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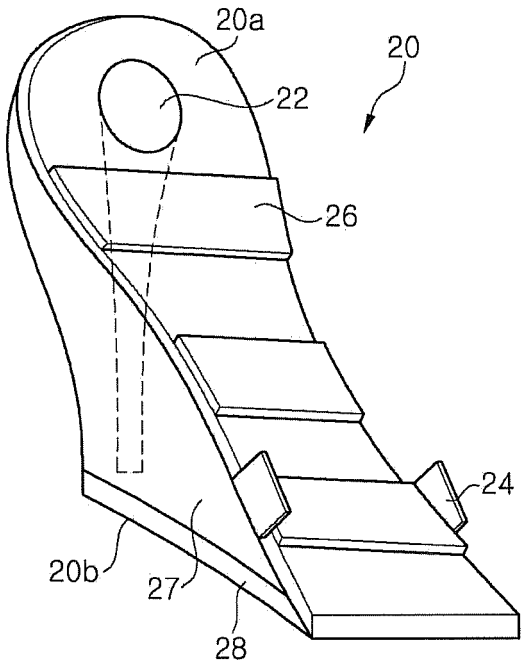
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(54) REMOVABLE WEDGE HEEL AND METHOD FOR SETTING SAME

(57) Disclosed herein is a removable wedge heel for high heel shoes, the removable wedge heel including: an upper slanted surface corresponding to a slanted bottom part of the high heel shoes; a bottom surface intersecting with the upper slanted surface so as to contact a ground; and a heel insertion hole formed toward the bottom surface from an upper portion of the upper bottom surface and closely inserted into a heel of the high heel shoes.

【Fig. 3】



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Description

[Technical Field]

[0001] The present invention relates to a removable wedge heel applied to high heel shoes, and more particularly, to a removable wedge heel capable of being removably coupled to the high heel shoes having a thin and high heel.

[Background Art]

[0002] There are various kinds of shoes having a thin and high heel. Recently, a height of a heel becomes higher while a thickness thereof becomes thinner. The thin and high heels mentioned above or the shoes including the above-mentioned heels refer to as a "pin hill," a "kill hill" or a " stiletto heel." Throughout this specification, the shoes including the thin and high heel refer to a 'high heel shoes" .

[0003] The high heel shoes have an excessively small area of a surface contacting a ground and allow a heel of person to be far apart from the ground. Therefore, concentrated load from the ground is delivered to a foot of wearer through the thin heel. For this reason, the wearer feels much discomfort and fatigue. However, many women favor wearing the high heel shoes even if they endure the discomfort and fatigue. Many carrier women tend to wear the high heel outdoor as it is and then change their high heel into a sneaker prepared in advance or relatively comfortable shoes indoor, particularly, at an office, or the like.

[0004] Meanwhile, there are wedge heel shoes including a wedge heel as the heel instead of the thin heel such as the pin heel, the kill heel, the stiletto heel, or the like. Since these wedge heel shoes have a large area of surface of the heel contacting the ground, the wearer may comfortably wear in spite of the high heel. However, in spite of the above-mentioned advantage of the wedge heel, the high heel shoes including the kill heel as the heel are still increasingly preferred.

[Disclosure]

[Technical Problem]

[0005] An attempt or a research intended to change a structure or a form of a heel was traditionally conducted in order to enable a wearer to more comfortably wear high heel shoes. However, since this attempt or research is required to change a design of the high heel shoes itself and is uneconomical, it is difficult to satisfy consumer demand.

[0006] An object of the present invention is to provide a removable wedge heel which is simply mounted on high heel shoes to thereby allow the high heel shoes to be used as wedge heel shoes without changing or deforming a structure of the high heel shoes.

[0007] Another object of the present invention is to provide a method of customizing a removable wedge heel by machining and customizing a wedge heel which may be harmoniously coupled to specific high heel shoes.

[Technical Solution]

[0008] According to an aspect of the present invention, there is provided a removable wedge heel for high heel shoes, the high heel shoes including: an upper slanted surface corresponding to a slanted bottom part of the high heel shoes; a bottom surface intersecting with the upper slanted surface and contacting a ground; and a heel insertion hole formed toward the bottom surface from an upper portion of the upper bottom surface and closely inserted into a heel of the high heel shoes.

[0009] A case in which the heel is inserted into the heel insertion hole, but is not closely adhered may be considered. In this case, the wedge heel and the high heel shoes may not be coupled to each other without changing or deforming the high heel shoes. Although another additional fixing unit is introduced between the high heel shoes and the wedge heel, a fixing unit between the heel insertion hole and the heel formed by closely inserting the heel of the high heel into the heel insertion hole of the wedge heel is necessarily required.

[0010] The removable wedge heel may have a periphery of the heel insertion hole made of at least viscoelasticity material.

[0011] The removable wedge heel may further include a pair of fixing clips installed at both sides of a lower portion of the upper slanted surface to thereby contact both sides in vicinity of a bottom of the high heel shoes.

[0012] The pair of fixing clips may be made of a transparent material.

[0013] The removable wedge heel may further include a nonskid part formed on the upper slanted surface.

[0014] According to another aspect of the present invention, there is provided a method of customizing a removable wedge heel, wherein a shape of high heel shoes is recognized; and the removable wedge heel is manufactured by machining a half-finished product according to the recognized shape of the high heel shoes. The removable wedge heel may include a heel insertion hole closely inserted into a heel of the high heel shoes.

[0015] The half-finished product may have the heel insertion hole or a basic insertion hole corresponding thereto formed in advance, and a surface of the half-finished product is machined, such that an upper slanted surface corresponding to a slanted bottom part of the high heel shoes may be formed.

[0016] In the machining of the surface, laser may be used.

[Advantageous Effects]

[0017] According to the exemplary embodiment of the present invention, the removable wedge heel is coupled

to the high heel shoes causing fatigue or inconvenience by the high and thin heel in the simple way, such that the high heel shoes may be deformed to the wedge heel shoes which may comfortably be worn. The removable wedge heel according to the exemplary embodiment of the present invention does not cause any damage or change to the high heel shoes itself. The wearer may selectively use the high heel shoes and the wedge heel shoes when the wearer wishes by attaching or separating the wedge heel. According to the exemplary embodiment of the present invention, the wedge heel may be simply customized according to the shape of the high heel shoes.

[Description of Drawings]

[0018]

FIG. 1 is a perspective view showing high heel shoes;
FIG. 2 is a perspective view showing a state in which a removable wedge heel according to an exemplary embodiment of the present invention is coupled to the high heel shoes of FIG. 1;
FIG. 3 is a perspective view showing the removable wedge heel according to the exemplary embodiment of the present invention;
FIG. 4 is a side view showing the removable wedge heel according to the exemplary embodiment of the present invention;
FIG. 5 is a view for describing a method of customizing the removable wedge heel according to an exemplary embodiment of the present invention; and
FIG. 6 is view showing examples of a half-finished product of the wedge heel which may be used in the method of customizing the removable wedge heel of FIG. 5.

[Best Mode]

[0019] Hereinafter, exemplary embodiments of the present invention will be described in detail with reference to the accompanying drawings. The exemplary embodiments of the present invention to be described below are provided by way of example so that the idea of the present invention can be sufficiently transferred to those skilled in the art to which the present invention pertains. Therefore, the present invention is not limited to the exemplary embodiments set forth herein but may be modified in many different forms. In the accompanying drawings, like reference numerals are used to describe like components and widths, lengths, thicknesses, or the like, of components may be exaggerated for convenience.

[0020] FIG. 1 is a perspective view showing high heel shoes, FIG. 2 is a perspective view showing a state in which a removable wedge heel according to an exemplary embodiment of the present invention is coupled to the high heel shoes of FIG. 1, FIG. 3 is a perspective view showing the removable wedge heel according to the exemplary embodiment of the present invention, and FIG. 4 is a side view showing the removable wedge heel according to the exemplary embodiment of the present invention.

[0021] Referring to FIG. 1, high heel shoes 10 may include a high and thin heel 12 referred to as a "pin hill" , a "kill hill" or a " stiletto heel". In addition, the high heel shoes 10 may include a slanted bottom portion 14 slantly and downwardly leading from a vicinity of the top of the heel 12 to a vicinity of a tip. When people wear the high heel shoes 10, the slanted bottom portion 14 hardly contacts a ground and forms a space of an approximately triangle shape between it and the ground. As mentioned above, since the thin and high heel of the high heel shoes 10 delivers concentrated load to a foot due to a small contacting area with the ground, it causes much inconvenience and fatigue to a wearer.

[0022] Referring to FIG. 2, a removable wedge heel 20 according to an exemplary embodiment of the present invention is coupled to the high heel shoes 10. By the coupling of the removable wedge heel 20, the heel 12 of the high heel shoes 10 is covered within the wedge heel 20 and the removable wedge heel 20 serves as the heel, such that the high heel shoes 10 is deformed to a form of the wedge heel shoes. In this case, an upper slanted surface of the removable wedge heel 20 contacts the slanted bottom portion 14 (see FIG. 1) of the high heel shoes 10 and a large bottom surface of the removable wedge heel 20 contacts the ground while having a large area of surface. The removable wedge heel 20 fills all spaces between the heel 12 and the tip of the high heel shoes 10. Therefore, the removable wedge heel 20 may provide comfort to the wearer.

[0023] In addition, the removable wedge heel 20 includes a viscoelasticity material having excellent buffering property such as latex, gel, cork and/or polyurethane, thereby making it possible to provide more comfort to the wearer.

[0024] Referring to FIGS. 3 and 4, the removable wedge heel 20 according to the exemplary embodiment of the present invention may include an upper slanted surface 20a slantly and downwardly leading from a rear to a front, and a bottom surface 20b provided so as to intersect with a lower portion of the upper slanted surface 20a and contact the ground.

[0025] In addition, the removable wedge heel 20 may include a heel insertion hole 22 deeply formed in an approximately vertical direction toward the bottom surface 20b from an upper portion of the upper slanted surface 20a, a pair of fixing clips 24 installed at both sides of a lower portion of the slanted surface 20a, and a plurality of nonskid parts 26 installed on the upper slanted surface 20a. In addition, the removable wedge heel 20 is generally made of the viscoelasticity material, but may have hardness covers 27 attached to the sides thereof in order to create a beautiful design or color.

[0026] As a material of the hardness cover 27, a plastic material is preferred, but other materials such as a metal

and the like may be used. Even in the case of using the hardness cover 27, some height region 28 adjacent to the bottom surface of the removable wedge heel 20 may expose a viscoelasticity or compressible material.

[0027] The heel insertion hole 22 is exactly fit with the heel 12 (see FIGS. 1 and 2) of the high heel shoes. This means that the heel 12 is exactly fit into the heel insertion hole 22 across an entire depth of the heel insertion hole 22 and the heel 12 is exactly fit into the heel insertion hole 22 only in a partial section of the depth of the heel insertion hole 22.

[0028] To this end, in at least partial section of the depth of the heel insertion hole 22, the heel insertion hole 22 may have a size slightly smaller than that of the heel 12. In this case, when the heel 12 of the high heel is inserted into the heel insertion hole 22, a periphery of the heel insertion hole 22 is elastically compressed, such that an inner surface of the heel insertion hole 22 is strongly adhered to a surface of the heel 12. When the periphery of the heel insertion hole 22 is made of at least viscoelasticity material, the periphery of the heel insertion hole 22 may be elastically deformed at the time of the insertion of the heel 12.

[0029] The depth of the heel insertion hole 22 is the same as a heel height of the high heel or is formed so as to be larger than the heel height. In addition, the heel insertion hole 22 may have a structure in which a lower portion thereof is closed, and may alternatively have a penetration structure in which the lower portion is opened.

[0030] The pair of fixing clips 24 are installed at both sides of the lower portion of the slanted surface 20a to thereby contact both sides of the high heel shoes 10 (see FIGS. 1 and 2) so as to engage therewith. The pair of fixing clips 24 are provided to prevent the removable wedge heel 20 from being twisted in a rotation direction for the high heel shoes 10. In the case in which the twist of the wedge heel 20 is prevented by only closely inserting the heel 12 into the insertion hole 22, it may also be considered that the fixing clips 24 are omitted. The fixing clips 24 may be manufactured of a transparent material so as to minimize an impact on the design of the high heel shoes 10.

[0031] The nonskid parts 26 are manufactured in a plate shape so as to be attached onto the upper slanted surface 20a. The nonskid part 26 may be formed of a material such as a silicon or the like having excellent nonskid property. In the present exemplary embodiment, although the plurality of nonskid parts 26 are provided, a single nonskid part 26 may be used. In this case, the nonskid part 26 may be attached onto the upper slanted surface 20a to be long while having a long shape.

[0032] The wedge heel as described above may be machined and sold at a shop specially handling it. In this case, a method of customizing a wedge heel machining the wedge heel so as to match the high heel shoes worn by a consumer may be provided as in an exemplary embodiment below.

[0033] The method of customizing the removable wedge heel according to the exemplary embodiment of the present invention may include a process P1 of preparing a wedge heel half-finished product, a process P2 of recognizing a shape of a high heel shoes, and a process P3 of machining the half-finished product as shown in FIG. 5. In addition, the process P3 of machining the half-finished product may include a process P31 of machining a surface and a process P32 of machining an insertion hole. The method of customizing the removable wedge heel may be performed by an automatic machine and may be performed by a worker or a skilled person.

[0034] It is noted that although the present exemplary embodiment mainly describes the method of customizing the wedge heel by the automatic machine, a manual customizing method by the worker is not excluded.

[0035] In the process P1 of the wedge heel half-finished product, the half-finished product of the wedge heel is prepared in advance. In this case, the half-finished product may not include a basic shape of the wedge heel and a basic insertion hole as shown in FIG. 5A, may have the basic shape of the wedge heel while not including the basic insertion hole as shown in FIG. 5B, has the basic shape of the wedge heel but may not include the insertion hole as shown in FIG. 5C, and may include both the basic shape of the wedge heel and the basic insertion hole as shown in FIG. 5D.

[0036] In the process P2 of recognizing the shape of the high heel shoes, a shape and a size of the slanted bottom portion of the high heel shoes and/or a shape and a size of the heel are recognized. In a case of a manual work, the shape is recognized with the naked eye by the worker or the skilled person, but at the time of using the automatic machine, the shape of the high heel shoes may be recognized using a known three-dimensional shape recognition program. Recognized shape information, that is, the shape and the size of the slanted bottom portion of the high heel shoes and the shape and the size of the heel are stored in a memory of a computer or the automatic machine as three-dimensional coordinate information.

[0037] As mentioned-above, the process P3 of machining the half-finished product may include the process P31 of machining the surface of the wedge heel and the process P32 of machining the insertion hole, wherein the process P31 of machining the surface is performed in a way in which the surface of the half-finished product is machined by means of a laser, for example. In this case, as described above, the surface machining may be automatically performed according to three-dimensional coordinate information which is recognized and stored. A degree of the surface machining may be varied according to the half-finished product. When using the half-finished product shown in FIG. 5A a machining manufacturing the basic shape of the wedge heel needs to be preceded, and when using the half-finished product shown in FIGS. 5B and 5D, since the basic shape of the wedge heel is provided, the surface machining that finely

adjusts the upper slanted surface of the wedge heel or the like so as to correspond to the shape of the slanted bottom of the high heel shoes is enough to this case.

[0038] The process P32 of machining the insertion hole may be performed in a way in which the size and the shape of the basic insertion hole formed in the half-finished product in advance are adjusted to match the heel of the high heel shoes. Since the heel insertion hole is closely inserted into the heel of the high heel shoes while being elastically deformed, the basic shape manufactured in advance may be used as it is. If necessary, the machining of the heel insertion hole is performed in a way of expanding the insertion hole. Although the process P31 of machining the surface is performed by the automatic machine, the process P32 of machining the insertion hole does not necessarily need to be performed by the automatic machine.

[0039] When using the half-finished product as shown in FIGS. 5A and 5B without having the basic insertion hole formed therein, the forming of the heel insertion hole is included in the process P32 of machining the insertion hole.

Claims

1. A removable wedge heel for high heel shoes, the removable wedge heel comprising:

   an upper slanted surface corresponding to a slanted bottom part of the high heel shoes;
   a bottom surface intersecting with the upper slanted surface so as to contact a ground; and
   a heel insertion hole formed toward the bottom surface from an upper portion of the upper bottom surface and closely inserted into a heel of the high heel shoes.

2. The removable wedge heel of claim 1, wherein the removable wedge heel has a periphery of the heel insertion hole made of at least viscoelasticity material.

3. The removable wedge heel of claim 1 or 2, further comprising a pair of fixing clips installed at both sides of a lower portion of the upper slanted surface to thereby contact both sides in vicinity of a bottom of the high heel shoes.

4. The removable wedge heel of claim 3, wherein the pair of fixing clips are made of a transparent material.

5. The removable wedge heel of claim 1 or 2, further comprising a nonskid part formed on the upper slanted surface.

6. A method of customizing a removable wedge heel, wherein:

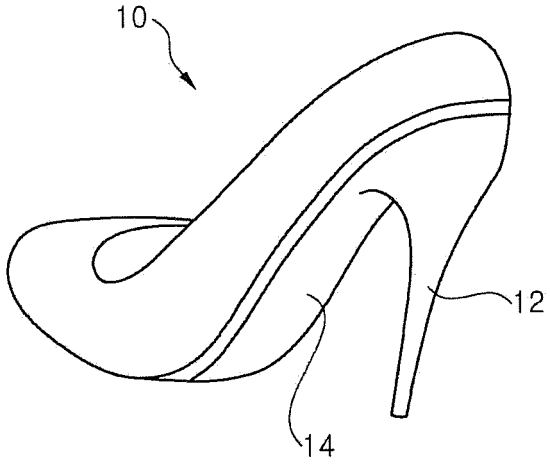
   a shape of high heel shoes is recognized; and
   the removable wedge heel is manufactured by machining a half-finished product according to the recognized shape of the high heel shoes,
   wherein the removable wedge heel includes a heel insertion hole closely inserted into a heel of the high heel shoes.

7. The method of claim 6, wherein the half-finished product has the heel insertion hole or a basic insertion hole corresponding thereto formed in advance, and
   a surface of the half-finished product is machined, such that an upper slanted surface corresponding to a slanted bottom part of the high heel shoes is formed.

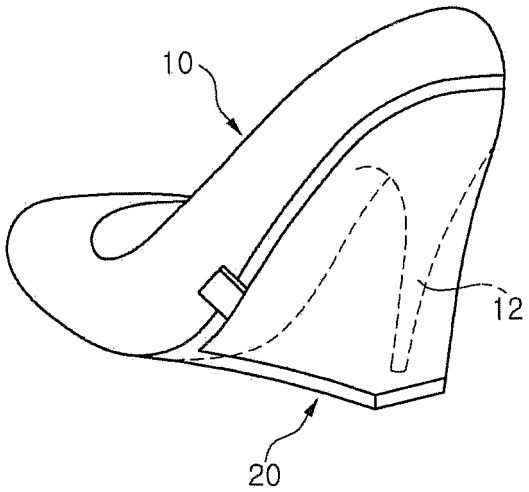
8. The method of claim 7, wherein in the machining of the surface, laser is used.

9. The method of claim 6, wherein after the manufacturing of the removable wedge heel, the heel of the high heel shoes is closely inserted into the heel insertion hole so that the removable wedge heel is coupled to the high heel shoes.

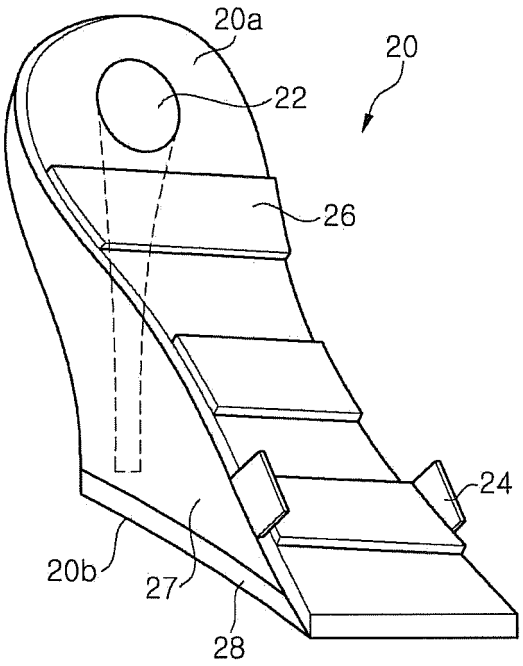
【Fig. 1】



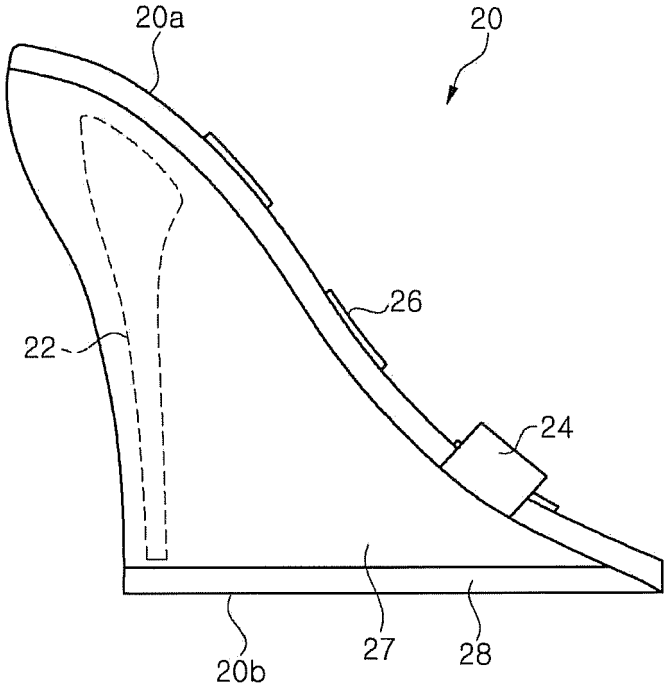
【Fig. 2】



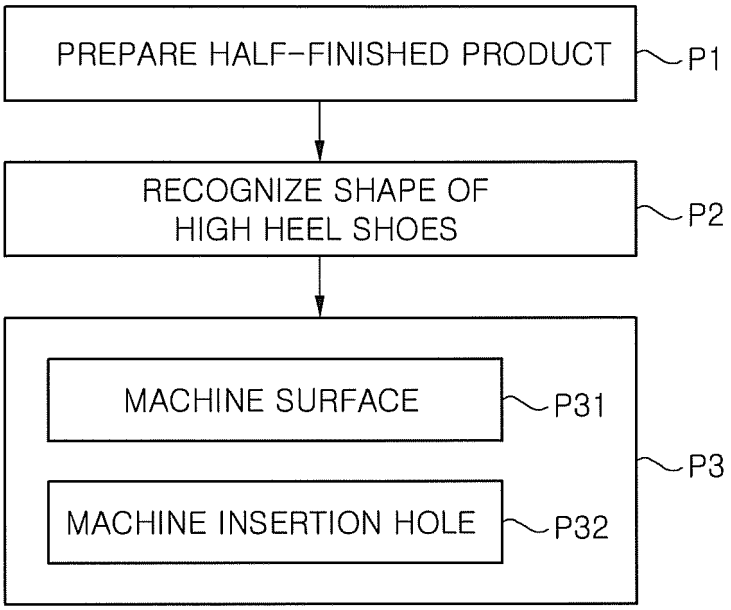
【Fig. 3】



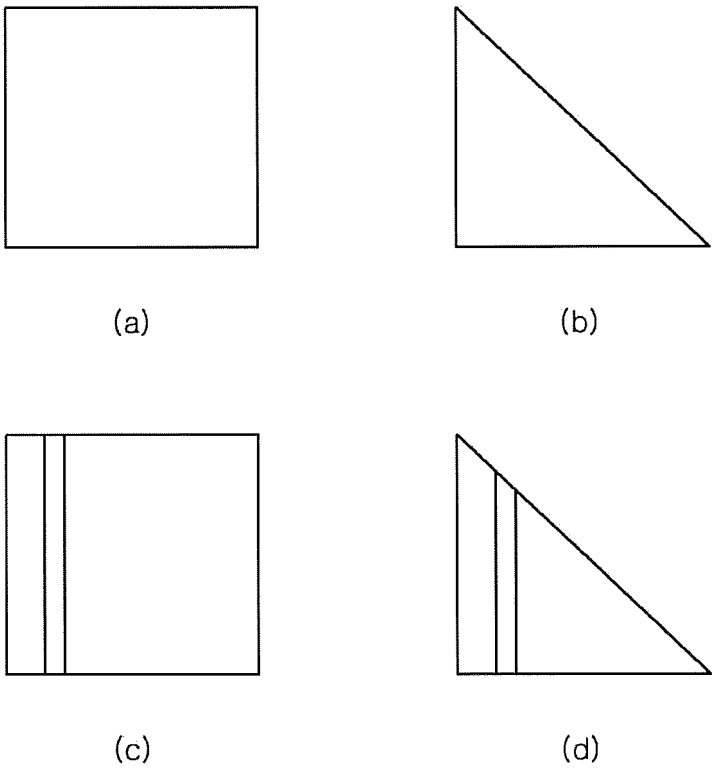
【Fig. 4】



【Fig. 5】


PREPARE HALF-FINISHED PRODUCT
P1
RECOGNIZE SHAPE OF HIGH HEEL SHOES
P2
MACHINE SURFACE
P31
MACHINE INSERTION HOLE
P32
P3

【Fig. 6】


(a)
(b)
(c)
(d)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2012/004748

A. CLASSIFICATION OF SUBJECT MATTER

A43B 13/36(2006.01)i, A43B 21/42(2006.01)i, A43B 3/24(2006.01)i, B29D 35/12(2010.01)i

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 13/36; A43C 13/00; A43B 11/00; A43B 21/42; A43B 21/36; A43B 21/30

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean Utility models and applications for Utility models: IPC as above
Japanese Utility models and applications for Utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS (KIPO internal) & Keywords: high heel, wedge heel, inclined plane, bottom surface, heel insertion hole

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006-0196082 A1 (ROBBINS, David B.) 07 September 2006 See abstract, paragraphs [0035], [0041], claims 1 to 9 and figures 5, 11 and 12.	1-9
A	US 4910885 A (HSIEH, Jerry W.) 27 March 1990 See abstract, claims 1, 4 and 5 and figures 1 to 6.	1-9
A	JP 2009-535073 A (JAGGER, Samantha) 01 October 2009 See abstract, claim 1 and figures 1, 2.	1-9
A	KR 10-2012-0079769 A (CHO, Chang Lae) 13 July 2012 See abstract, claims 1 to 4 and figures 1 to 3.	1-9

☐ Further documents are listed in the continuation of Box C. ☒ 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
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"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 such 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	Date of mailing of the international search report
23 OCTOBER 2012 (23.10.2012)	**29 OCTOBER 2012 (29.10.2012)**
Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 189 Seonsa-ro, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR2012/004748

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