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A request for correction of line 39, page 2 and lines 8 and 9, page 3 of the originally filed description has been filed pursuant to Rule 88 EPC. A decision on the request will be taken during the proceedings before the Examining Division (Guidelines for Examination in the EPO, A-V, 2.2).

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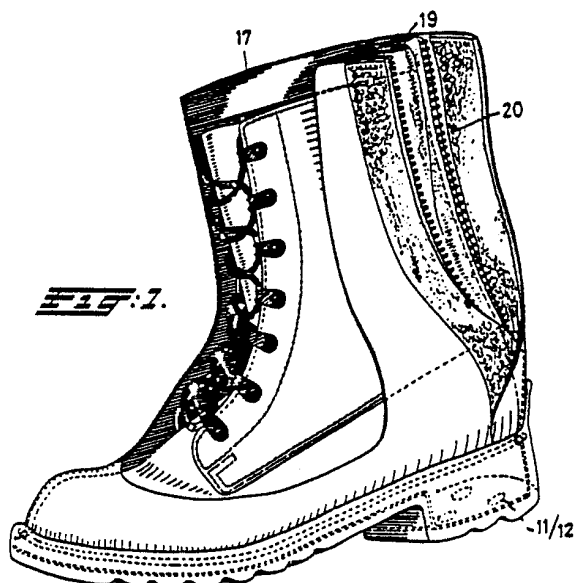
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(54) **A shoe composed of replaceable elements.**

(57) A shoe composed of replaceable elements comprising an inner sole (1,2) and upper parts (2) connected thereto said inner sole having a protruding rim (4), a separate outer sole (5,6) having an undercut rim portion (7,8) being adapted to be releasably attached to said inner (1,2) by means of said undercut portion (7,8) gripping around said protruding rim (4). The upper parts (2) can be covered by an upper cover (17) to be clamped between said undercut rim portion (7,8) and said inner sole rim (4).



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A shoe composed of replaceable elements.

For protecting footwear, e.g. against contamination, moisture or cold, overshoes or boots are known which are to be worn over normal footwear. In the case of protection against a contaminated environment such overshoes or boots can be removed for being decontaminated or destroyed.

An objection of such overshoes is, that in use the normal footwear is made heavier and its flexibility is reduced, so that the user will be hindered thereby, and, in any case, walking with such overshoes takes place in a different manner than with normal footwear.

It is an object of the invention to provide a shoe which, without these objections, is suitable for the above-mentioned and also other purposes, and which, moreover, has additional advantages. Although this shoe has been developed, in the first place, for military uses, its application is not restricted thereto.

The shoe according to the invention, comprising an outer sole and an inner sole with upper parts connected thereto, is characterised by a separate outer sole made of plastics or rubber with an undercut rim portion which is adapted to grip tightly around the protruding rim of the inner sole, in order to be releaseably engaged with said inner sole, which rim portion of the outer sole is, in particular, provided with an embedded tensioning wire arranged above said undercut, which outer sole, moreover, can be provided with a pulling tab in its heel portion, by means of which the undercut rim can be pulled away from the rim of the inner sole, in order to release said outer sole, and, if required, said tensioning wire can be provided with a tensioning clamp by means of which the tensioning wire, after applying the outer sole, can be tightened.

Moreover additional anchoring means can be provided, such as, in particular, snap or lock connections, and/or embedded stiffening hooks or the like gripping around the inner sole.

Furthermore the shoe according to the invention can be provided with an additional protecting upper cover which surrounds the upper portion of the shoe, which upper cover, in particular, is separate from the outer sole, a rim portion thereof being sealingly clamped behind the undercut rim portion of the outer sole.

The outer sole is intended to be provided, under all circumstances, on the shoe, which, in particular, is provided with a thin flexible inner sole which is not intended for walking thereon. The user always walks on footwear with the same weight and the same flexibility. In the case of a separate upper cover, the latter can be provided at will, said upper

cover being light, so that it will not or hardly influence walking.

An additional advantage of such a separate outer sole is that it can be easily replaced, so that, also in the case of damage or wear of said sole, immediately a new outer sole can be provided without replacement of the upper parts, which, in particular for military uses, has important advantages in view of transport and storage of replacement material. It is also possible to replace such an outer sole by a sole with an other profile, which can be important particularly in the case of mountaineering, which sole can be provided, if desired, with nails or the like.

With the same outer sole different separate upper covers can be used, e.g. exclusively for protection against contamination, for providing water-proofness, or with an additional heat-insulating effect.

The invention will be described below in more detail by reference to a drawing, showing in:

Fig. 1 a representation in perspective of an ankle-boot which is provided with an outer sole and an upper cover (shown partly broken away) according to the invention;

Fig. 2 a partial section of Fig. 1; and

Figs. 3A and 3B partial sections at a larger scale of rim portions of an outer sole according to the invention with additional stiffening means.

In the drawing an ankle-boot 1, in particular a soldier's shoe, consisting of a sole 1 and upper parts 2 connected thereto in a manner not shown. This sole 1 merges with a heel portion 3, and is provided with a circumferential outer rim 4 which protrudes outside the upper portion 2. The sole 1 and heel 3 can form a single piece which needs not to be wear-proof, so that the sole 1 can be relatively thin and flexible, and the heel portion 3 can be lower than in the case of a normal sole.

This shoe is provided with a protector which, in the first place, comprises an outer sole 5 with a heel portion 6, which outer sole and heel portion are formed of one piece of plastics or rubber. The outer sole 5 is, moreover, provided with a circumferential upstanding rim 7 with a bulge 8, in which bulge a continuous tensioning wire 9 is embedded. As follows from Fig. 2, said bulge 8 defines an undercut in which the protruding rim 4 of the sole 1 and its heel portion 3 fits.

The tensioning wire 9 should be sufficiently elastic for ensuring a good clasp without hindering the application of the bulge 8 around the sole rim 4 and removing it again. This is facilitated by providing the rear portion of the bulge 8 with a pulling tab 10 by means of which the bulge 8 can

be sufficiently bent outwards, and, when applying the sole, it can be pulled by means of this tab. If necessary the tensioning wire 9 can be provided with a tensioning clamp by means of which, after applying the sole, the wire 9 can be put under the required tension.

In order to avoid vertical movements between the sole 1 and/or heel 3 and the outer sole 5 and its heel portion 6 respectively, and in particular such movements which might give rise to the outer sole coming off, additional securing means can be applied. Fig. 2 shows bushes 11 sunk into the heel 3 of the shoe proper, into which locking pins 13 engaging recesses 12 in the heel portion 6 can be fixed by rotation thereof over, for instance, a quarter turn, which rotation can be obtained by means of a coin. As a matter of fact also snap locks or the like can be used instead thereof, which can, moreover, be arranged also in other points of the sole.

As shown in Fig. 3A, the upstanding rim portion 7 can, if required, be stiffened in appropriate points by means of an embedded strip 14 made of steel or the like, a curled portion 15 thereof gripping around the wire 9, in order to improve the grip on the rim 4 of the sole 1.

The sole portion 5' near the heel portion 6 is, as a rule, narrowed so that, there, the tensioning wire 9 may be less effective. It can be favourable then, as shown in Fig. 3B, to provide the rim bulge 8 of such a widened portion 8' that the wire 9 will not be bent substantially inwards, and between the wire 9 and the inner end of the widened part 8' a hard filler 16 can be inserted in order to transfer the pressure of the wire 9 inwards, which pressure piece 16 can also be a part of a stiffening hook according to Fig. 3A.

For a further protection against moisture, cold and, as the case may be, contamination, a separate upper piece 17 can be used, and a terminal rim 18 thereof can be clamped below the bulge 8 of the outer sole, thus providing a sealed connection. This upper portion consists, for instance, of impermeable material, and can, in particular, be provided with an insulating lining.

The upper piece can have any height suitable for the purpose in view, and is, therefore, not restricted to the shape shown. Additional tensioning means can be provided for closing the upper part thereof around the leg of the user. This can, for instance, be done in the manner shown by providing a pleat 19 with a zip-fastener.

It will be clear that also an upper piece can be used which is fixedly connected with the sole 5.

Claims

1. A shoe, comprising an outer sole and an inner sole with upper parts connected thereto, **characterised** by a separate outer sole (5, 6) made of plastics or rubber with an undercut rim portion (7, 8), adapted to grip tightly around the protruding rim (4) of the inner sole (1, 2) in order to releasably engage with said sole rim (4).

2. The shoe of claim 1, **characterised** in that the rim portion (7, 8) of the outer sole (5) is provided with an embedded tensioning wire (9) arranged above said undercut.

3. The shoe of claim 1 or 2, **characterised** in that the outer sole (5, 6) is provided in its heel portion (6) with a pulling tab (10).

4. The shoe of claim 2 or 3, **characterised** in that the tensioning wire (9) is provided with a tensioning clamp.

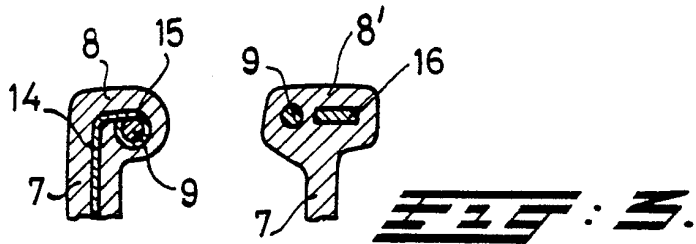
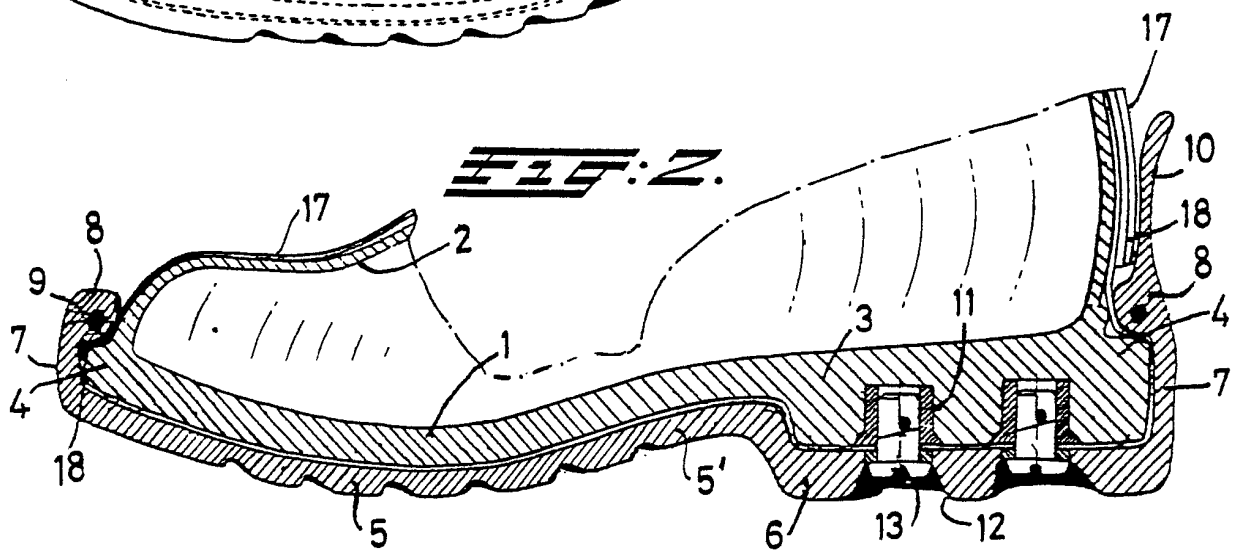
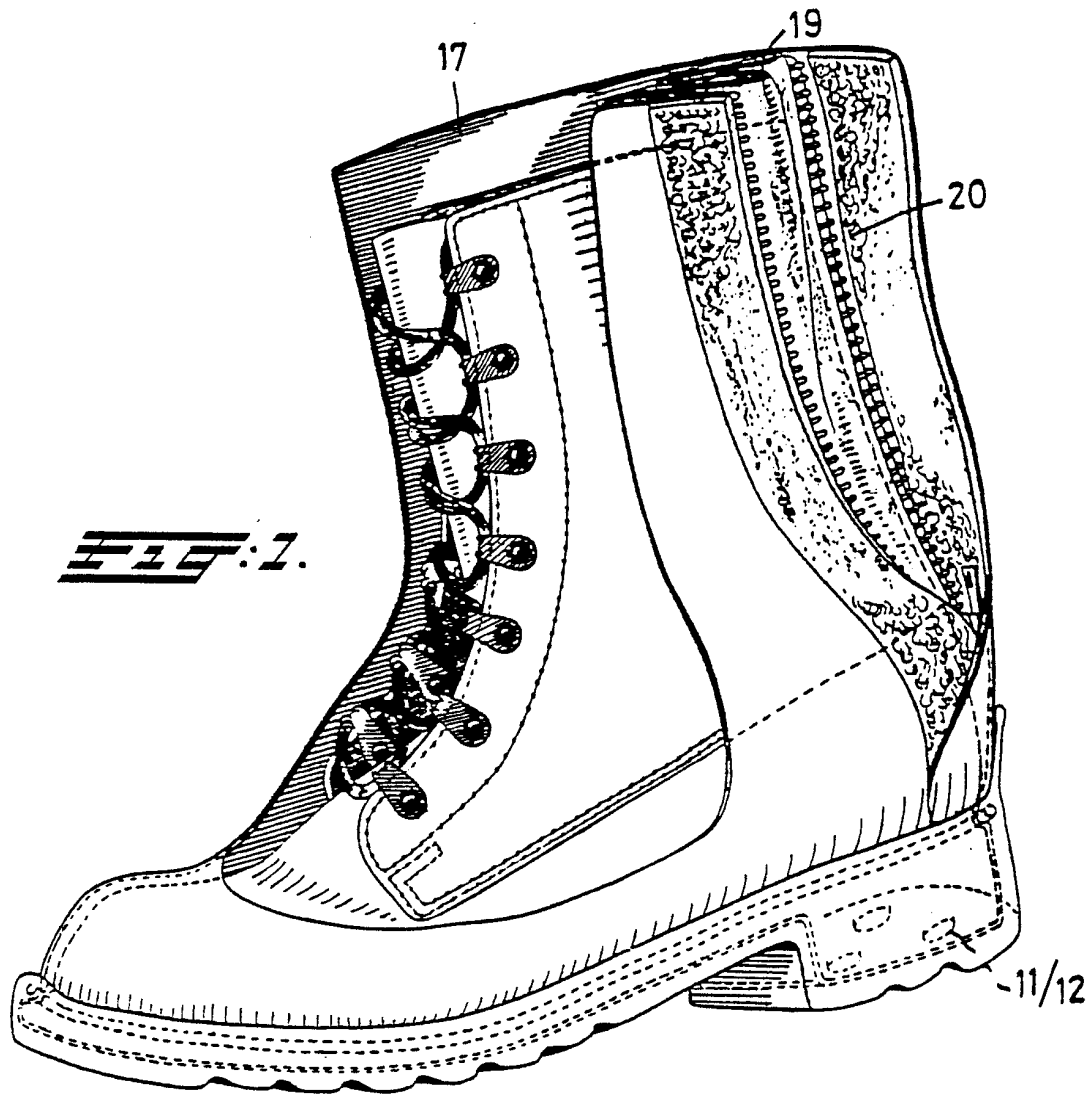
5. The shoe of any one of claims 1..4, **characterised** by additional anchoring means.

6. The shoe of claim 5, **characterised** in that the additional anchoring means comprise snap or lock connections (11..13) which are in particular provided in the heel portion (6).

7. The shoe of claim 5 or 6, **characterised** by embedded stiffening hooks (14) gripping around the inner sole (1).

8. The shoe of any one of claims 1..7, **characterised** by an additional upper cover (17) surrounding the upper portion (2) of the shoe.

9. The shoe of claim 8, **characterised** in that the upper cover (17) is separate from the outer sole (5, 6), a rim portion (18) thereof being adapted to be sealingly clamped under the undercut rim portion (7, 8) of the outer sole (5, 6).



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UW REF.:
MIJN REF.: Lx 876560/Mm/cs

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WILLEM WITSENPLEIN 3-4

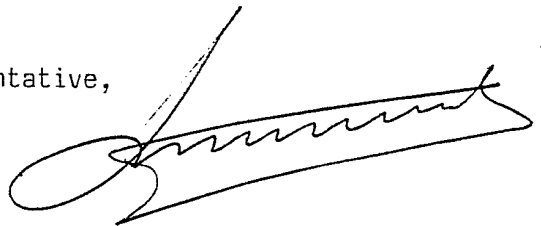
Re: European patent application No. 87202307.2
in the name of Nederlandse Organisatie voor Toegepast-
Natuurwetenschappelijk Onderzoek TNO

Please find enclosed the certified copy of the basic
Netherlands patent application No. 8602995 and an English
translation of this certified copy.

I kindly request you to amend the specification of European
patent application No. 87202307.2 as follows:

- P.2 (39) "sole" must be "inner sole"
- P.3 (8,9) "a protector ... comprises" to be cancelled.

The Representative,



Encl.

For the purpose of publication, only	
☒	as received
☐	as received with exception
☐	as received with amendments
☐	as received
☒	date: 22/12/87
☒	Receiving Section



European Patent
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EUROPEAN SEARCH REPORT

Application Number

EP 87 20 2307

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	DE-A-3 205 444 (CONTINENTAL GUMMI-WERKE AG) ---	1,3	A 43 B 3/16
X	FR-A- 361 307 (A. ROBERTS et al.) ---	1,2	
A	EP-A-0 185 588 (J.C. BEHAR) -----	8,9	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			A 43 B A 43 C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27-01-1988	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			