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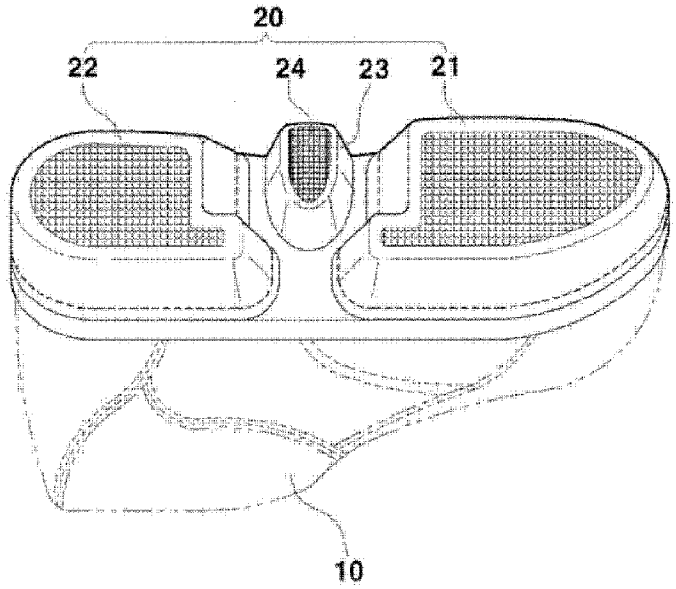
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(54) **Title:** SHOE OUTSOLE

[Fig. 1]



(57) **Abstract:** The present invention provides a shoe outsole which is constructed such that a front outsole part (21) and a rear outsole part (22) are integrally coupled to a lower surface of a shoe body (10), so that acupressure is repeatedly applied to a portion of a foot of a user which pertains to the pancreas of the user, thus promoting secretion of insulin, thereby naturally reducing a blood sugar level of the user who is diabetic. Furthermore, the present invention can improve the shape of the foot, even if the arch of the foot has become deformed. The present invention is char¬ acterized in that a middle outsole part (23) is provided between the front outsole part (21) and the rear outsole part (22), which are integrally provided under the shoe body.

WO 2009/017358 A2

Description

SHOE OUTSOLE

Technical Field

[1] The present invention relates, in general, to shoe outsoles and, more particularly, to a shoe outsole which is constructed such that a front outsole part and a rear outsole part are integrally coupled to a lower surface of a shoe body, so that acupressure is repeatedly applied to a portion of a foot of a user which pertains to the pancreas of the user, thus promoting secretion of insulin, thereby inducing the user who is diabetic to conduct walking or running exercise, and naturally reducing a blood sugar level of the user who is diabetic, and improving the shape of the foot, even if the arch of the foot has been deformed.

Background Art

[2] Recently, patients who suffer complications attributable to diabetes have increased. Particularly, an incident rate of diabetic foot lesions has largely increased, so that awareness of problems caused by foot lesions has increased. Typically, diabetics are frequently attacked by such diabetic foot lesions. Once a diabetic contracts a diabetic foot lesion, a long length of and large costs for treatment are required.

[3] Furthermore, a foot ulcer is a representative example of complications attributable to diabetes and is one of the major causes for which diabetics are hospitalized. After the diabetics are hospitalized, treatment is required for a very long period of time. Mortality from foot ulcers is also relatively high. In some cases, due to the foot ulcer, legs of the patient may have to be cut off.

[4] Therefore, early detection and prevention are of vital importance for the successful treatment of such diabetic complications. Furthermore, foot care education and efforts for disease prevention must be further promoted.

[5] It has been known that diabetic foot ulcer results from several complex causes. It is of importance if the cause be diabetic peripheral neuropathy or peripheral vascular disease. Other causes of outbreaks of foot ulcers are deterioration of joint mobility, the formation of hardened skin, abnormal walking, deformation of the shape of a foot, incorrect foot care and injuries attributable to excessive pressure being applied to one portion of a foot when wearing shoes and walking.

[6] Therefore, to prevent diabetic foot ulcer, it is very important to reduce pressure applied to the feet by wearing appropriate shoes or socks and removing hardened skin.

[7] However, in Korea, because diabetic shoes, which are typically used for medical treatment, are imported products from other countries, the burden of medical expenses shouldered by patients who need diabetic shoes has increased. In addition, of the

imported diabetic shoes, there are many products, the effects of which are not scientifically proven, thus exposing patients to unhealthy effects.

[8] With regard to diabetic neuropathy, measurement of plantar foot pressure is useful in finding a portion of a foot susceptible to foot lesions as well as determining whether a patient is in a risk group of those susceptible to foot lesions. In addition, the plantar foot pressure measurement can be used to determine susceptibility to treatment used for reducing plantar foot pressure.

[9] Meanwhile, in the case of diabetic shoes which have been sold in Korea to date, most of the diabetic shoes only function to prevent feet from becoming injured or prevent perspiration from the feet from remaining in the shoes.

[10] In other words, the conventional diabetic shoes only have the function of preventing the feet from becoming injured, without the promotion of continuous exercises by diabetics. Therefore, such a conventional diabetic shoe is problematic in that it cannot realize substantial improvement in the health of the diabetics by controlling blood sugar levels.

Disclosure of Invention

Technical Problem

[11] Accordingly, the present invention has been made keeping in mind the above problems occurring in the prior art, and an object of the present invention is to provide a shoe outsole which stimulates the arch of a foot (an area which pertains to the pancreas) of the user who is diabetic, thus promoting secretion of insulin through mere walking, thereby reducing the blood sugar level of the diabetic user.

[12] Another object of the present invention is to provide a shoe outsole which can prevent the arch of the foot of the user from becoming deformed into a flat shape, such as in the case of flat foot.

Technical Solution

[13] In order to accomplish the above objects, the present invention provides a shoe outsole, including: a front outsole part and a rear outsole part respectively provided under a front lower surface and a rear lower surface of a shoe body, wherein a middle outsole part is provided between the front outsole part and the rear outsole part, which are integrally provided under the shoe body to form the outsole, the middle outsole part applying acupressure to an arch of a foot.

[14] Preferably, the middle outsole part may have a protrusion on a portion thereof to be brought into contact with a ground, the protrusion protruding towards the ground and having a convex shape, so that the middle outsole part applies acupressure to the arch of the foot.

Advantageous Effects

[15] A shoe outsole according to the present invention stimulates an arch of a foot (the area which pertains to the pancreas) of the user who is diabetic, thus promoting secretion of insulin through mere walking, thereby reducing the blood sugar level of the diabetic user.

[16] Furthermore, the present invention can prevent the arch of the foot of the user from becoming deformed into a flat shape, such as in the case of flat foot. In addition, even if the arch of the foot of the user is in the deformed state, the present invention improves the shape of the arch of the foot such that it reverts to the normal shape.

[17] Moreover, because the present invention does not continuously apply pressure to the arch of the foot, the user can comfortably conduct exercise involving walking or running.

Brief Description of the Drawings

[18] FIG. 1 is a perspective view showing a shoe outsole, according to the present invention;

[19] FIG. 2 is a sectional view showing the construction of the shoe outsole of FIG. 1; and

[20] FIG. 3 is of views showing the operation of the shoe outsole of FIG. 1 when a user who wears the shoe is walking.

Best Mode for Carrying Out the Invention

[21] Hereinafter, a shoe outsole according to the present invention will be described in detail with reference to the attached drawings.

[22] FIG. 1 is a perspective view showing the shoe outsole, according to the present invention. FIG. 2 is a sectional view showing the construction of the shoe outsole of FIG. 1. FIG. 3 is of views showing the operation of the shoe outsole of FIG. 1 when a user who wears the shoe is walking.

[23] As shown in FIGS. 1 through 3, the shoe outsole of the present invention is provided under a lower surface of a shoe body 10 and includes a front outsole part 21 and a rear outsole part 22.

[24] In the shoe outsole 20, the front outsole part 21 is provided under the front portion of the shoe body 10 to support a front portion of a foot of a user. The rear outsole part 22 is provided under the rear portion of the shoe body 10 to support the rear portion of the foot.

[25] Furthermore, a middle outsole part 23 is provided between the front outsole part 21 and the rear outsole part 22 to provide acupressure effects to the arch of the foot.

[26] The middle outsole part 23 includes a protrusion 24, which protrudes towards the ground, such that when the user walks, the middle outsole part 23 can effectively apply acupressure to the arch of the foot.

[27] The operation of the shoe outsole of the present invention having the above-

mentioned structure will be explained below.

[28] When the user who wears the shoes walks, as shown in FIG. 3, before the middle outsole part of the shoe outsole 20 comes into contact with the ground, the protrusion 24 maintains the state of being convexly protruded towards the ground.

[29] When the middle outsole part 23 comes into contact with the ground, the protrusion 24 is pushed upwards by the ground against the foot of the user, as shown in FIG. 3.

[30] The protrusion 24, which is pushed upwards, applies pressure to the arch of the foot of the user. Due to the pressure applied to the foot of the user, a biological reaction occurs in the pancreatic organs connected to the intestinal organs.

[31] In detail, in the pancreas, β cells, which contain granules which can be dyed celadon green by aniline, secrete insulin.

[32] Therefore, in the case of a diabetic, secretion of insulin can be promoted merely by wearing the shoes of the present invention and by walking, so that the blood sugar level can be reduced.

[33] Furthermore, in the present invention, pressure is not continuously applied to the foot of the user except when the middle outsole part 23 contacts the ground, applying pressure to the foot. Therefore, there is an advantage in that the user is prevented from feeling pain attributable to the continuous application of pressure.

[34] In addition, because excessive pressure is prevented from being applied to the foot, the user can continuously walk or exercise without suffering any pain.

[35] As stated above, the present invention can, as well as helping a diabetic, help a person who has a deformed arch or has flat feet, because when he or she wears the shoes of the present invention the shapes of the arches of the feet can be improved.

[36] In brief, when the user wears the shoes and walks, the rear outsole part 22 of the shoe body 10, the middle outsole part 23 and the front outsole part 21 in consecutive order contact the ground.

[37] In this process in which the shoe outsole comes into contact with the ground, the center of gravity of the user's body is moved forwards and, simultaneously, the middle outsole part 23 of the shoe outsole 20 contacts the ground. Thereby, the middle outsole part 23 is pushed upwards, that is, towards the shoe body 10, thus applying pressure to the arch of the foot.

[38] As such, the middle outsole part 23 applies pressure to the arch of the foot and pushes the arch upwards, thus improving the shape of the arch.

[39] Thereafter, when the rear outsole part 22 of the shoe body is lifted upwards, the middle outsole part 23 is also lifted upwards from the ground. At this time, the pressure, which had been applied to the arch of the foot, is removed. Therefore, the foot is prevented from suffering pain attributable to the pressure, and the user can continuously conduct exercise which involves walking or running.

[40] As described above, while the user is walking or running, the rear, middle and front outsole parts of the outsole of each shoe contact the ground in the listed order, and this operation is repeated, so that acupressure is continuously applied to the feet, thus further increasing the positive effects of exercise.

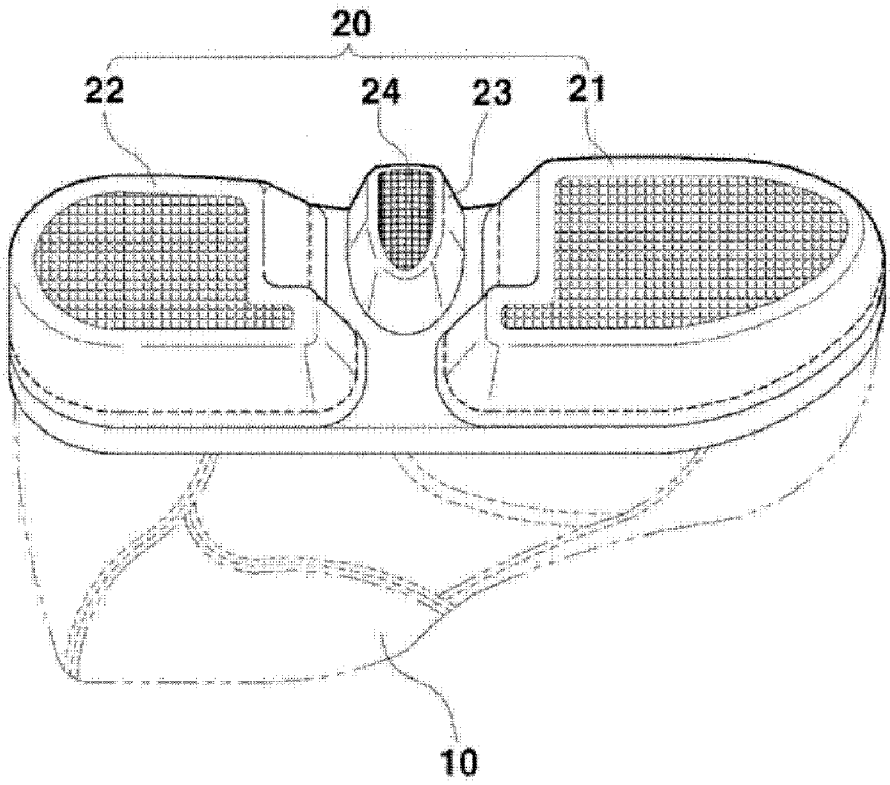
Claims

[1] A shoe outsole, comprising: a front outsole part (21) and a rear outsole part (22) respectively provided under a front lower surface and a rear lower surface of a shoe body (10), wherein

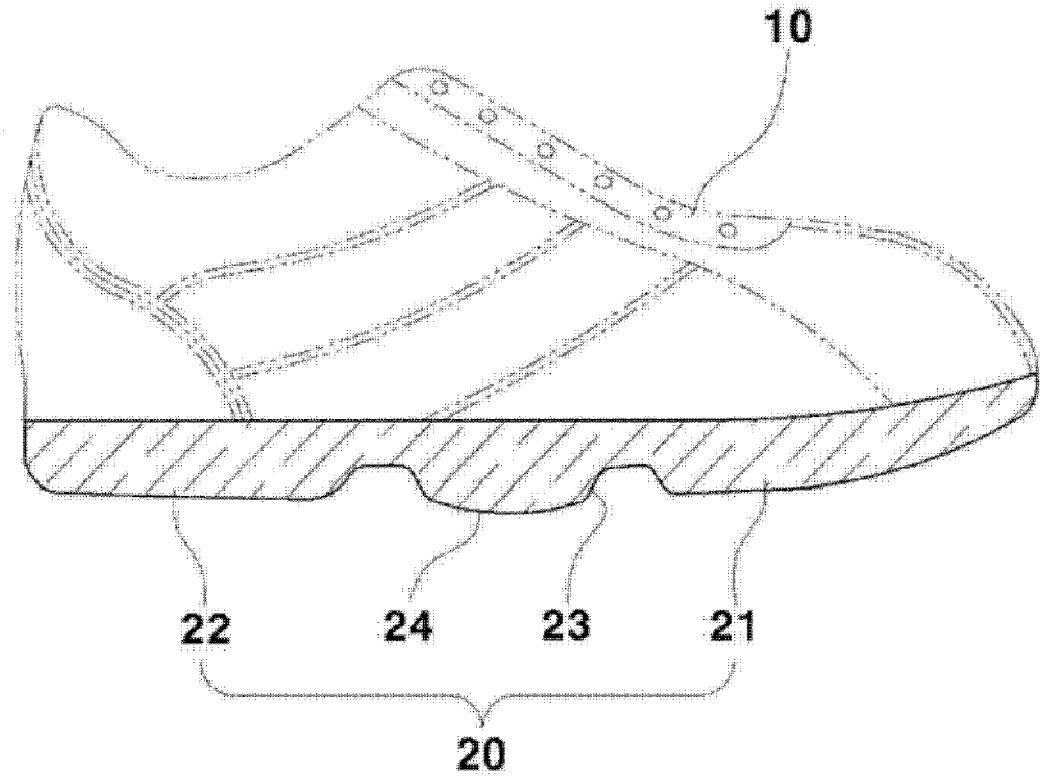
a middle outsole part (23) is provided between the front outsole part (23) and the rear outsole part (22), which are integrally provided under the shoe body (10) to form the outsole (20), the middle outsole part (23) applying acupressure to an arch of a foot.

[2] The shoe outsole according to claim 1, wherein the middle outsole part (23) has a protrusion (24) on a portion thereof to be brought into contact with a ground, the protrusion (24) protruding towards the ground and having a convex shape, so that the middle outsole part (23) applies acupressure to the arch of the foot.

[Fig. 1]



[Fig. 2]



[Fig. 3]

