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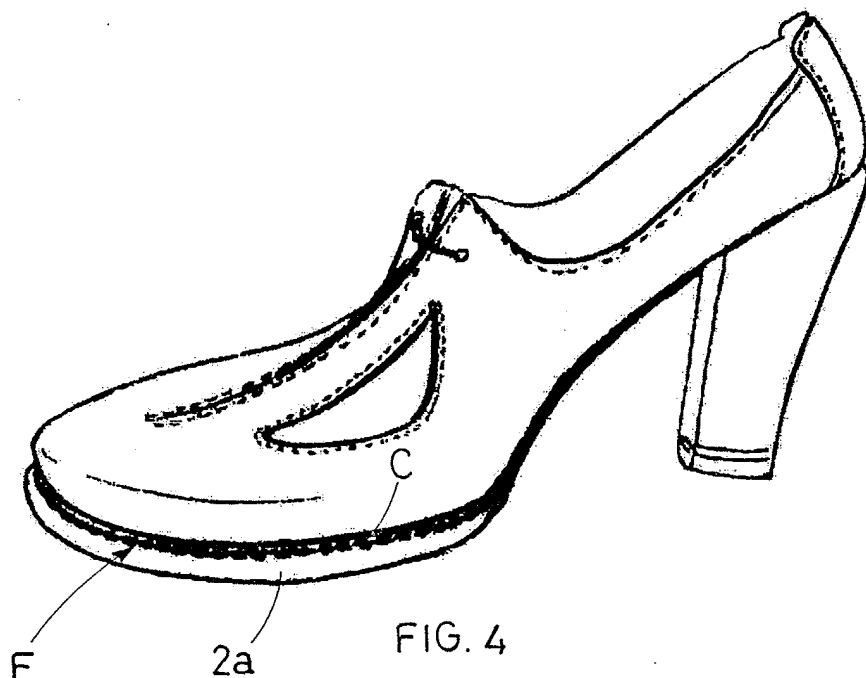
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(54) **Fabrication process for footwear soles**

(57) The present invention refers to a fabrication process for footwear soles, according to which the lower side of the sole (1) is covered with a thin layer of leather (2) having the same shape as the sole and a larger sur-

face than the sole, so that the external edges (2a) protrude slightly with respect to the perimeter of the sole, over which the protruding edges (2a) are folded, glued and/or sewn.



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Description

[0001] The present patent application refers to a fabrication process for footwear soles, as well as to the soles obtained with this process.

[0002] According to traditional technology, leather soles consist in a single piece of leather, on which a heel is applied successively.

[0003] The leather used for the sole must be suitably punched in order to have the desired shape, and then milled on the perimeter borders.

[0004] The upper is then applied over the sole and fixed in a stable way to the sole by means of sewing and/or gluing.

[0005] The operations that are needed to finish the shoe also include the assembly of a perimeter band, known as "welt", by means of sewing and/or gluing.

[0006] The function of the welt is to surround the entire upper on the perimeter of the leather sole and give a more refined look to the entire shoe, since the milled perimeter of the leather sole is not satisfactory from the aesthetic viewpoint.

[0007] As mentioned earlier, the present invention refers to a new fabrication process for leather shoes that is intended to innovate the traditional technology, which has been confined to standardised solutions for long.

[0008] The process of the invention provides for the fabrication of soles with a more refined aesthetic look that can considerably improve the aesthetics of the sole.

[0009] The sole obtained with the process of the invention is characterised by high finish on the perimeter and does not require the assembly of the traditional perimeter welt.

[0010] The idea of the present invention basically consists in gluing a thin layer of leather on the lower side of a leather sole.

[0011] In particular, the layer of leather that covers the lower side of the sole has the same shape as the sole and a higher surface than the sole, so that the external edges protrude slightly with respect to the perimeter edges of the sole.

[0012] This allows for folding the protruding edges of the leather inwards, so that the edges can cover the perimeter borders of the leather sole and be fixed on the upper side of the sole by means of a seam, thus creating a highly refined perimeter band having the same aspect and aesthetics of a traditional welt.

[0013] It can be said that the first advantage of the sole obtained with the process of the invention is represented by the intrinsic aesthetic level and is related to the possibility of avoiding the use of a traditional welt.

[0014] Furthermore, the good finish of the perimeter edges, which are covered with a thin layer of leather, avoids the need to perform the traditional milling on the perimeter borders.

[0015] Since the perimeter borders are covered, the sole of the invention is characterised by a higher level of water tightness with respect to soles obtained with

traditional methods.

[0016] It must be noted that the process of the invention also includes an additional optional operating stage, which refers to the application of a rubber sole (preferably provided with anti-slip tread) on the section of the leather sheet that covers the front half of the leather sole.

[0017] It is worthless saying that, without leaving the scope of the present invention, the process can also be used with PVC soles, for example, other than leather soles.

[0018] The good outcome of the final product, however, is ensured by the "hidden" PVC covering obtained by folding the layer of leather over the borders; in this way, the layer of leather can give the impression that the sole is completely made of natural material.

[0019] For major clarity the description of the invention continues with reference to the enclosed drawing, which are intended for purposes of illustration only and not with a limiting sense, whereby:

- Figures 1/1A, 2/2A and 3/3A show the different stages of the process of the invention by means of views of the sole during fabrication with corresponding transversal cross-sections.
- Figure 4 is a diagrammatic view of a woman's shoe provided with the sole obtained with the process of the invention.

[0020] According to the process of the invention, which is applied starting from a sole (1) made of leather or other suitable materials, the sole (1) is covered with a thin layer of leather (2) provided with slightly protruding borders (2a), as shown in Figure 1/1A.

[0021] The protruding borders (2a) are first folded upwards (as shown in Fig. 2/2A) and then inwards (as shown in Figures 3/3A) to cover the lateral borders (1a) of the sole (1) and are glued and/or sewn on the upper side of the sole (1), thus creating a leather perimeter band (F), preferably characterised by a visible seam (C) that imitates a welt.

[0022] It appears evident that the sole obtained with the process of the invention can be provided with a traditional heel and possibly with a rubber sole, preferably with anti-slip tread, applied in the front half of the sole.

[0023] Finally, it must be said that although Fig. 1 shows a possible embodiment of the present invention, in which the borders (2a) of the leather layer (2) are folded only in the front half, the same borders can be folded and fixed along the entire perimeter of the sole.

Claims

1. Fabrication process for footwear soles, **characterised by** the fact that the lower side of the sole (1) is covered with a thin layer of leather (2) with protruding borders (2a), which are first folded upwards

and then inwards to cover the lateral borders (1a) of the sole (1) and are glued and/or sewn on the upper side of the sole (1), thus creating a leather perimeter band (F).

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2. Fabrication process for footwear soles as defined in the preceding claim, **characterised by** the application of a rubber sole on the section of the leather layer (2) that covers the front half of the leather sole (1).

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3. Sole obtained with the process as defined in the preceding claims.

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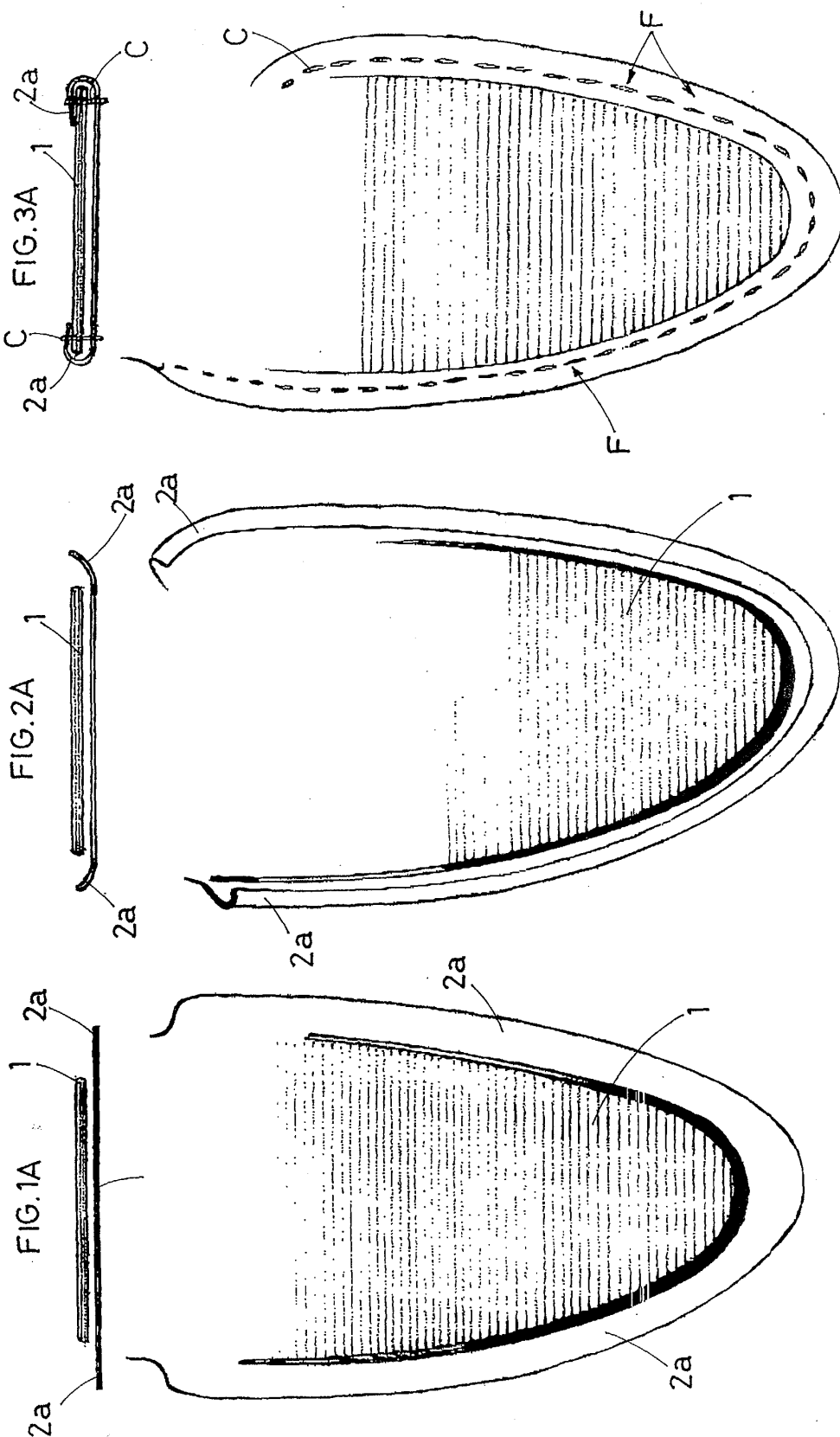
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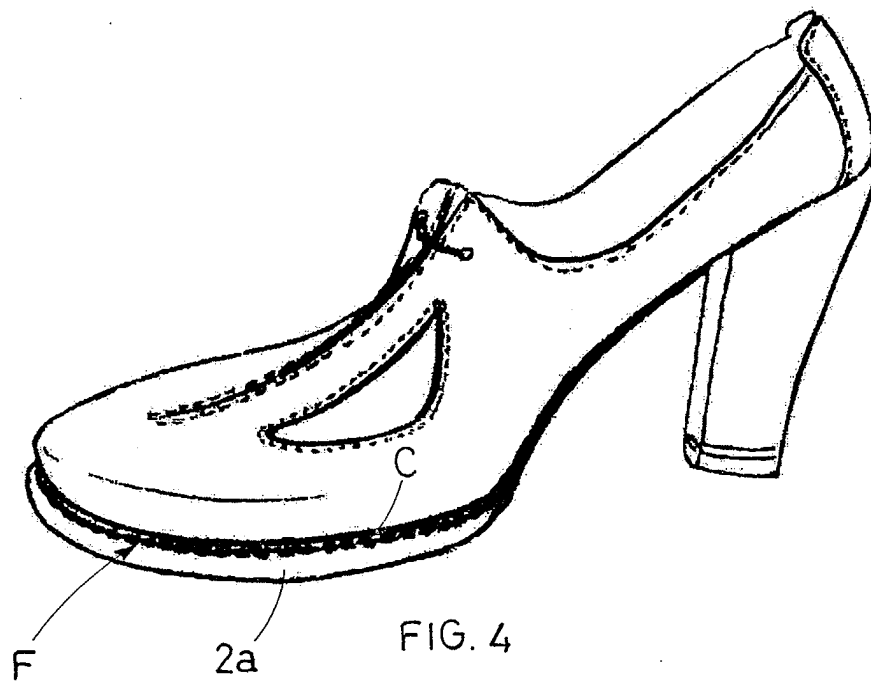
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EUROPEAN SEARCH REPORT

Application Number
EP 04 42 5568

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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		5 November 2004	Cianci, S
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			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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