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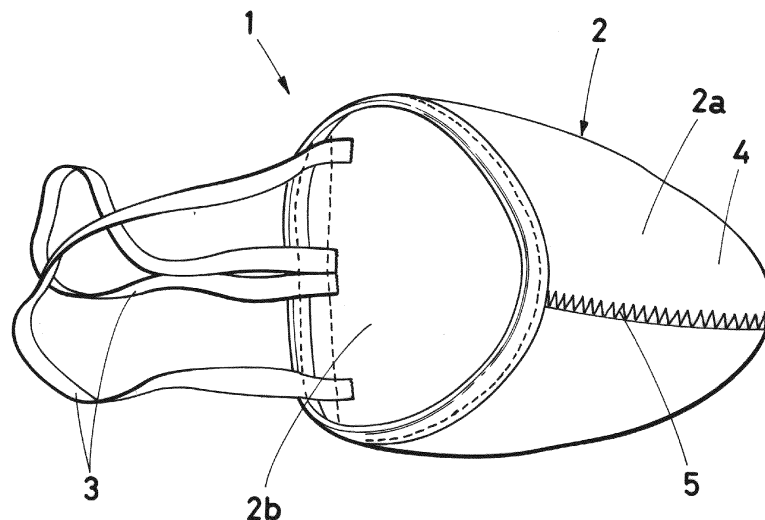
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(54) **GYMNASTICS TOE SHOE**

(57) The invention relates to a gymnastics toe shoe having a body (2) made of fabric, leather or another flexible material having an approximately conical shape comprising an upper portion (2a) covering only the toes and a lower portion (2b) covering only half of the sole, respective elastic bands (3) being attached thereto for attachment to the heel, said body (2) is made of a single part (4) having a central hem (5) in the upper portion (2a) of the body and a hem at the front (6) partially connecting

the upper portion (2a) and the lower portion (2b), the part (4) has a symmetrical sole configuration according to a longitudinal axis (7) which includes a rear edge (8) which opens at the distal ends thereof into straight sides (9) that are curved toward the inside of the part in side sections (10) toward two pointed recesses (11) having a central projection (12) therebetween, the curvature of which is complemented by the sum of the side sections (10).



**FIG.1**

## Description

### Object of the invention

[0001] The invention, as stated the statement of the present specification, relates to a gymnastics toe shoe with novelty characteristics to be described in detail later that provide advantages to the intended function and are a remarkable improvement in the current state of the art.

[0002] More particularly, the object of the invention focuses on a type of sports shoe which is known as toe shoe because it only covers the front part of the foot and which is specially designed for rhythmic gymnastics, without discarding any other similar activity, which has the peculiarity of being formed from a single piece, rather than from two as usual, which provides advantages both of comfort for the user and of manufacturing.

### Field of application of the invention

[0003] The field of application of the present invention falls within the sector of the footwear industry, focusing on the field of sports footwear and, particularly, in the manufacture of gym shoes particularly toe shoes for rhythmic gymnastics.

### Background of the invention

[0004] As is known, the gymnastics toe shoe is designed for the use and practice of the movements made with the feet by the gymnast in their development in the tapestry of competition.

[0005] The format of the toe shoe is the equivalent of half a foot, from fingers up to half of the sole, being attached to the heel by two elastic bands forming a complete and harmonic attachment of the cited toe shoe with the foot. In this way, the jumps, turns and pirouettes performed in the tapestry in the development of the exercise to be shown in the competition, are well harmonized, giving the foot, on the one hand, the physical soundness of wrapping its instep and sole, and on the another hand, bringing aesthetics and refinement to the movements of fingers, highlighting the greater and better development of complex movements that translate in each exercise, to frame a perfect harmony with the rest of the movements of body, both head, trunk and limbs.

[0006] The confection of the current toe shoe is determined by two parts: upper or instep, and sole or base of the foot. These two parts are joined each other by a seaming with thread, with a column sewing machine that connects the parts by a seam, or also with the other variety, such as the seaming with thread in a flat zigzag sewing machine (seamless), this system avoiding the discomfort caused by the seams on the sides of the foot to the gymnasts.

[0007] Important part of the physiognomy of the toe shoe consist of the piping, or tape of varied textile composition (cotton, faille, etc.) that serves to cover the inner

edge of the toe shoe and connect the two parts (upper and sole), giving a better attachment to both, and at the same time it can beautify the toe shoe itself by providing a contrast of color with the color or colors used in each model of toe shoe, which can be very varied.

[0008] Finally, there are the elastic bands that allow fitting the foot inside the toe shoe, serving as a connection with the heel for a perfect fit, giving security to the gymnast in the expression of her movements.

[0009] Well, the essential objective of the present invention is to develop a new type of toe shoe in which its structural construction is improved in order to minimize the seam that connects both portions of the toe shoe since it is surrounding all the side edge of the toe shoe and, given the purpose for which it is intended, can produce discomfort in the gymnast, because of the rubbing.

[0010] It should be noted that, at least the applicant is not aware of any other invention presenting technical, structural and constitutive characteristics similar to those presented by the gymnastics toe shoe that is preconized here and as claimed.

### Explanation of the invention

[0011] Thus, the gymnastics toe shoe that the present invention proposes is configured as a remarkable novelty within its field of application, since in the light of its implementation and exhaustively the above described object of the same is reached successfully, the characteristic details of the same that make it possible being conveniently collected in the end claims that accompany to the present description.

[0012] Concretely, what the invention proposes is a new gymnastics toe shoe with an innovative format that revolutionizes the sense of toe shoe that nowadays exists. In this, the two characteristic parts that structure the toe shoe are removed, and disappear, in a large proportion, the seams that connect the two parts, providing a significant relief in the gymnasts' feet since does not suffer the inconvenience of seams.

[0013] At the same time, and thanks to its new configuration, the toe shoe exerts a state of uniformity between the foot and the toe shoe, as if it were a glove, providing the dual role of pleasant feeling as a caress that wraps the foot, and the other of, solvency, safety and well-being when enjoying the autonomy of the entire toe shoe in a single piece.

[0014] The main feature of the new toe shoe is, therefore, its configuration from a single piece, i.e. the upper and the instep (instep and sole) evenly constitute the contour of the toe. It is no longer formed of two pieces sewn together, either in zigzag or seam, but one piece that unifies the upper and the sole, which is sewn in the upper central part of the upper, preferably with the zigzag system or butt joint, to avoid the seam thickness.

[0015] The front of the upper which must connect with the sole, just at the height of the toes, can be closed in the two possible ways, zigzag or butt joint or normal sew-

ing, achieving the minimum discomfort in the tip of the foot, because it becomes a much shorter seam than only covers the front end of the toe shoe, and not all of its contour as is the case in the conventional two-piece toe shoe.

**[0016]** In addition, the single part consisting of the new toe shoe, is sewed by a piping of elastic fiber that allows the total enclosure of the toe shoe at the height at the mouth of the foot.

**[0017]** Finally, and conventionally, the toe shoe is equipped with two elastic bands sewn, one in the central portion of what would form the sole of the toe shoe, and the other in the side portions, at the height of what would be the separation of the upper and the sole, all this at the mouth of the foot.

**[0018]** With this new model is achieved:

- Disappearance of the current system of two parts forming the toe shoe.
- Creation of a single piece that gives the result of fusion of the upper and the sole.
- Disappearance (partial) of the side seam, both in sewing and zigzag or butt joint.
- The union of the two parts forming the upper is achieved by central sewing in the same, avoiding the resulting discomfort predominating with the seam.
- The manufacturing is simplified, since it comprises a single piece, the cutting and assembly steps are reduced and, in addition, saving material.

**[0019]** In the light of the above, it is found that the gymnastics toe shoe described, represents an innovative structure of characteristics previously unknown to date for such purpose, reasons that linked to its practical usefulness, endow it with sufficient grounds to obtain the privilege of exclusivity requested.

### Description of the drawings

**[0020]** To complement the description being made and in order to help better understand the features of the invention, a set of drawings is attached to the present specification as an integral part of itself, wherein the following is shown as way of illustration but not limited to:

Figures 1 and 2.- They show, respectively, a top and side perspective view of an example embodiment of the gymnastics toe shoe object of the invention, appreciating in them the general configuration of the same as well as the parts and elements it comprises and the arrangement of the same.

Figure 3.- It shows a plan view of the single piece that makes up the toe shoe, before its sewing, appreciating the configuration of the same.

### Preferred embodiment of the invention

**[0021]** In view of the aforementioned figures, and according to the numbering adopted, it can be seen in them a preferred embodiment of the invention, which comprises the parts and elements described in detail below.

**[0022]** Thus, as seen in Figures 1 and 2, the concerned toe shoe (1), which conventionally consists of a type of footwear comprising a body (2) made of fabric, leather or another suitable flexible material, having an approximately conical shape comprising an upper portion (2a) covering only the toes and a lower portion (2b) covering only half of the sole, respective elastic bands (3) being attached thereto in its back portion for attachment to the heel, with the particularity that the body (2) is made of a single part (4) determining a central hem (5) in the upper portion (2a) of said front body and a front hem (6) only connecting in part the upper portion (2a) and the lower portion (2b), occupying only a small portion of the body in said front portion.

**[0023]** To that end, as shown in Figure 3, the part (4) forming the front body (2) of the toe shoe of the invention has a symmetrical sole configuration, according to a longitudinal axis (7), which includes a rounded rear edge (8) which opens at the distal ends thereof into respective straight sides (9), which in turn are curved toward the inside of the part in respective side sections (10) toward two pointed recesses (11) having a central projection (12) therebetween, the curvature of which is complemented by the sum of said side sections (9).

**[0024]** With such configuration, the rear edge (8) determines the mouth of the front body (2), in which, conventionally a piping (13) is sewn finishing the toe shoe; the straight sides (9) are joined together and determine the central hem (5) of the upper portion (2a), that will preferably be a zigzag seam, and the side sections (10) are attached to the central projection (12) determining the front hem (6), which can be of zigzag, butt joint of normal type.

**[0025]** Sufficiently described the nature of the present invention, as well as how to implement it, it is not considered necessary to extend its explanation for any person skilled in the art to understand its scope and the benefits that derive from it, stating that, within its essentiality, it can be put into practice in other embodiments that differ in detail from that indicated by way of example, and to which the protection claimed will also reach them provided that its fundamental principle is not altered or modified.

### Claims

1. GYMNASTICS TOE SHOE, being of the type comprising a body (2) made of fabric, leather or another suitable flexible material, having an approximately conical shape comprising an upper portion (2a) covering only the toes and a lower portion (2b) covering only half of the sole, respective elastic bands (3) be-

ing attached thereto in its back portion for attachment to the heel, is **characterized in that** said body (2) is made of a single part (4) and has a central hem (5) in the upper portion (2a) of said body and a front hem (6) only connecting the upper portion (2a) and the lower portion (2b), occupying only a small portion of said body in said front portion.

2. GYMNASTICS TOE SHOE, according to claim 1, **characterized in that** the part (4) forming the body (2) has a symmetrical sole configuration, according to a longitudinal axis (7), which includes a rounded rear edge (8) which opens at the distal ends thereof into respective straight sides (9), which in turn that are curved toward the inside of the part in respective side sections (10) toward two pointed recesses (11) having a central projection (12) therebetween, the curvature of which is complemented by the sum of said side sections (10).

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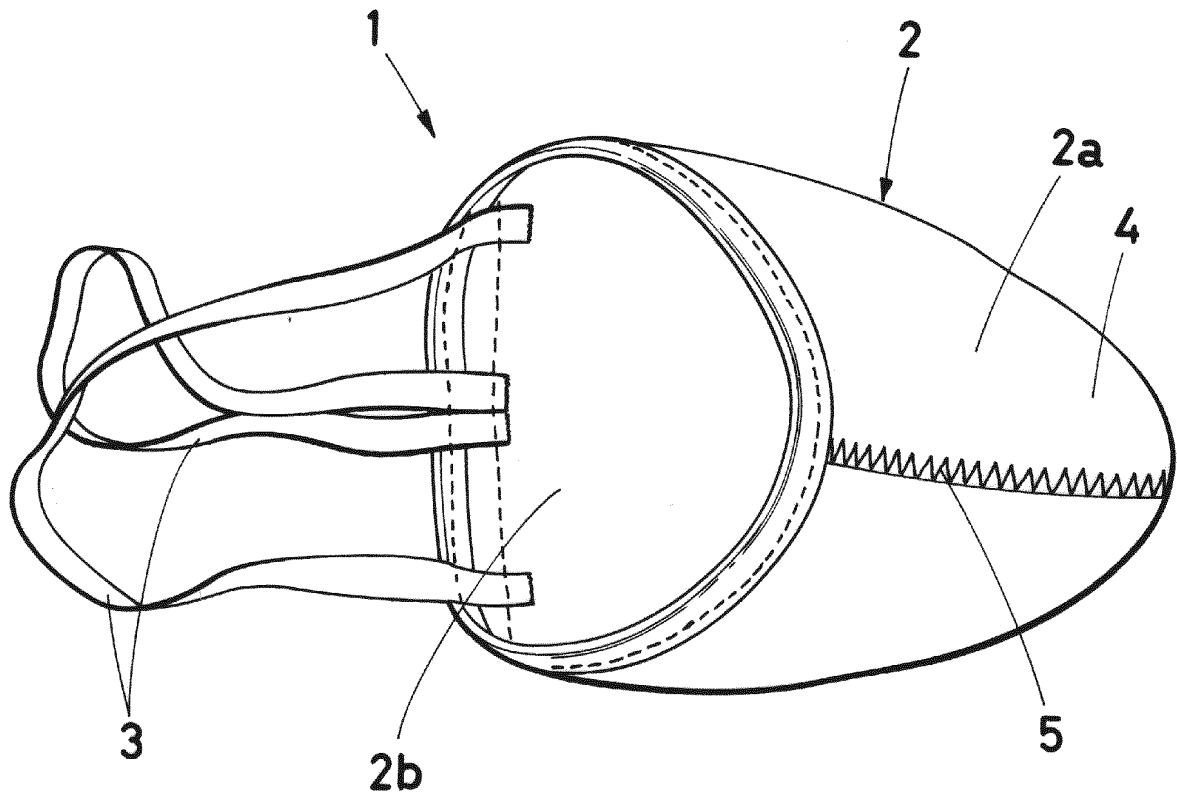
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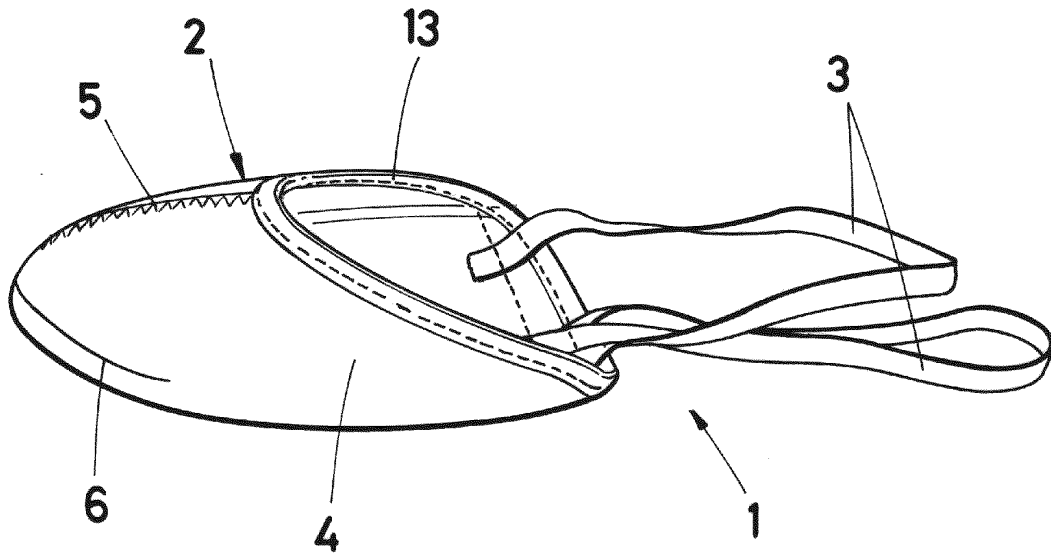
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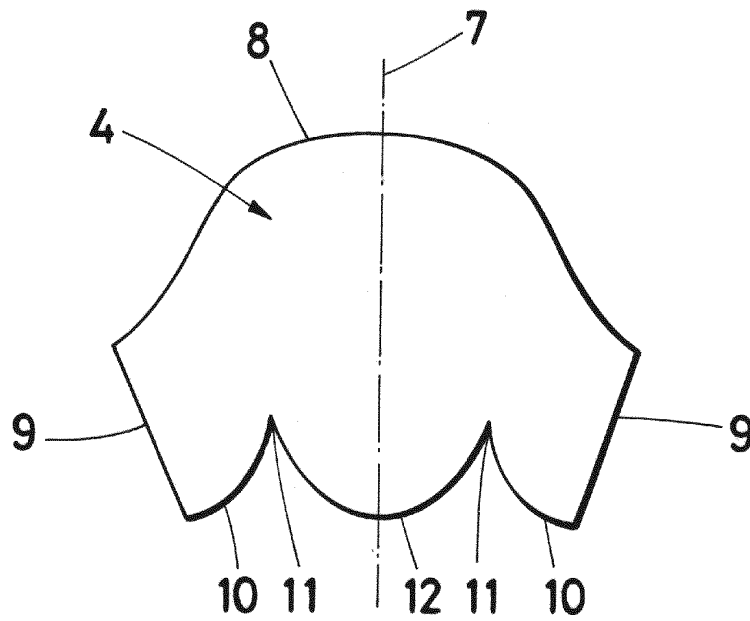
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**FIG.1**



**FIG. 2**



**FIG. 3**

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2013/000004

5	A. CLASSIFICATION OF SUBJECT MATTER	
	A43B5/12 (2006.01)	
	According to International Patent Classification (IPC) or to both national classification and IPC	
10	B. FIELDS SEARCHED	
	Minimum documentation searched (classification system followed by classification symbols) A43B	
	Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched	
15	Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)	
	EPODOC, INVENES, WPI	
	C. DOCUMENTS CONSIDERED TO BE RELEVANT	
20	Category*	Citation of document, with indication, where appropriate, of the relevant passages
		Relevant to claim No.
25	A	US 3887946 A (LASKIN SONDRÁ ET AL.) 10/06/1975, description: column 1, line 29-48; column 2, line 24-38; column 3, line 10-50; figures.
	A	WO 9951117 A2 (WILKENFELD DAVID) 14/10/1999, description: page 6, line 4-29; figures.
30	A	US 6018888 A (WILKENFELD DAVID ET AL.) 01/02/2000, description: column 2, line 33-54; column 3, line 38-41; figures.
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35	A	GB 2293958 A (GALVAGNI MARIO ANTHONY ET AL.) 17/04/1996, description: pages 3-4; figures.
40	<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.	
45	* Special categories of cited documents:	"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
	"A" document defining the general state of the art which is not considered to be of particular relevance.	"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
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	"P" document published prior to the international filing date but later than the priority date claimed	
	Date of the actual completion of the international search 02/08/2013	Date of mailing of the international search report (05/08/2013)
55	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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**EP 2 944 210 A1**

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Information on patent family members

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