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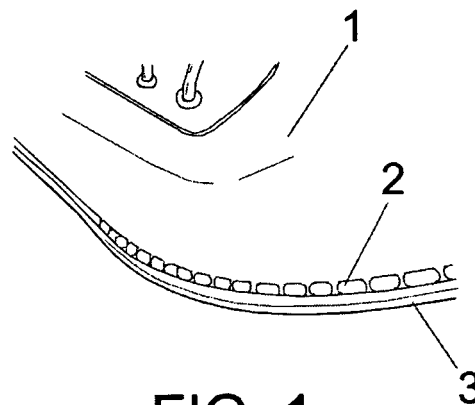
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**07300 Inca (Baleares) (ES)**

(54) **SYSTEM FOR PROTECTING THE SEAM OF A SHOE UPPER**

(57) The invention relates to a system for protecting a seam (2) produced by the "stitch down" process, by means of sealing with a rubber strip, said seam being produced by stitching the outwardly mounted edge of the

corresponding upper (1) to the corresponding sole (3) or welt, in such a way that the rubber strip (4) is fixed by vulcanization, sealing the seam (2) itself, and thereby waterproofing the seam and the shoe.



**FIG. 1**

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## Description

### Object of the invention

[0001] The present invention relates to a system for protecting the seam of the shoe upper wherein said seam performs the fixation by stitching the edge projected outward of the upper with the sole or welt of the shoe itself, the process known as "stitch down".

[0002] The object of the invention is to achieve the waterproofing of the seam referred above and therefore of the seam made-up by the aforementioned "stitch down" system.

### Background of the invention

[0003] There are processes for manufacturing shoe, and can be cited as those most known the so-called "strobel" and "stitch down", in such a way that in the first case it is created a inner cover of the upper by zigzag stitching of a inner sole to the upper, while in the second case a inner sole is fixed to the sole and subsequently the upper is tightened and pasted to the sole, leaving the fixing seam of the inner sole outwardly of the shoe and therefore with a total lack of waterproofing in the same.

[0004] This problem is trying to be resolved by a sticking outward of the perimeter edge of the sole to the upper, which not avoids having to fix or stitch the constituent inner sole of the cover and of the step of pasting the sole to the inner sole itself.

[0005] In any case, the waterproofing cannot be achieved effectively and the use of the mounting inner sole cannot be avoided and however adhesives are required to fix the upper to the sole.

[0006] On the other hand, the invention patent 414080 describes a manufacturing process of a shoe, and specifically a process for fixing the upper to the sole, by a seam, but always with a lack of waterproofing of the fixation.

### Description of the invention

[0007] The system proposed has been conceived to solve the problems previously set forth, based on a simple but extremely effective solution.

[0008] Specifically, the new system consist of protecting the seam produced by the "stitch down" process by sealing with a crude strip rubber, being the set then vulcanized in an autoclave, in such a way that the aforementioned seam remains protected against water and therefore waterproofing the shoe, in addition to make-up a medium that reinforces the bond between the upper and the sole, since the seam that joins the upper to the sole or welt is performed on an edge projected outwards from the upper itself.

[0009] Using this system the use of mounting inner soles is not required, thus reducing the use of adhesives since the bond of the upper to the sole is performed by

stitching and not gluing, definitively resulting and as a result in a great flexibility shoe.

[0010] Using this protection system is also achieved an optimum finish in regards to the aesthetic aspect of the shoe, regardless of achieving the waterproofing with the rubber strip, the bond between upper and sole is also reinforced.

### Description of the drawings

[0011] To complement the description below and in order to help to a better understanding of the features of the invention, in accordance with a preferred example of embodiment thereof, is accompanied as an integral part of the description a set of drawings wherein, with illustrative and non-limitative character, has been represented as follows:

Figure 1 shows a detail in perspective from one side and partial portion of a shoe in which the corresponding seam of the upper to the sole, all this as is conventionally.

Figure 2 shows a perspective view of the shoe equipped with the covering rubber strip and waterproofing of the seam shown in the previous figure.

### Preferred embodiment of the invention

[0012] As can be seen in the aforementioned figures, the "stitch down" process for manufacturing shoes, consist in that the edge of the shoe upper (1) is mounted outwardly and is stitched by a seam (2) to the corresponding sole (3) or welt, as depicted in Figure 1.

[0013] In that regard, the novelty consists of protecting this seam (2) by a crude rubber strip (4) that is then vulcanized with the rest of the shoe in an autoclave, providing in this way not only the protection and waterproofing of the shoe seam (2), and therefore of this latter, but the bond between upper (1) and sole or welt (3) is reinforced, not only against water, but other external agents, such as friction, etc.

[0014] The shoe with the improvement described and corresponding to the invention does not require mounting inner sole, in addition the use of adhesives is reduced since the fixation of the upper to the sole is performed by a seam and not glued, resulting further in a remarkably flexible shoe.

### Claims

1. System for protecting the seam of a shoe upper, which being applicable in that type of shoes in which the manufacturing process is based on the fact that the edge of the corresponding upper (1) is mounted outwardly and is stitched by a seam (2) to the sole itself (3) or welt, is **characterized in that** it consist

of applying on said seam (2) a crude rubber strip (4), whereupon the vulcanization is performed in autoclave of the set, protecting and waterproofing the seam (2) and thereby the shoe itself.

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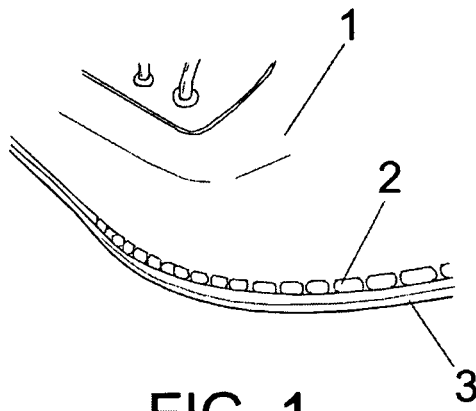


FIG. 1

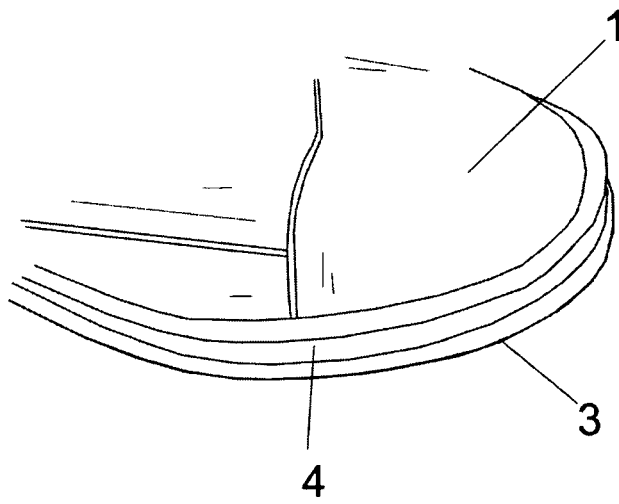


FIG. 2

## INTERNATIONAL SEARCH REPORT

International application No.  
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A. CLASSIFICATION OF SUBJECT MATTER		
<b>A43B15/00</b> (2006.01) <b>A43B9/04</b> (2006.01) 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) <b>A43B</b>		
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 practicable, search terms used) <b>EPODOC, INVENES, WPI</b>		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 0988806 A1 (COMPAR SPA ) 29/03/2000, description: paragraphs [1, 3, 6-8, 10, 12-14] ; figures.	1
Y	ES 1000444 U (ELADIO VICENTE PALAZÓN) 01/03/1988, description: column 1, line 4-22; column 1, line 59 - column 2, line 14; column 3, line 1 - column 4, line 26; figures.	1
A	ES 1033722 U (SANJUAN PENA FRANCISCO ) 01/10/1996, description: page 3, line 18 - page 4, line 9; page 4, line 27 - page 5, line 15; figures.	1
A	ES 1010795 U (GARRIDOSA, S.L.) 16/02/1990, description: column 1, line 49 - column 2, line 9; column 2, line 26-55; figures.	1
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance. "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure use, exhibition, or other means. "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search <b>06/03/2012</b>		Date of mailing of the international search report <b>(16/03/2012)</b>
Name and mailing address of the ISA/  OFICINA ESPAÑOLA DE PATENTES Y MARCAS Paseo de la Castellana, 75 - 28071 Madrid (España) Facsimile No.: 91 349 53 04		Authorized officer E. Pértica Gómez  Telephone No. 91 3493271

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2011/070754

C (continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of documents, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ES 1039351 U (ART III BOOTS AND SHOES S L ) 01/12/1998, description: column 1, line 60 - column 2, line 14; column 2, line 27-68;	1
A	GB 507325 A (GEORGE EMANUEL HALDINSTEIN ) 09/06/1939, description: page 2, line 1-31; figures.	1
A	GB 842914 A (KLAUS MAERTENS ET AL.) 27/07/1960, description: page 1, line 11-22; page 3, line 107-113; page 4, line 60-71; figures.	1

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International application No.

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Information on patent family members

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**REFERENCES CITED IN THE DESCRIPTION**

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