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(71) Applicant (for all designated States except US):  
**MARELLO, Emanuele** [IT/IT]; Via Alla Spiaggia, 20/4,  
I-18039 Ventimiglia (IM) (IT).

(72) Inventor; and

(71) Applicant : **FERRANDO, Emanuel** [IT/IT]; Loc. Mag-  
auda, 41, I-18033 Camporosso (IM) (IT).

(74) Agent: **RICCARDI, Sergio**; Via M. Melloni, 32,  
I-20129 Milano (IT).

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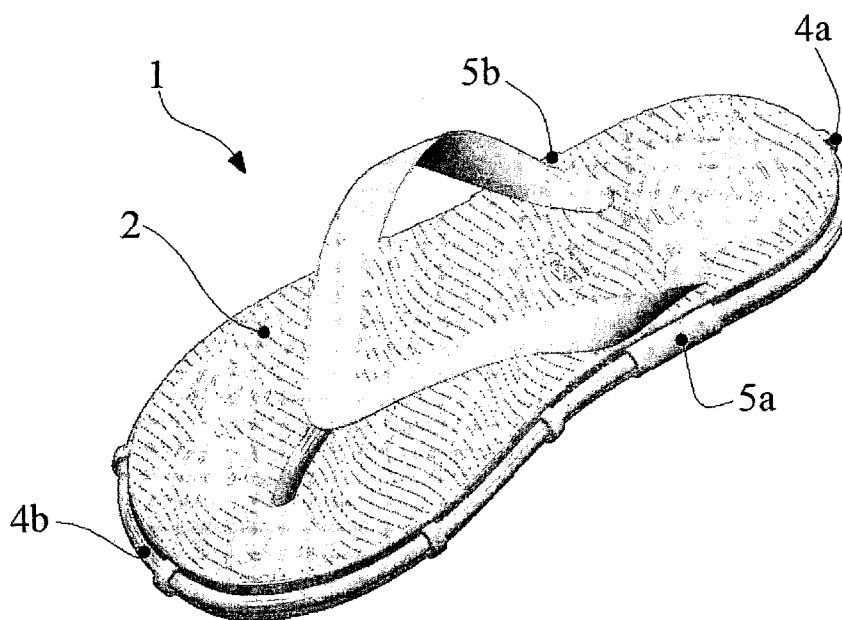
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(54) Title: FOOTWEAR PROVIDED WITH LIGHTING ELEMENTS



(57) Abstract: A footwear (1) of ev-  
ery kind, provided with lighting ele-  
ments (6) the main function of which  
is to provide a particular aesthetic  
value to the specific footwear said  
lighting elements (6) are applied to.

Fig. 1

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**FOOTWEAR PROVIDED WITH LIGHTING ELEMENTS**

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**Text of the description**

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The present invention relates to a footwear including lighting elements.

5       The need of providing the footwear with housing for decorative elements and, more particularly, lighting elements is justified mainly by aesthetic value the footwear is intended to be given. In the following description, every kind of shoe is considered included within the term footwear, whether it is specifically for use in summer rather than winter, and therefore open or closed shoes, sandals, slippers, flip-flops, boots and so on.

10       Differently from several other products available on the market the footwear according to the present invention provides use of lighting elements in terms of structure able to be fitted to the footwear, such that the whole lighting effect highlight shapes and/or characteristic portions thereof without weighing its whole original look down.

15       Main object of the present invention is, therefore, to provide a footwear provided with portions suitable for housing of lighting elements which can be easily fitted to the shape of said housing portions.

20       Further object of the present invention is to provide a footwear wherein the lighting elements do not need of accessories outside the structure of the same lighting element, such as batteries for power supply or any other electronic or mechanical device necessary for the lighting element operation.

Another object of the present invention is to provide a footwear which can be easily found inside not lighted environments.

25       Another object of the present invention is to provide a footwear which, in case of low or absent lighting, can offer an aesthetic characterization considerably higher in comparison with well-illuminated environments.

A detailed description of a preferred embodiment according to the present invention, the advantages and the features of which will become clear, will be now provided with reference to the annexed drawings, in which:

fig. 1 is a top view of a preferred embodiment of the footwear according to the present invention,

fig. 2 is a side view of the footwear in fig. 1, and

fig. 3 is a partial cross section of the footwear in fig. 1.

Referring now to figs. 1 and 2, there is shown a footwear 1, such as a flip-flop, provided with a groove 3 formed on the side surface along the whole perimeter of the sole 2 of said footwear 1. Preferably said groove 3 is formed with a semicircular section. A pair of seats 4a and 4b, at the rear portion and the front portion, respectively, is even placed on the side surface of said sole 2 at the same height of said groove 3. Said seats 4a and 4b, in the particular embodiment shown, are constituted by enclosure having an almost semicircular section, as shown in fig. 3, and formed with transparent plastic material, formed in one piece with said sole 2 or they can be stuck thereto if formed as separate elements. Said sole 2 further provides the presence of attachments 5a and 5b, suitably shaped in order to be able to be each operatively connected to at least two ends of lighting elements for a subsequent application thereof. Said attachments 5a and 5b are placed, as even shown in fig. 2, centrally at the right and left portions, respectively, of said sole 2, and at the same height of said groove 3. As previously said about the seats 4a and 4b, said attachments 5a and 5b can be formed in one piece with said sole 2 and stuck thereto.

From the particular structure of the described footwear and from the annexed drawings, it is envisioned that the footwear 1 allows for the insertion of a couple of lighting elements (not shown), a first element of which is passed through the seat 4a, connected at one end to said attachment 5a and at the other end to said attachment 5b, so as to result

firmly housed inside the groove 3, for almost half of its development. The second half of the development of said groove 3 will then be intended to house the second lighting element, supported, in a manner analogous to the first lighting element, by the attachments 5a and 5b and by the seat 4b. in this manner it is possible to provide the footwear with an illumination involving the whole sole perimeter, even applying different lighting elements, for example, by color or brightness.

In particular there is provided the application of lighting elements such as cheluminescent tubes 6 (see fig. 3), also known as glowstick and available on sale with several diameters of the tube and, obviously, with several colors. The main advantage of the cheluminescent tubes is given by the fact that they do not need of external power supply since the light emitted therein comes from the internal substances when they chemically react one with another. It is clear that at the equilibrium of the reaction there will be also the end of the lighting phenomenon; the attaching simplicity of the cheluminescent tubes onto the structure of the footwear 1 according to the present invention will allow the replacement of the worn-out cheluminescent tube with a new one. In most of the cases said tubes have a circular section and a standard diameter, for which reason the size of the semicircular section of said groove 3 will be able to house at least a half section of said tube, so as to make it protrude in respect of the projection of said sole 2 on the ground.

Even if the present invention has been described and shown as illustrative with reference to a particular kind of footwear, that is a flip-flop, it has to be noticed that it could be applied to any other kind of footwear which lighting elements, and in particular cheluminescent tubes, are wanted to be applied to.

### Claims

1. A footwear (1) comprising:

(i) at least a groove (3) formed along the perimeter of said footwear (1),

(ii) a plurality of attachments (4a, 4b, 5a, 5b) placed along said groove (3),

5 (iii) at least a lighting element houseable within at least a portion of said groove (3) and fixed in a removable manner to at least one of said plurality of attachments (4a, 4b, 5a, 5b).

2. The footwear (1) according to claim 1, wherein said footwear (1) is a flip-flop.

3. The footwear (1) according to claims 1 or 2, wherein said lighting elements are  
10 cheluminescent tubes (6).

4. The footwear (1) according to claim 4, wherein said attachments (4a, 4b) are a pair of transparent enclosure formed in one piece with said footwear (1) and placed at the rear and front portions, respectively, of the sole (2) of said footwear (1).

5. The footwear (1) according to claim 4, wherein said attachments (5a, 5b) are a pair  
15 of attachments formed in one piece with said footwear (1) and placed at the right and left portions, respectively, of the sole (2) of said footwear (1).

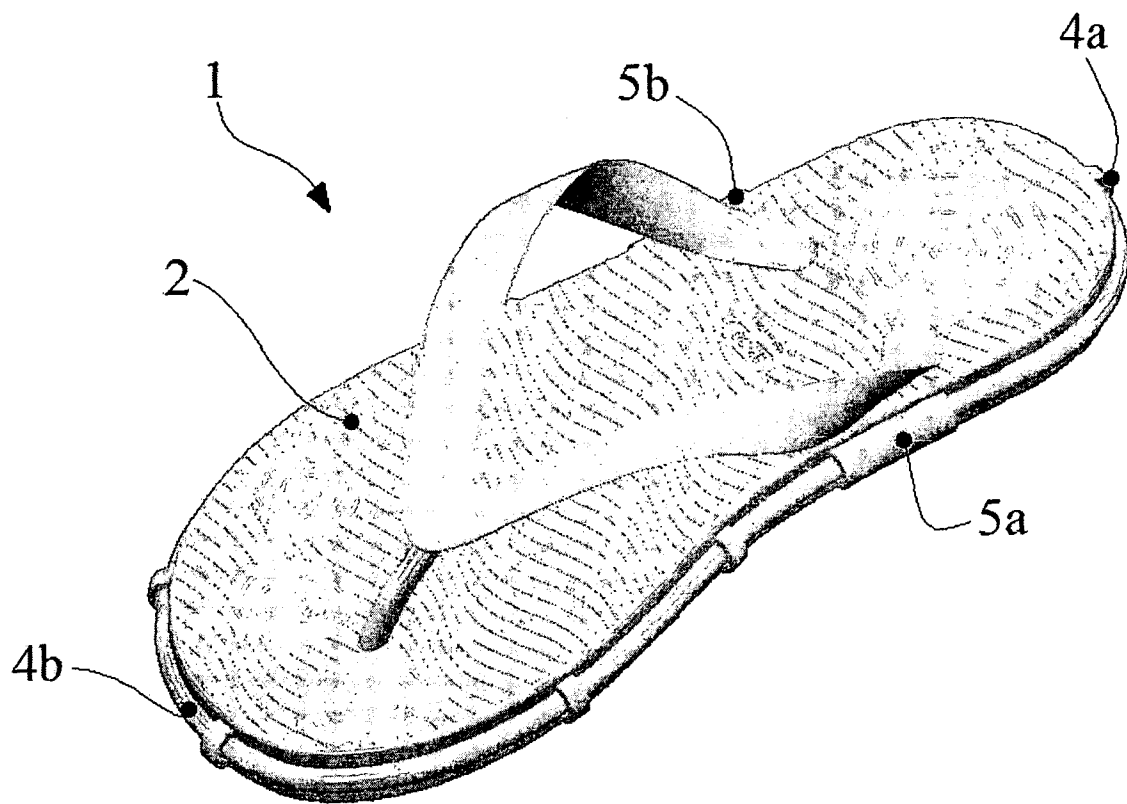


Fig. 1

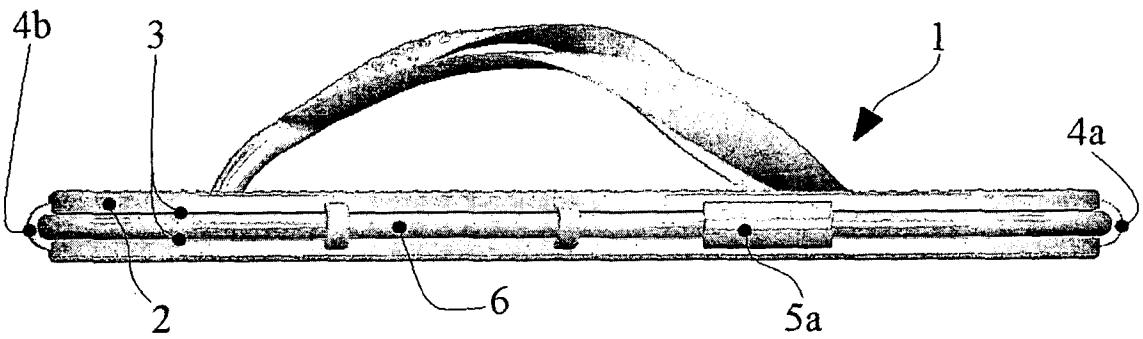


Fig. 2

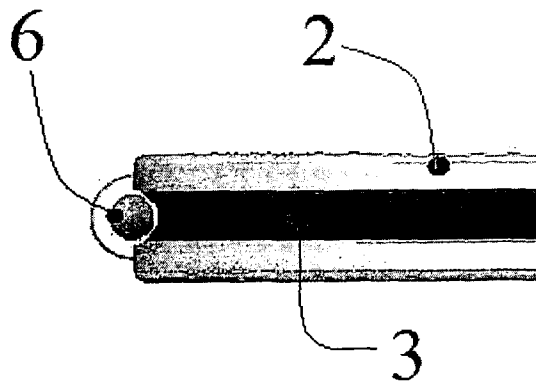


Fig. 3

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2009/004410

## A. CLASSIFICATION OF SUBJECT MATTER

INV. A43B3/00

ADD.

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)

A43B

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 practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2007/087177 A2 (TURN SPORTS CO LLC U [US]) 2 August 2007 (2007-08-02) paragraphs [0059], [0 61]; figures 14C-14G	1-5
X	US 2008/117624 A1 (KIRKOV BORISLAV [US]) 22 May 2008 (2008-05-22) paragraphs [0016], [0 23]; claims 2,3	1-5
A	US 5 052 131 A (RONDINI PAUL [US]) 1 October 1991 (1991-10-01) claims; figures	1,2
A	EP 0 534 560 A1 (SHKALIM YOSSEF [IL]) 31 March 1993 (1993-03-31) claims; figures	1
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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\*G\* document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040,  
Fax: (+31-70) 340-3016

Authorized officer

Claudel, Benoît



# INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). . . DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 6 050 007 A (ANGELIERI ROBERT S [US] ET AL) 18 April 2000 (2000-04-18) claims; figures</p> <p>-----</p>	1,3

# INTERNATIONAL SEARCH REPORT

Information on patent family members

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PCT/EP2009/004410

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007087177 A2	02-08-2007	NONE	
US 2008117624 A1	22-05-2008	NONE	
US 5052131 A	01-10-1991	NONE	
EP 0534560 A1	31-03-1993	JP 5192206 A	03-08-1993
US 6050007 A	18-04-2000	AU 3879100 A	21-11-2000
		BR 0011312 A	26-02-2002
		CA 2373592 A1	16-11-2000
		JP 2003526399 T	09-09-2003
		WO 0067601 A2	16-11-2000