing overlap is provided between the flaps 11 and one end of the band 12 whereat the cited pocket-like recesses are located.

Through holes 15 are formed at the recess locations for receiving the pin 10 and respective boss.

In order to complete the coupling, a protuberance 20 defined on the rear quarter 7 would be inserted into the recesses whereby the rear quarter is practically coupled to underneath a portion of the cited first part to thus accomplish an excellent closure of the boot.

In order to prevent damaging stresses from arising, there is provided at the front quarter at least one shaped notch 30 which extends longitudinally over at least a portion of the front quarter, which affords a limited flex at the quarter area.

In order to spread the stresses over a large surface area, at the inward end of the front quarter there is provided a padding 31 which practically discharges the stresses onto the flaps 32 placed on the notch sides.

Thus, the instant structure ensures that the stresses are well spread and create no problems of failure of the ski boot structure.

For completeness of illustration, it should be further added that provided at the inward end of the

rear quarter is a rear padding, generally designated with the reference numeral 40.

It may be appreciated from the foregoing discussion that the invention achieves all of its objects, and in particular that the particular type of rear quarter-to-shell coupling, as accomplished by forming recesses on the shell inside, affords the possibility of making a rear entry ski boot in just two pieces, while still ensuring a firm and snow proof closure of the boot with a good clamping action on the skier's leg.

Furthermore, the provision of a longitudinal notch at the upper end of the front quarter allows any stresses to be uniformly relieved without resulting in failure of the ski boot structure.

In practicing the invention, the materials used, as long as compatible with the specific intended use, as well as the dimensions and contingent shapes, may be any suitable ones to meet individual requirements.

CLAIMS

1. A rear entry ski boot structure comprising a first part (2) defining, in an integral construction, both a boot shell (3) and a front quarter (5) with a rear band formation (12) and with side flaps (11), and a second part including a rear quarter (7) connected pivotally to said first part (2), characterized in that said first part (2) has, at the area of pivotal connection to said second part (7), recesses (R) defined between said side flaps (11) of the boot shell (3) and said rear band formation (12), at least one portion (20) of said second part (7) being receivable in said recesses.

2. A rear entry ski boot structure according to Claim 1, characterized in that said at least one portion of said second part receivable in said recesses comprises protuberances (20) provided at the lower end of said rear quarter (7).

3. A rear entry ski boot structure according to one or more of the preceding claims, characterized in that it comprises through holes (15) formed in said flaps (11), said rear band formation (12) and correspondingly in said protuberances (20) for the insertion of pins (10) pivotally connecting said rear quarter (7) to said first part (2).

4. A rear entry ski boot structure according to one or more of the preceding claims, characterized in that it comprises, located at the upper end of said front quarter (5), a shaped notch (30) extending lengthwise and spanning at least a portion of said front quarter (5).

5. A rear entry ski boot structure according to Claims 1-4, characterized in that it comprises a padding (31) applied to the inside surface of said front quarter (5) at least at the area thereof affected by said shaped notch (30).

6. A rear entry ski boot structure according to Claims 1-5, characterized in that it comprises a rear padding (40) associated with the inside surface of the upper end of said rear quarter (7).

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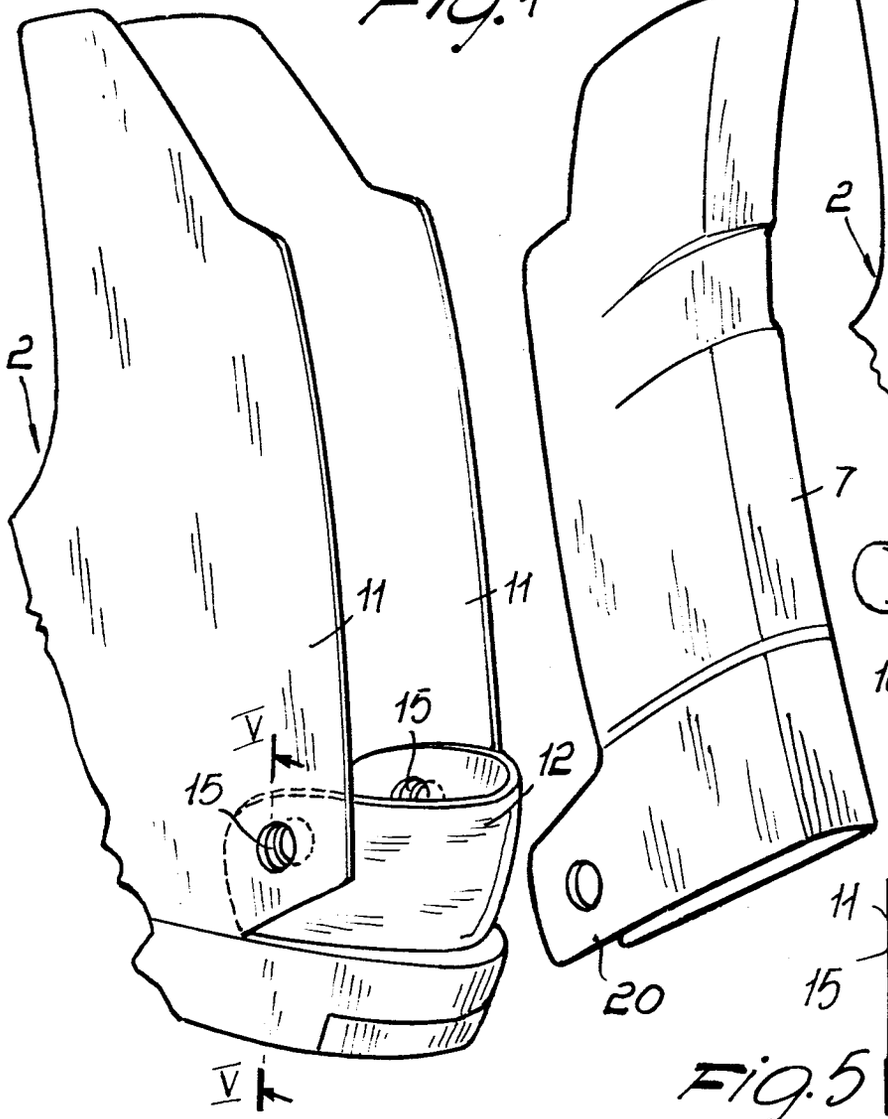
Fig.1



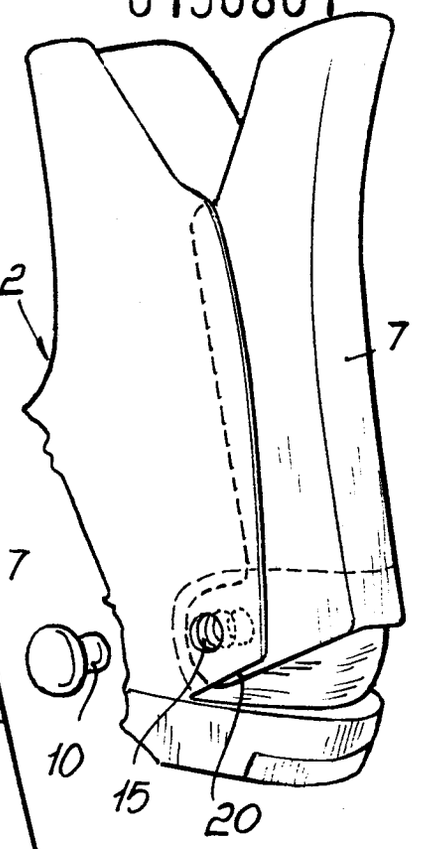


Fig.2

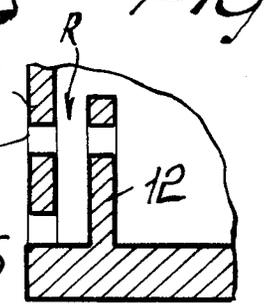


Fig.5

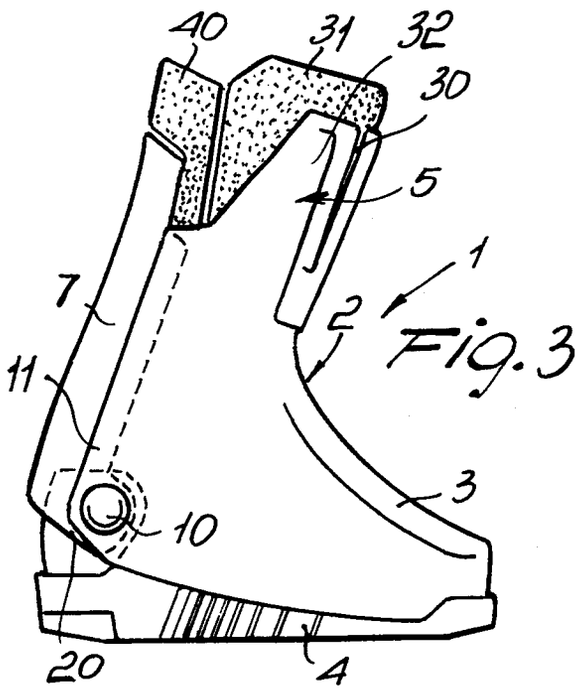


Fig.3

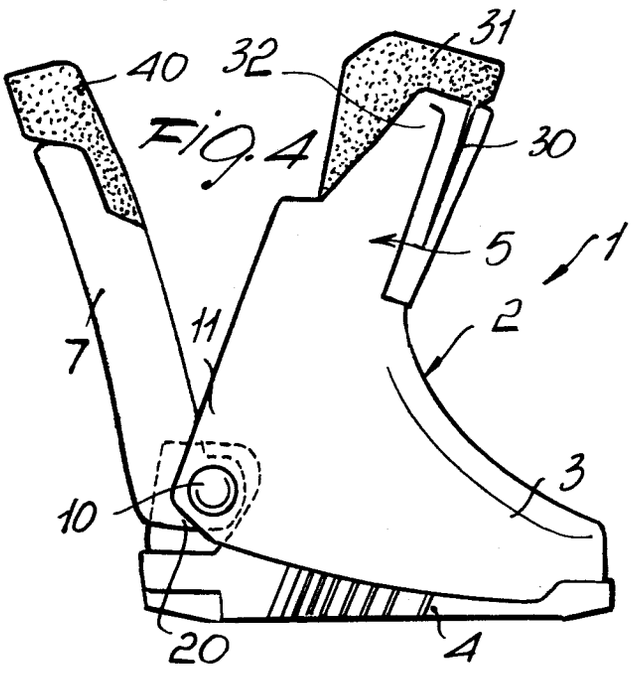


Fig.4

European Patent Office

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Application number

EP 85 10 0634

EUROPEAN SEARCH REPORT

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.4)
X,Y	FR-A-2 354 065 (F. SALOMON & FILS) * Figures 33,35,36 *	1-6	A 43 B 5/04
Y	EP-A-0 053 340 (REICHLE SPORTSCHUH) * Figures 1-9 *	2	
Y	FR-A-2 441 353 (NORDICA) * Figures 1,6 *	1,3-6	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			A 43 B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	26-03-1985	MALIC K.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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O : non-written disclosure
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E : earlier patent document, but published on, or after the filing date
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