

(12) **EUROPEAN PATENT APPLICATION**

(21) Application number: 80302602.0

(51) Int. Cl.³: **A 43 B 3/16**
A 41 D 17/00

(22) Date of filing: 30.07.80

(30) Priority: 15.08.79 GB 7928404

(43) Date of publication of application:
25.01.81 Bulletin 81/8

(84) Designated Contracting States:
CH DE FR GB IT LI

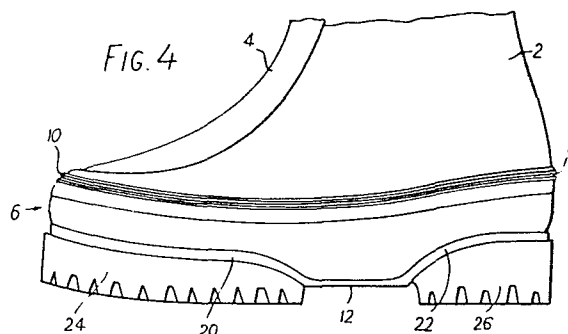
(71) Applicant: Davison, George Gordon
LD Mountain Centre Ltd Site 19, Hertburn Estate
District 11, Washington
Tyne & Wear, NE37 2SF(GB)

(72) Inventor: Davison, George Gordon
LD Mountain Centre Ltd Site 19, Hertburn Estate
District 11, Washington
Tyne & Wear, NE37 2SF(GB)

(74) Representative: Gura, Henry Alan et al,
MEWBURN ELLIS & CO. 70 & 72 Chancery Lane
London WC2A 1AD(GB)

(54) Improvements in or relating to gaiters.

(57) A gaiter for a mountaineering or like boot, the gaiter having a flexible, open-bottomed upper or leg portion (2) for encasing the boot upper and the lower extent of a wearer's leg, and a rand portion (6) of rubber or like elastic material secured to the open bottom end of the upper portion (2) to form a base to the gaiter. The rand portion (6) is provided with front and rear openings (14, 16) therethrough separated by a transverse instep strap (12) whereby, on location of the boot in the gaiter said openings (14, 16) in the rand portion (6) can be stretched over the sole (24) and heel (26) respectively of the boot with the boundaries (20, 22) of said openings making sealing contact with the welt of the boot, the instep strap (12) extending across the instep of the boot to effect said seal right around the welt of the boot.



1.

IMPROVEMENTS IN OR RELATING TO GAITERSTECHNICAL FIELD

This invention relates to gaiters for location on boots or like articles of footwear.

BACKGROUND ART

5 When walking in for example wet, muddy or snowy conditions such as occur in mountaineering, hill-climbing, fell-walking and like activities, it is desirable to wear gaiters over boots with a view to preventing the ingress of water, mud or snow into the
10 boot.

Heretofore, such a gaiter has commonly comprised an open-bottomed legging the bottom of which is secured to the sole of a boot by means of straps, wires or other tensioning devices, the legging extending
15 upwardly to cover the upper of the boot and the lower region of the wearer's leg. Such an arrangement successfully prevents direct ingress of undesirable elements into the upper of the boot but the seal between the open bottom of the gaiter and the boot
20 is not such as to prevent said elements making their way up between the gaiter and the boot upper. Thus the boot upper and laces are prone to undesirable wear while the elements eventually make their way into the boot.

2.

Further, the means for attaching the established gaiters to boots are often complex and expensive and are such as to exert a drag effect on the feet of a wearer on walking through mud, snow or the like.

5 More particularly, the means for attaching the gaiter to a boot commonly comprises a length of wire housed in a seam formed around the open-bottom of the gaiter together with a strap attached to the wire, In order to tension the wire around the welt of the
10 boot, the strap is pulled and is then passed under the instep of the boot and secured to the gaiter by a buckle or like arrangement. In an alternative arrangement the wire may be tensioned by means of a screw clip, requiring the use of a screw-driver to effect
15 the attachment.

It will be appreciated that the presence of straps, buckles, screw clips and the like all contribute towards the cost of the gaiter and are all prone to wear and damage which could result in repair or
20 replacement of the gaiter being necessary.

Furthermore, the tensioned wire does not and cannot engage with the necked part of the boot between the sole and the heel thereof with the result that, as mentioned above, mud, water, snow and the like can
25 make its way up the gaiter between the gaiter and the boot.

3.

DISCLOSURE OF THE INVENTION

According to the present invention there is provided a gaiter for location on a boot or like article of footwear, the gaiter comprising a flexible upper portion shaped to fit over the upper of the boot, and characterised by a rand portion of elastic sheet material the periphery of which is connected to said upper portion to define a base to the gaiter, said rand portion having an aperture formed therethrough across which extends an instep strap to define front and rear openings the shapes of which conform substantially with those of the sole and heel respectively of the boot but the dimensions of which are less than the corresponding external dimensions of said sole and heel, the arrangement being such that, on location of the gaiter on the boot, the boundaries of the front and rear openings in the rand portion are extended to make sealing contact with associated portions of the welt of the boot, the instep strap extending across the base of the boot between the sole and the heel thereof to ensure sealing contact of the rand portion around the welt of the boot, the rand portion of the gaiter, together with the upper portion thereof, extending upwardly of the boot from the welt to cover the upper of the boot.

Such an arrangement ensures an effective seal all the way round the welt of the boot such as to prevent

4.

the ingress of undesirable material between the boot and the gaiter whereby the wearer's foot remains dry and the boot upper and laces are protected to give added life thereto. Further, the absence of buckles, clips and like securing means reduces the drag on the boot compared with the above-mentioned established arrangements.

In one embodiment of the invention, the upper portion of the gaiter is of a flexible, non-elastic material, the periphery of the rand portion being directly attached to the lower periphery of said upper portion such that, on location of the gaiter on the boot, a differential stretch is established in the rand portion increasing from zero at the periphery thereof to a maximum value at the boundaries of the front and rear openings therein.

In an alternative embodiment of the invention, the upper portion of the gaiter is of a flexible, non-elastic material, the lower periphery of said upper portion being ruched and having the periphery of the rand portion directly attached thereto such that, on location of the gaiter on the boot, the lower periphery of the upper portion is unfolded and a differential stretch is established in the rand portion increasing from a positive minimum value at the periphery thereof to a maximum value at the boundaries of the front and rear openings therein.

5.

In a still further embodiment of the invention, the gaiter may further comprise, between the rand portion and the upper portion, an insert of an elastic sheet material which, on location of the gaiter on the
5 boot, is extended over the toe region of the upper of the boot.

In all embodiments, the instep strap may be of an elastic or a non-elastic material and may include a reinforcing insert therein.

10 Preferably the rand portion includes an increased-thickness bead portion surrounding each of the front and rear openings therein, while said rand portion may further include an increased-thickness bead portion bounding the periphery thereof.

15 In a preferred gaiter the rand portion is of rubber and the upper portion is of fabric, conveniently a waterproofed fabric, although the rand portion and the upper portion may be integrally moulded from an elastic material.

20 BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a plan view from below of the outermost face of the rand portion of a gaiter according to the invention;

Figs. 2 and 3 are sections on the line II-II and
25 III-III respectively of Fig. 1;

Fig. 4 shows part of a gaiter according to the invention, and including the rand portion of Fig. 1,

6.

located on a boot, and

Fig. 5 shows part of an alternative gaiter according to the invention located on a boot.

BEST MODES OF CARRYING OUT THE INVENTION

5 Referring to Figs. 1 to 4, the gaiter includes a substantially conventional open-bottomed upper portion part of which is shown at 2 and which is shaped to fit over the upper of a boot and at least the lower regions of a wearer's leg. The upper portion 2 may be of a
10 flexible fabric material such as canvas or waterproofed nylon and is conveniently zipped along its length, a flap 4 covering said zip.

The gaiter further includes a rand portion indicated generally at 6 of an elastic sheet material,
15 preferably waterproof, such as rubber.

The illustrated rand portion is of generally oval form, asymmetrically shaped about the minor axis and symmetrically shaped about the major axis. However the rand portion could be asymmetrical about the major
20 axis. The periphery of the rand portion 6 conforms substantially in size and shape with the periphery of the open-bottom of the upper portion 2 when said peripheries are sewn together, the rand portion then forming a base to the gaiter. More particularly a
25 continuous channel 8 is formed in an upstanding bead 10 integrally moulded on the rand portion 6 to extend right round the periphery of the outer surface of said

7.

rand portion. The lower extent of the upper portion 2 of the gaiter is abutted against the peripheral regions of the inner face of the rand portion 6 to underlie said channel and the rand portion and upper portion are sewn
5 together by thread passing through the base of the channel 8 and said two portions. Thus the individual stitches are housed within the channel 8 and the rand portion extends across the open bottom of the upper portion to form a base to the gaiter, the adjoined
10 peripheries of the two portions being in an unstretched condition.

A substantially central aperture is formed through the rand portion 6 across which extends an instep strap 12 to define front and rear openings 14,16 respectively
15 in the rand portion 6.

The shapes of the openings 14,16 conform substantially with the shapes of the sole and heel respectively of standard mountaineering or hill-climbing boots, but the internal dimensions of said openings are substant-
20 ially less than the corresponding external dimensions of said sole and heel for reasons to be detailed below.

In the embodiment illustrated in Figs. 1 to 4, the instep strap 12 is integrally moulded with the rand portion 6 and is of increased thickness compared with the
25 body part of the rand portion. Said instep strap may include a fabric reinforcement 18 therein, while the openings 14,16 may be surrounded by upstanding beads 20,22 also integrally moulded in the rand portion 6.

8.

In order to fit the above-described gaiter to a welted boot having a sole 24 and a heel 26 separated by an instep, the following procedure should be adopted.

- 5 The gaiter upper portion 2 is unzipped to the full and the toe of the boot is inserted into the toe part of the upper portion 2 with the boot laces next to the open zip. The rubber rand portion 6 of the gaiter is stretched over the toe of the boot so that
- 10 the part of the bead 20 bounding the front of the opening 14 fits into the toe portion of the welt of the boot to abut against the ledge between the welt and the sole 24 of the boot, making sure that the bead 20 does not project below the welt.
- 15 The boot is turned upside down with the toe thereof pointing away and the instep strap 12 is stretched into position to extend across the instep of the boot between the sole 24 and heel 26, the bead 20 of the rand portion then fitting snugly onto that part
- 20 of the welt of the boot above the sole 24 while the front edge of the instep strap 12 abuts the rear transverse face of said sole.

- The rear of the rand portion 6 is stretched over the heel 26 of the boot so that the bead 22 fits
- 25 snugly onto that part of the welt of the boot above the heel 26 while the rear edge of the instep strap 12 abuts the front transverse edge of said heel.

9.

The gaiter is now in the position shown in Fig. 4 and it will be appreciated that the elastic nature of the material of the rand portion 6, together with the tension in the instep strap 12 acting on the rand
5 portion, ensures an effective seal between the rand portion 6 of the gaiter and the boot right around the welt region of said boot with said rand portion 6 conforming closely with the shape of the boot.

More particularly, a differential stretch exists
10 across the rand portion 6 increasing from zero around the periphery of said rand portion 6 at its region of attachment to the upper portion 2 to a maximum value at the beads 20,22, with the tension in the instep strap causing the rand portion 6 to seal against the
15 instep of the boot.

Instead of being integrally moulded with the rand portion 6, the instep strap may comprise a separate component secured to the rand portion 6 and may be of a non-elastic material.

20 Before the rand portion 6 is secured to the open-bottom end of the upper portion 2, the material defining said open bottom may be ruched, the arrangement being such that, on location of the gaiter on a boot as described above, the ruched material is
25 unfolded and a corresponding stretch is imparted to the adjoined periphery of the rand portion 6 whereby a differential stretch exists across the rand portion

10.

increasing from a positive minimum value at said periphery to a maximum value at the beads 20,22.

Instead of fabricating the rand portion 6 and upper portion 2 as two separate components and subsequently securing said two portions together, the gaiter may be moulded as one piece from an elastic material.

An alternative embodiment is shown in Fig. 5 and has an insert portion 28 of an elastic material located between the parts of the rand portion 6 and upper portion 2 to surround the toe of the boot. The purpose of this insert portion 28 is to increase the flexibility of the gaiter at the toe end thereof to facilitate location of the gaiter on a boot and to increase the range of boot sizes one particular gaiter will fit.

More particularly, the insert portion 28 is of sheet elastic material one edge 30 of which is secured to the front periphery of the rand portion 6 and the other edge 32 of which is secured to the periphery of the front part of the open bottom end of the upper portion 2. In common with the embodiment of Figs. 1 to 4, the periphery of the rand portion 6 and the open bottom end of the upper portion 2 are secured together over the rear parts thereof.

In the unstretched condition of the gaiter, the front of the rand portion 6 and the insert portion 28

11.

define therebetween a cup to receive the toe of the boot. On insertion of the toe of the boot therein, the elastic nature of the insert portion 28 facilitates stretching of the rand portion 6 over the sole of the
5 boot and also permits boots of different sizes to be received within the same gaiter, the size of the boot determining the degree of stretch of the portion 28.

The insert portion 28 may comprise a separate component secured, for example by sewing, to both the
10 rand portion 6 and the upper portion 2. Alternatively the insert portion 28 may be integrally moulded with the rand portion 6.

All the described embodiments have many advantages over the above-detailed known arrangements particularly
15 in that the close fit between gaiter and boot all around the welt of the boot provides full protection to both the boot and the wearer's leg and foot against snow or water penetration and therefore against cold. Thus the boot uppers and laces are protected from
20 rocks, scree, abrasion and constant soakings thereby increasing the potential life of a boot by a significant amount.

The gaiter is of a smooth external shape with no straps, wires or other devices present to exert a drag
25 on the wearer when walking through snow, mud or the like, while there are no 'mechanical' parts to rust or otherwise deteriorate or malfunction.

12.

CLAIMS

1. A gaiter for location on a boot or like article of footwear, the gaiter comprising a flexible upper portion (2) shaped to fit over the upper of the boot, and characterised by a rand portion (6) of elastic sheet material the periphery of which is connected to said upper portion (2) to define a base to the gaiter, said rand portion having an aperture formed therethrough across which extends an instep strap (12) to define front and rear openings (14,16) the shapes of which conform substantially with those of the sole (24) and heel (26) respectively of the boot but the dimensions of which are less than the corresponding external dimensions of said sole (24) and heel (26), the arrangement being such that, on location of the gaiter on the boot, the boundaries of the front and rear openings (14,16) in the rand portion (6) are extended to make sealing contact with associated portions of the welt of the boot, the instep strap (12) extending across the base of the boot between the sole (24) and the heel (26) thereof to ensure sealing contact of the rand portion (6) around the welt of the boot, the rand portion (6) of the gaiter, together with the upper portion (2) thereof, extending upwardly of the boot from the welt to cover the upper of the boot.

2. A gaiter as claimed in claim 1 in which the upper portion (2) of the gaiter is of a flexible, non-

13.

elastic material, the periphery of the rand portion (6) being directly attached to the lower periphery of said upper portion (2) such that, on location of the gaiter on the boot, a differential stretch is established in the rand portion (6) increasing from zero at the periphery thereof to a maximum value at the boundaries of the front rear openings (14,16) therein.

3. A gaiter as claimed in claim 1 in which the upper portion (2) of the gaiter is of a flexible, non-elastic material, the lower periphery of said upper portion being ruched and having the periphery of the rand portion (6) directly attached thereto such that, on location of the gaiter on the boot, the lower periphery of the upper portion (2) is unfolded and a differential stretch is established in the rand portion (6) increasing from a positive minimum value at the periphery thereof to a maximum value at the boundaries of the front and rear openings (14,16) therein.

4. A gaiter as claimed in claim 1 and further comprising, between the rand portion (6) and the upper portion (2), an insert (28) of an elastic sheet material which, on location of the gaiter on the boot, is extended over the toe region of the upper of the boot.

5. A gaiter as claimed in any one of claims 1 to 4 in which the instep strap (12) is of an elastic



14.

material.

6. A gaiter as claimed in claim 5 in which the instep strap (12) is integrally formed with the rand portion (6).

5 7. A gaiter as claimed in any one of claims 1 to 4 in which the instep strap (12) is of a non-elastic material.

8. A gaiter as claimed in any one of claims 1 to 7 in which the instep strap (12) includes a
10 reinforcing insert (18) therein.

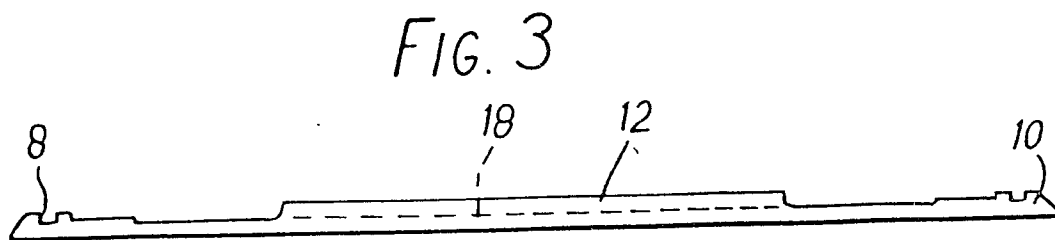
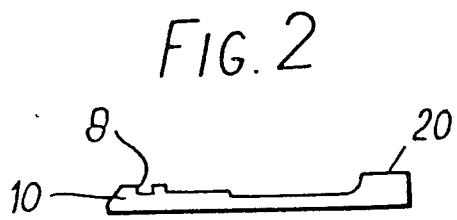
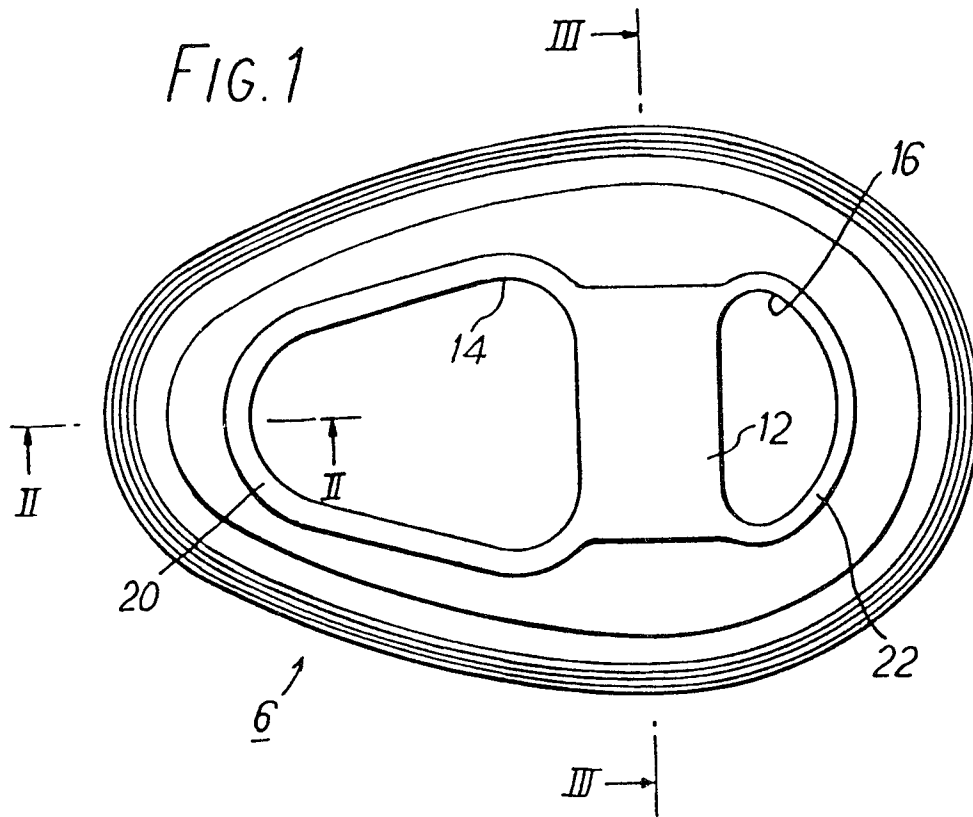
9. A gaiter as claimed in any one of claims 1 to 8 in which the rand portion (6) includes an increased-thickness bead portion (20,22) surrounding each of the front and rear openings (14,16) therein.

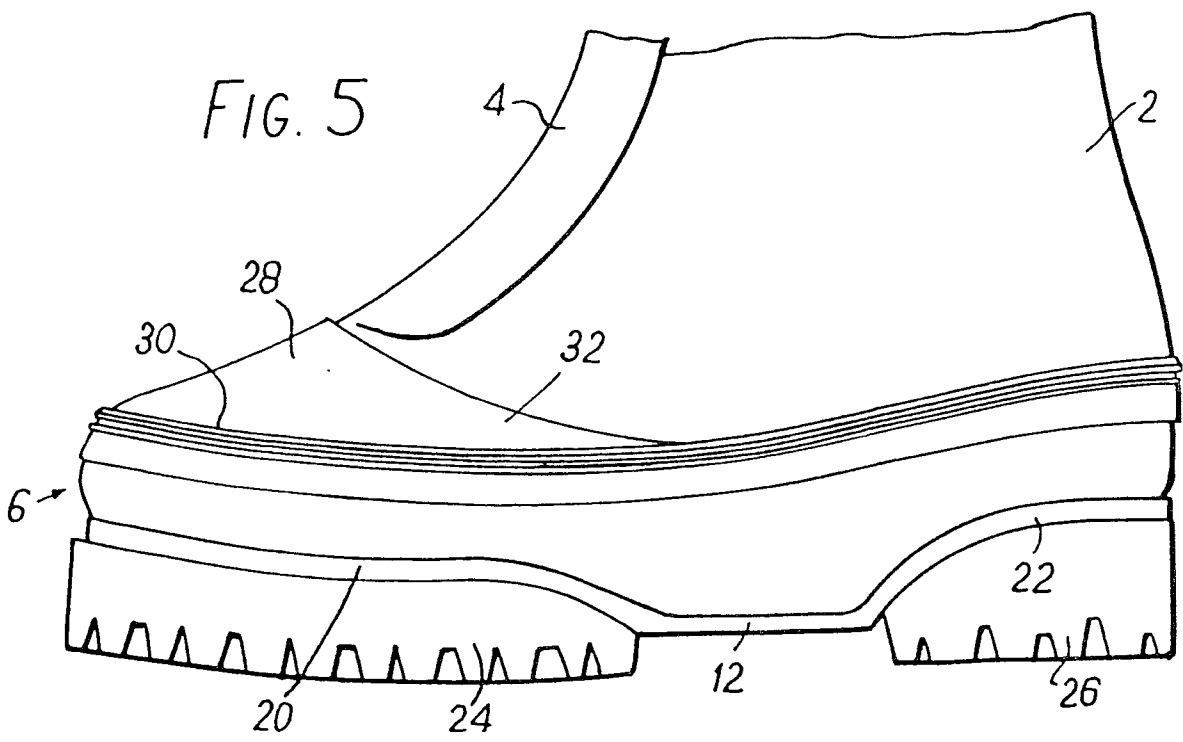
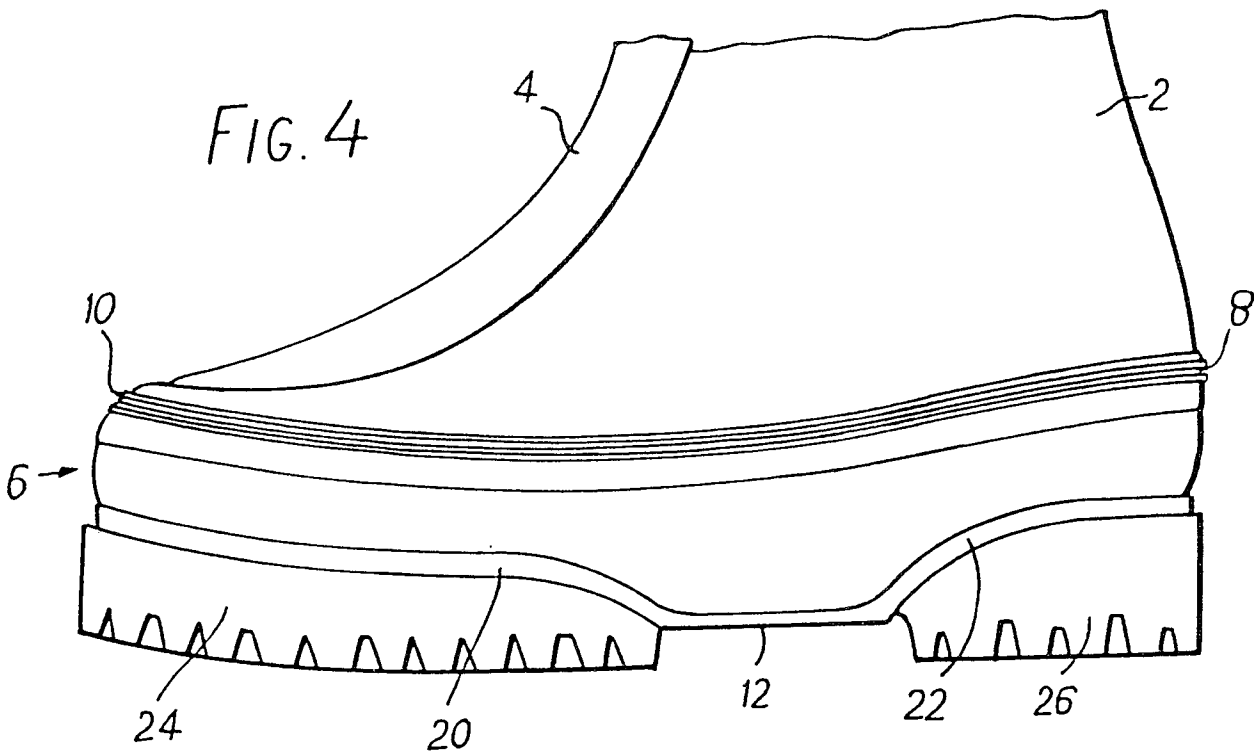
15 10. A gaiter as claimed in any one of claims 1 to 9 in which the rand portion (6) includes an increased-thickness bead portion (10) bounding the periphery thereof.

11. A gaiter as claimed in any one of claims
20 1 to 10 in which the rand portion (6) is of rubber and the upper portion (2) is of fabric.

12. A gaiter as claimed in claim 1 in which the rand portion (6) and the upper portion (2) are integrally moulded from an elastic material.









European Patent
Office

EUROPEAN SEARCH REPORT

0024143

Application number

EP 80 30 2602

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	<u>US - A - 2 970 390</u> (W. BROUGH) --	1,5,6, 9,12	A 43 B 3/16 A 41 D 17/00
	<u>DE - C - 177 157</u> (H.HORN) --	1,5	
	<u>US - A - 2 032 793</u> (R. CLARK) --	1,5	
A	<u>US - A - 2 032 052</u> (S. FRIEDENBERG)		
A	<u>US - A - 2 061 160</u> (E.KENDALL) -----		
			TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
			A 43 B A 41 D
			CATEGORY OF CITED DOCUMENTS
			X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons
			&: member of the same patent family, corresponding document
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
The Hague	04-11-1980	DECLERCK	