



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 616 493 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
18.01.2006 Bulletin 2006/03

(51) Int Cl.:
A43B 3/16 (2006.01) A43B 13/26 (2006.01)
A43B 13/16 (2006.01) A43B 3/26 (2006.01)

(21) Application number: **04027795.6**

(22) Date of filing: **23.11.2004**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LU MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL HR LT LV MK YU

• **Votolato, Kimberly,**
Trustee of Votolato Living Trust
Newport Beach, CA 92663 (US)

(30) Priority: **12.07.2004 US 889747**

(72) Inventor: **Votolato, Earl J.**
Newport Beach, CA 92663 (US)

(71) Applicants:
• **Votolato, Earl J.,**
Trustee of Votolato Living Trust
Newport Beach,
CA 92663 (US)

(74) Representative: **Rupp, Christian**
Mitscherlich & Partner,
Patent- und Rechtsanwälte,
Postfach 33 06 09
80066 München (DE)

(54) **Elastic overshoe with slip resistant sole pads**

(57) An elastic overshoe includes an upper portion, a sole portion, and a first pad. The upper portion and the

sole portion have an elasticity that is greater than the elasticity of the first pad.

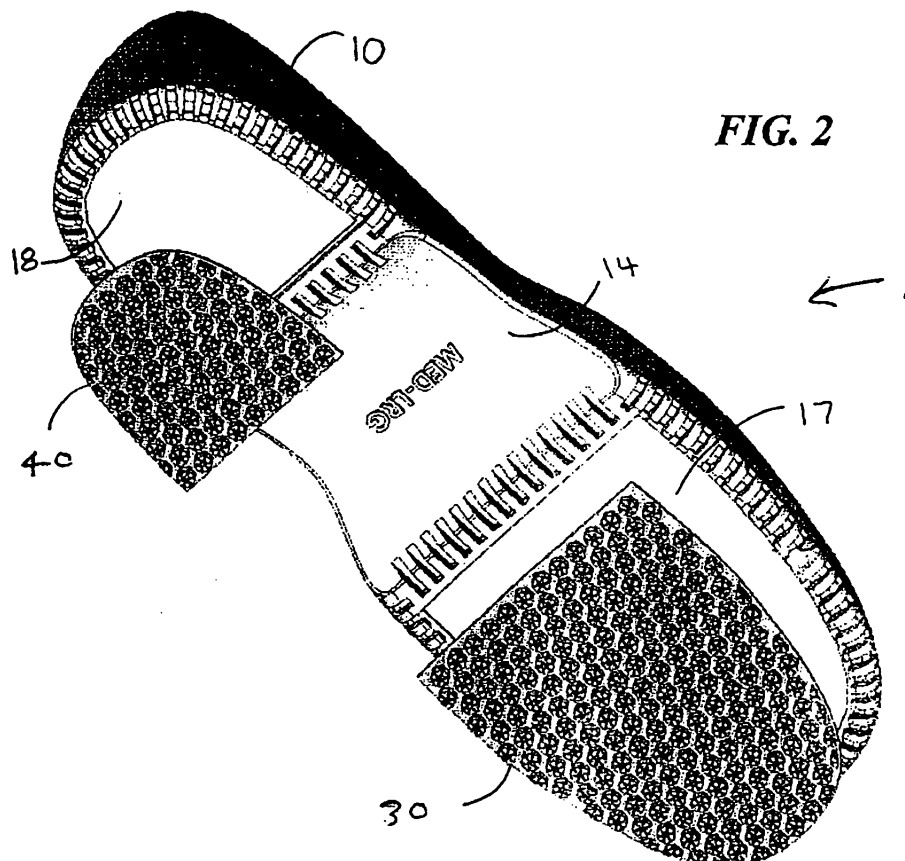


FIG. 2

EP 1 616 493 A1

Description**Field of the Invention**

[0001] The present invention relates generally to overshoes (shoe covers).

Background

[0002] Elastic overshoes of various types have been known for decades. They are typically worn to keep the wearer's feet warm and dry during cold and/or wet weather, but are also used in hospitals, restaurants, factories, and other areas where floors may be slippery.

[0003] Previously known overshoes generally comprise a unitary construction, such as, for example, that found in a continuous molded rubber product. This is done to facilitate construction of the overshoe using a single, inexpensive molding process. Unfortunately, in such cases both the upper portion and the sole are necessarily made of the same material, which is then intended to satisfy the competing needs of elasticity and grip.

[0004] One solution to these competing needs is to fashion the sole with a raised tread pattern. Such tread patterns are designed to improve traction and thus reduce the likelihood of the wearer accidentally slipping. Although somewhat effective, the inherent tradeoff resulting from the use of a given material usually means that either the overshoe is insufficiently elastic (requiring manufacture and stocking of many different sizes), or the overshoe has insufficient traction.

[0005] There is yet a third tradeoff, namely that materials satisfying both elasticity and traction can have undesirable durability characteristics. Among other things previously known overshoes tend to wear out prematurely, rip, or in some other manner become dysfunctional.

[0006] Thus, there is still a need for an overshoe that has adequate elasticity, as well as enhanced slip resistance, and high durability.

Summary of The Invention

[0007] The present invention provides methods and apparatus in which an elastic overshoe includes an upper portion, a sole portion, and at least one gripping pad, where the upper portion and the sole portion have an elasticity greater than that of the pad.

[0008] The entire overshoe can advantageously be manufactured from rubber or other polymers. Although all suitable materials are contemplated, the upper and sole portions are preferably one continuous piece of thermoplastic rubber, while the pad (or pads) is/are formed of nitrile rubber. Various different thermoplastic rubbers and thermoplastic elastomers, as well as other elastic materials, are also contemplated.

[0009] In preferred embodiments an overshoe has a first pad disposed at a ball portion of the sole, and a second pad disposed at a heel portion of the sole. Both pads

are affixed to the sole portion using glue, or some other bonding mechanism. Since the ball and heel of the overshoe are separated from one another, the intervening section of the sole continues to have relatively high elasticity.

[0010] The first and second pads can advantageously have a tread pattern that enhances slip resistance, and indeed the material or materials used for the pads can be chosen in part for improved wear and slip resistance..

[0011] Various objects, features, aspects and advantages of the present invention will become more apparent from the following detailed description of preferred embodiments of the invention, along with the accompanying drawings in which like numerals represent like components.

Brief Description of The Drawing**[0012]**

Figure 1 is a top perspective view of an exemplary embodiment the elastic overshoe of the present invention; and

Figure 2, is a bottom perspective view of the elastic overshoe of Figure 1, showing the first and second pads thereof.

Detailed Description

[0013] In **Figures 1 and 2**, an overshoe 1 generally comprises an upper portion 10, a sole portion 20, a first pad 30, and a second pad 40.

[0014] With particular reference to **Figure 1**, the upper portion 10 is configured to slip over a regular shoe and to fit tightly thereabout. To that purpose the upper portion 10 is advantageously molded to fit overtop of a typically shaped athletic or dress shoe. Various alternative embodiments are contemplated for women's shoes, such as uppers that have a pointed front, but such embodiments are not preferred. Upper portion 10 is also advantageously configured to be generic with respect to footedness, i.e. the same overshoe would work equally well with a right foot and a left foot. As with other overshoes, the upper portion 10 slips over a regular shoe by inserting the regular shoe into opening 13 and pulling the overshoe onto the regular shoe. The overshoe may be removed by simply pulling it off of the regular shoe.

[0015] The upper portion 10 and sole portion 20 are preferably one continuous piece of elastic material. As used herein, the term "elastic" refers to something that stretches to a significant extent, and then substantially returns to its original shape. Preferred elastic materials include various forms of rubbers or other polymers, including especially thermoplastic rubbers. Various different thermoplastic rubbers and thermoplastic elastomers are suitable.

[0016] Alternatively, the upper portion 10 and sole por-

tion 20 can be comprised of different materials, or different blends of the same materials, and then attached by glues, adhesives, ultrasonic welding, or by any other suitable methods. In production versions a manufacturer would likely overmold the pad(s) into the sole, or affix the pad(s) using a mechanical attachment such as a retaining button used in beach foot thongs, where the thong is attached through the sole and is anchored in place by a small portion of material fanning out the bottom the sole.

[0017] With particular reference to **Figure 2**, a first pad 30 is disposed at the ball 17 of the sole portion 20. Similarly, a second pad 40 is disposed at the heel 18 of sole portion 20. Optionally, an arch 14 is formed in the bottom or sole 20 of the overshoe, intermediate the toe 17 and the heel 18.

[0018] The first pad 30 and the second pad 40 can be formed of any suitable material or materials that provide(s) advantageous wear and slip resistance. The presently preferred material comprises nitrile rubber.

[0019] The first pad 11 and the second pad 12 may be attached to the upper portion 10 by any suitable means. For example, the first pad 11 and the second pad 12 may be attached to the upper portion 10 by glues, adhesives, ultrasonic welding, overmolding, retaining button, and so forth. Alternatively, the first pad 11 and the second pad 12 may be molded into the upper portion 10. This may, for example, be accomplished by a co-molding process wherein the first pad 11 and the second pad 12 are provided as inserts for the mold with which the upper portion 10 is fabricated.

[0020] The area of the sole 16 located intermediate the first pad 11 and the second pad 12, at approximately the arch of the wearer's foot, is advantageously comprised of a substantially elastic material, which assists in allowing the overshoe to accommodate a variety of shoe sizes.

[0021] It is also worthwhile to appreciate that any desired number of materials may be used to form the upper portion 10, the first pad 11, and the second pad 12. The first pad 11 can be made from a different material with respect to the second pad 12. Further, the first pad 11 and/or the second pad 12 may be formed of more than one material.

[0022] The overshoe of the present invention need not be limited to two pads. Any desired number of pads may be utilized. Thus, an overshoe of the present invention may comprise 1, 2, 3, 4, 5, 6, 7, 8 or more pads.

[0023] The upper portion 10 may alternatively be configured such that it covers a larger portion of a regular shoe that would be covered by the overshoe of Figures 1 and 2. The upper portion 10 may alternatively be configured to cover all or a portion of a shoe or boot.

[0024] As with the upper portion 10, sole portion 20 is advantageously configured to be generic with respect to footedness, i.e. the same overshoe would work equally well with a right foot and a left foot. This has the advantage of requiring only a single mold shape. It has the additional advantage of easily allowing a substitute overshoe to re-

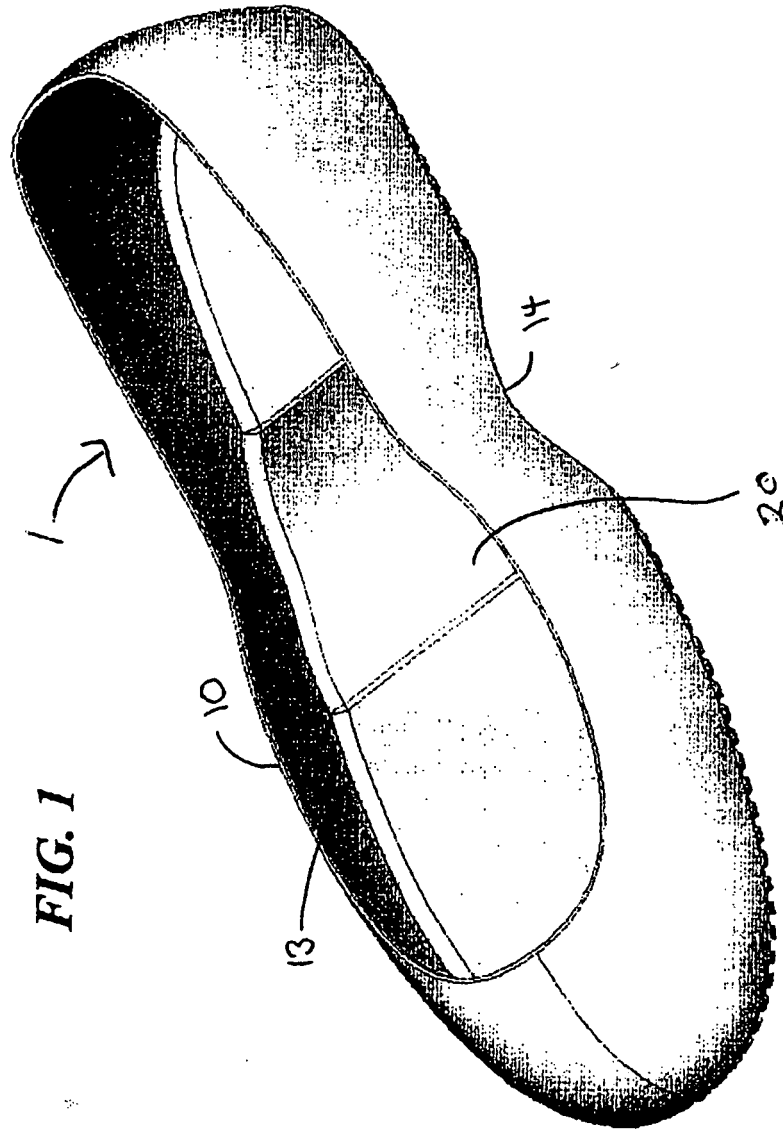
place a damaged regular shoe without consideration as to which (right or left) regular shoe it replaces.

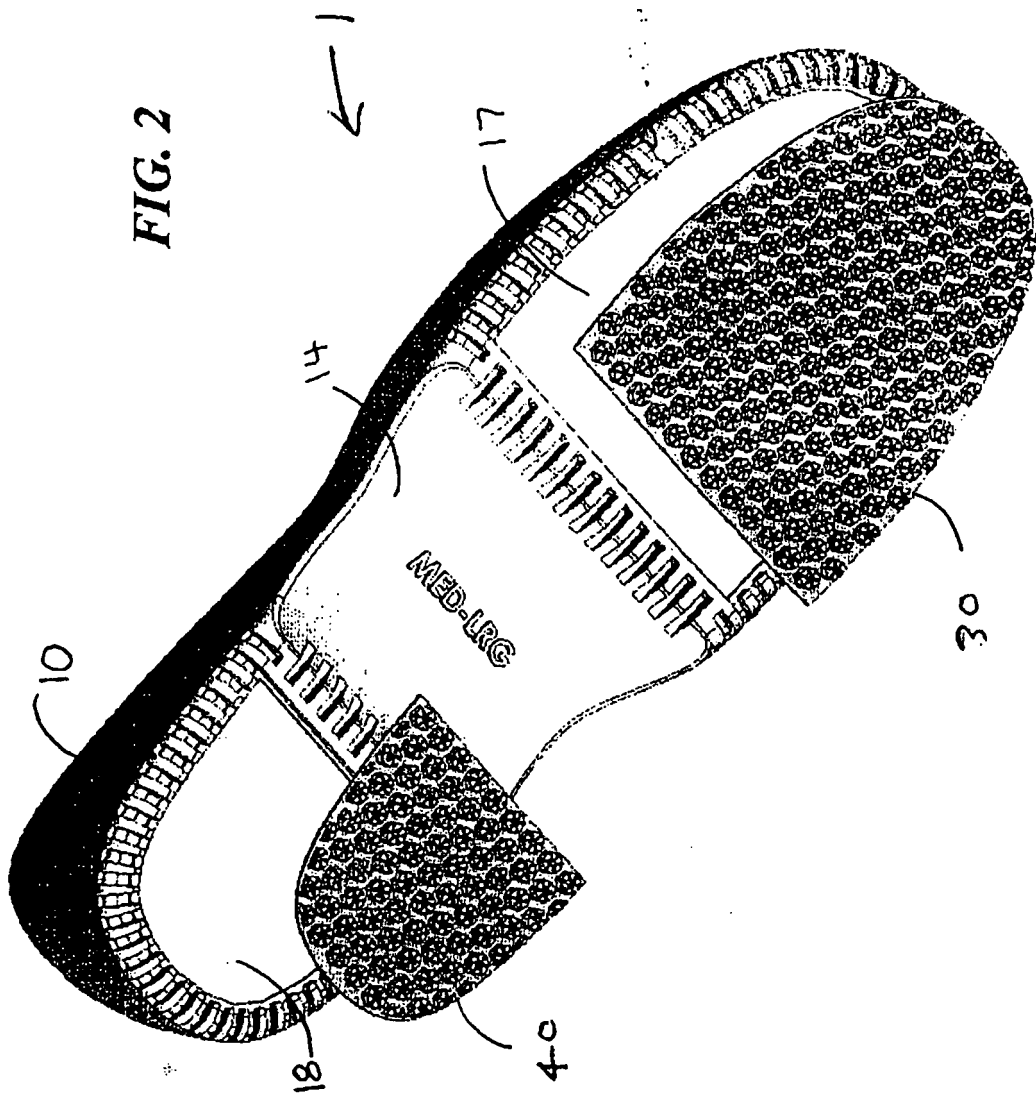
[0025] Preferably, one size of the overshoe of the present invention fits a plurality of sizes of regular shoes. It is contemplated that two sizes of the overshoe of the present invention will fit most of the adult shoe sizes.

[0026] Thus, specific embodiments and applications of improved overshoe have been disclosed. It should be apparent, however, to those skilled in the art that many more modifications besides those already described are possible without departing from the inventive concepts herein. The inventive subject matter, therefore, is not to be restricted except in the spirit of the appended claims. Moreover, in interpreting both the specification and the claims, all terms should be interpreted in the broadest possible manner consistent with the context. In particular, the terms "comprises" and "comprising" should be interpreted as referring to elements, components, or steps in a non-exclusive manner, indicating that the referenced elements, components, or steps may be present, or utilized, or combined with other elements, components, or steps that are not expressly referenced.

Claims

1. An elastic overshoe including an upper portion, a sole portion, and a first pad, the upper portion and the sole portion having an elasticity greater than the elasticity of the first pad.
2. The overshoe of claim 1, wherein the first pad is disposed on a bottom of the sole portion.
3. The overshoe of claim 2, wherein the upper portion is formed of thermoplastic rubber and the first pad is formed of nitrile rubber.
4. The overshoe of claim 2 wherein the first pad provides enhanced slip resistance with respect to the slip resistance of the upper portion.
5. The overshoe of claim 1, wherein the first pad is disposed at a ball of the sole portion, and a second pad, having less elasticity than the upper portion and the sole portion, is disposed at a heel of the sole portion.
6. The overshoe of claim 5 further comprising a second pad having less elasticity than the upper portion and the sole portion, and wherein the first and second sole pads are positioned apart from one another on the sole portion in a manner that facilitates stretching of the sole.







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.7)
X	US 4 217 704 A (WHITAKER, MERVIN A) 19 August 1980 (1980-08-19) * column 3; claim 2 * -----	1-6	A43B3/16 A43B13/26 A43B13/16 A43B3/26
X	US 5 813 143 A (BELL ET AL) 29 September 1998 (1998-09-29) * column 8, lines 20-65 * -----	1-6	
X	FR 1 313 270 A (RENE GASTON MILLET) 28 December 1962 (1962-12-28) * the whole document * -----	1-6	
X	US 4 434 565 A (HALEY ET AL) 6 March 1984 (1984-03-06) * figure 10 * -----	1-6	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A43B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		4 October 2005	Claude1, B
CATEGORY OF CITED DOCUMENTS		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	
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			

1
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 02 7795

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-10-2005

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4217704	A	19-08-1980	NONE	
US 5813143	A	29-09-1998	CA 2225301 A1	20-06-1998
FR 1313270	A	28-12-1962	NONE	
US 4434565	A	06-03-1984	NONE	

EPO FORM P0469

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82