



US 20070151124A1

(19) **United States**

(12) **Patent Application Publication**

**Chan**

(10) **Pub. No.: US 2007/0151124 A1**

(43) **Pub. Date:**

**Jul. 5, 2007**

(54) **WOMAN'S SHOE**

(52) **U.S. Cl.** ..... **36/35 R; 36/28; 36/71**

(76) **Inventor: Wen-Chieh Chan, Fongshan City (TW)**

Correspondence Address:

**ROSENBERG, KLEIN & LEE  
3458 ELLICOTT CENTER DRIVE-SUITE 101  
ELLICOTT CITY, MD 21043 (US)**

(21) **Appl. No.: 11/325,428**

(22) **Filed: Jan. 5, 2006**

**Publication Classification**

(51) **Int. Cl.**

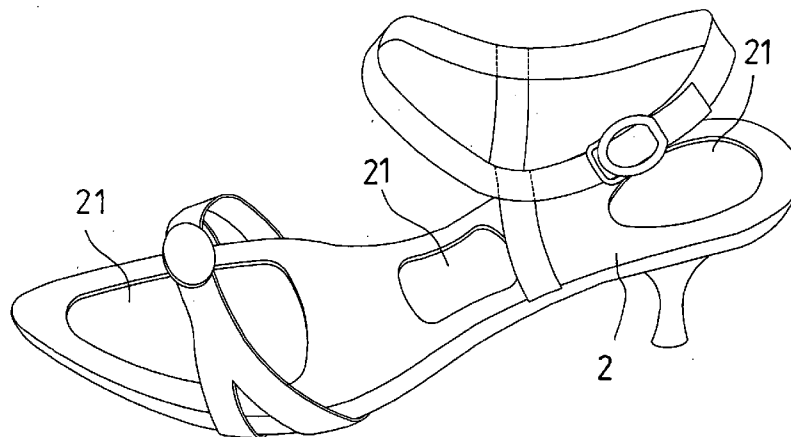
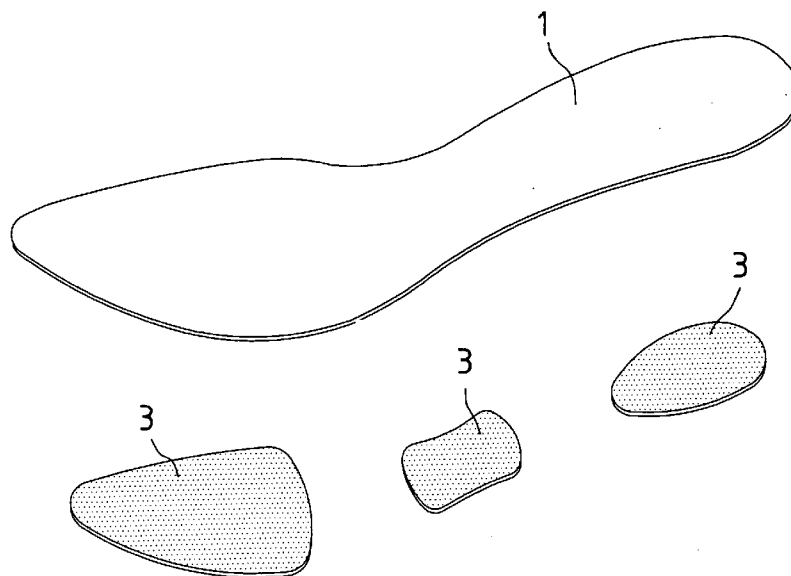
**A43B 13/18** (2006.01)

**A43B 21/06** (2006.01)

**A43B 19/00** (2006.01)

(57) **ABSTRACT**

A woman's shoe includes an insole surface layer, a sole under the insole surface layer and at least a thermoplastic rubber member. The sole is cut with at least a recess, for fitting the thermoplastic rubber member therein at a spot corresponding to a portion of a foot supporting a person's weight while walking or standing. Accordingly, the thermoplastic rubber member can absorb an impact force or a pressure as high as one third to two thirds of a body's weight while wearing such high-heel shoes. Moreover, it can soothe sourness of one's shoulders, soften the cervical vertebra and prevent insomnia, achieving a comfortable and healthy effect.



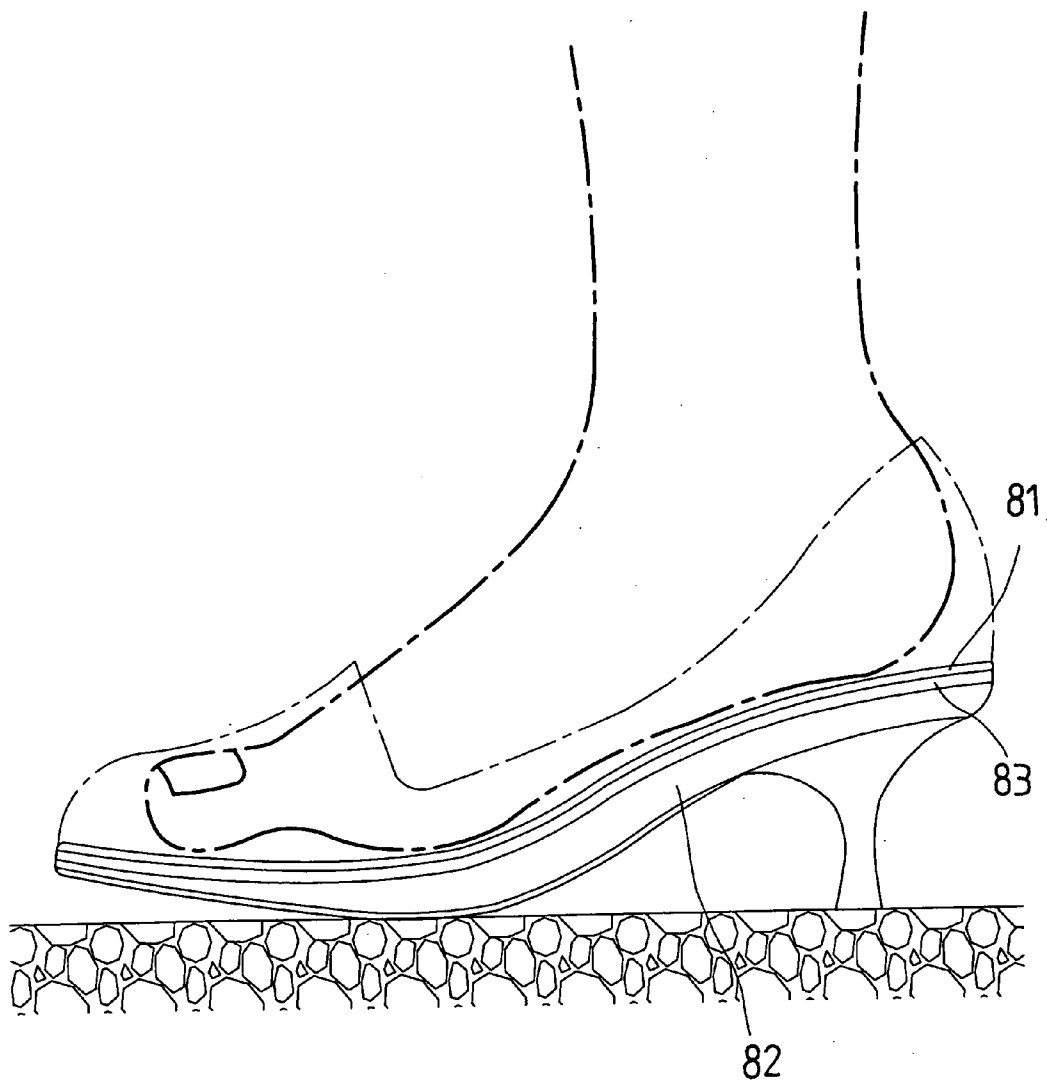


FIG. 1  
(PRIOR ART)

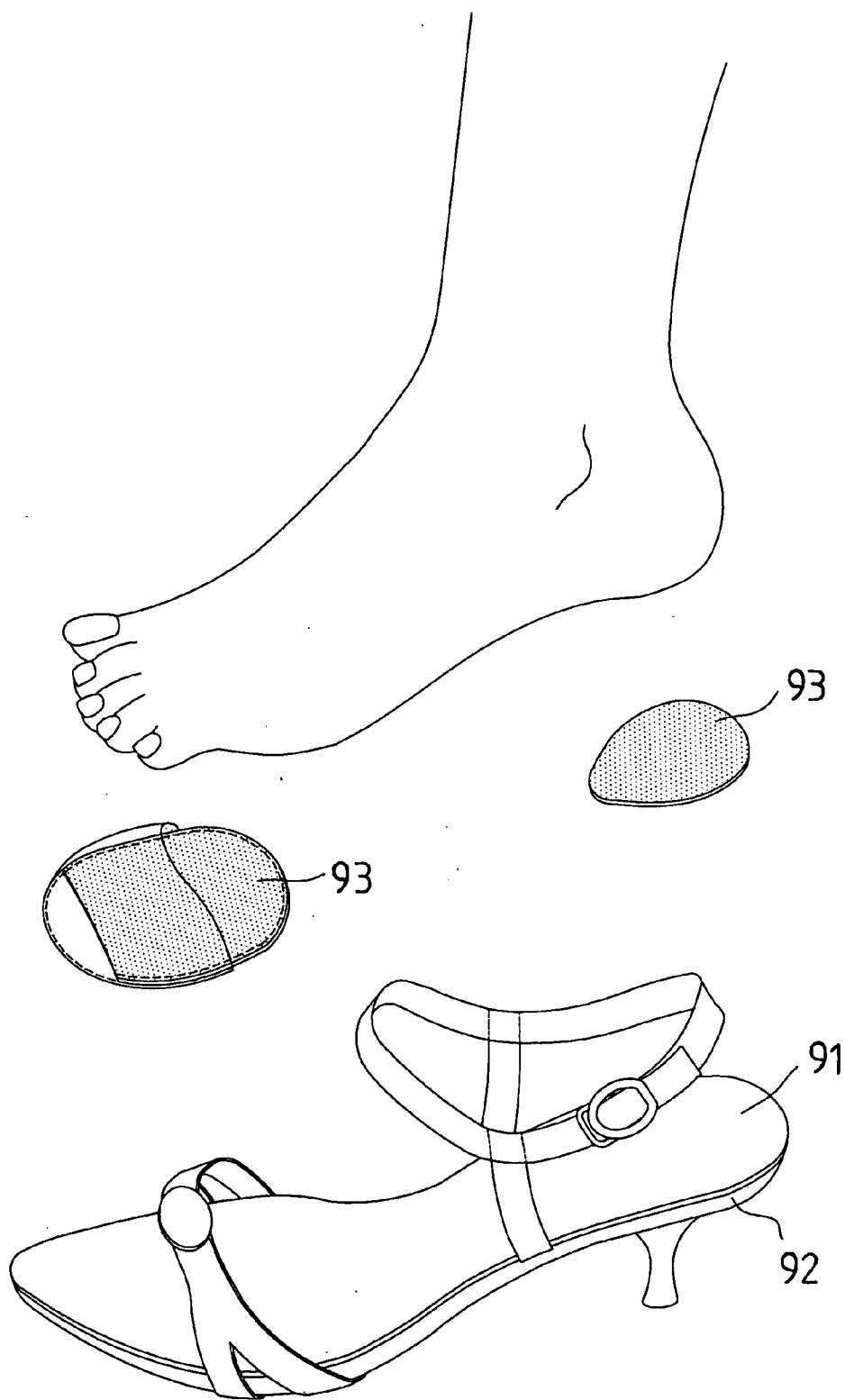


FIG. 2  
(PRIOR ART)

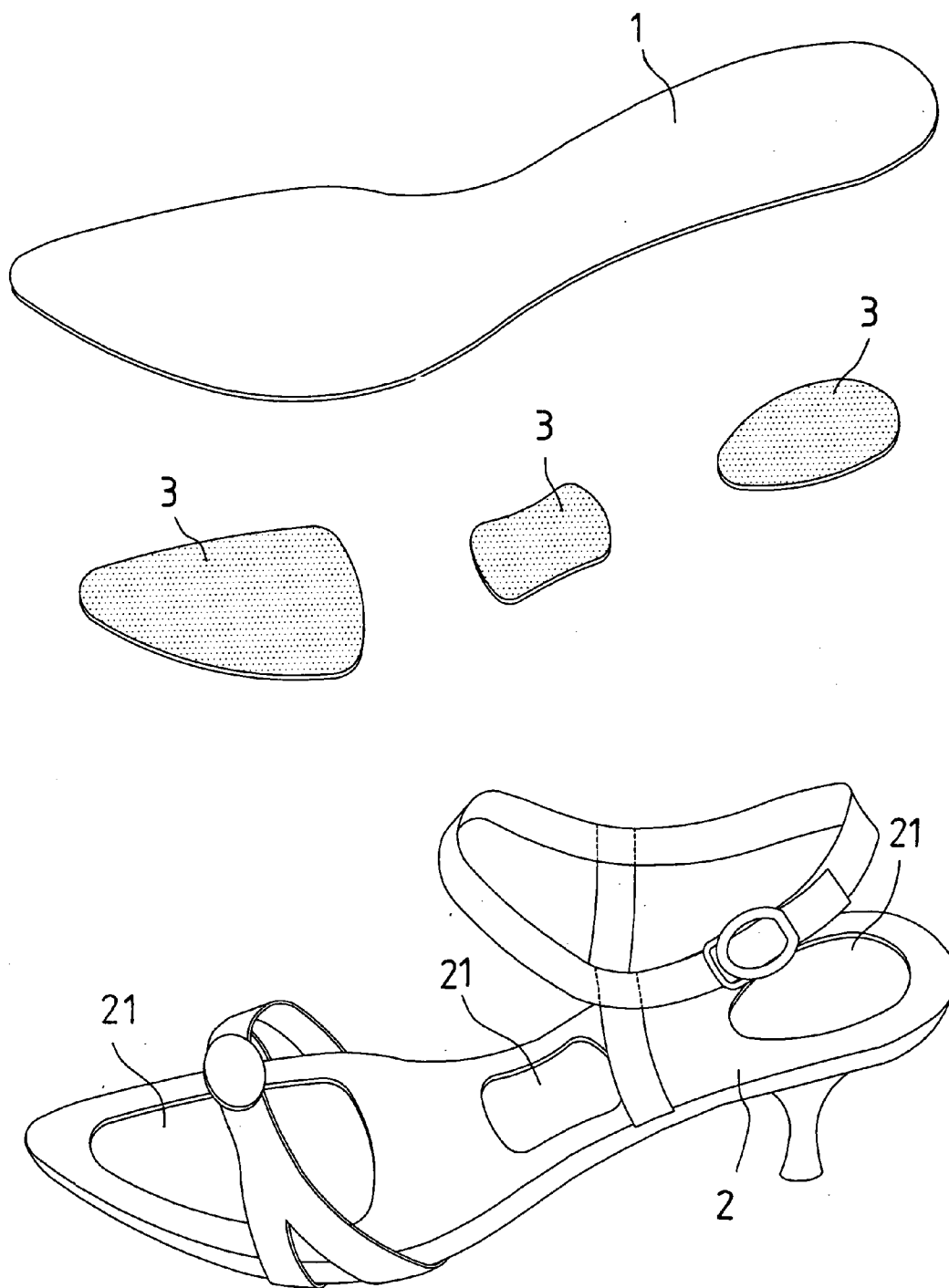


FIG. 3

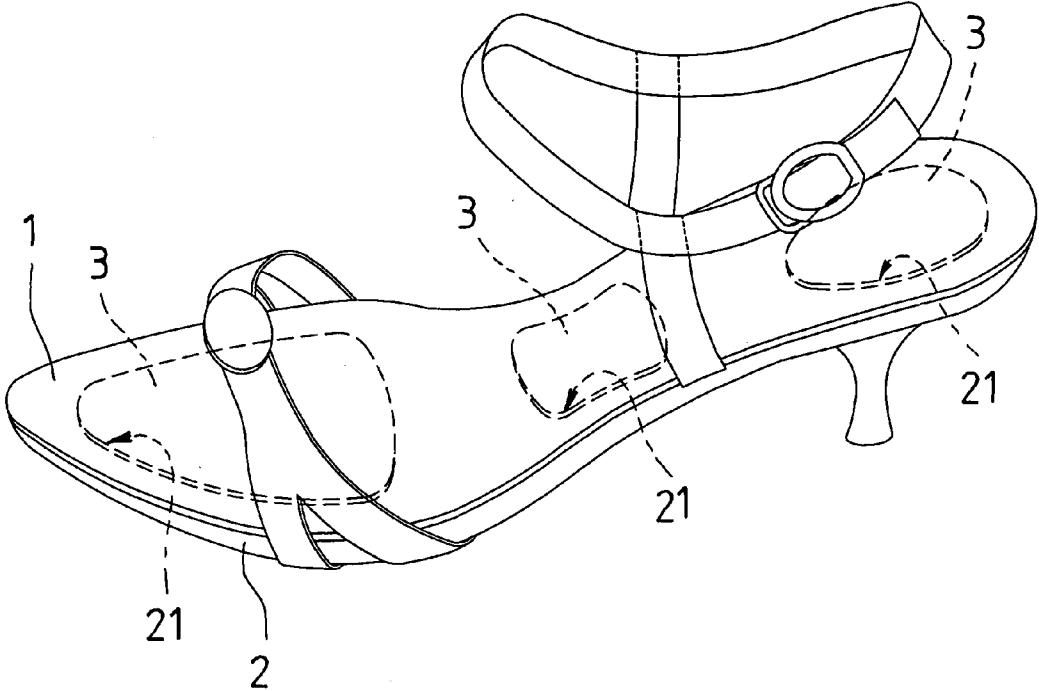


FIG. 4

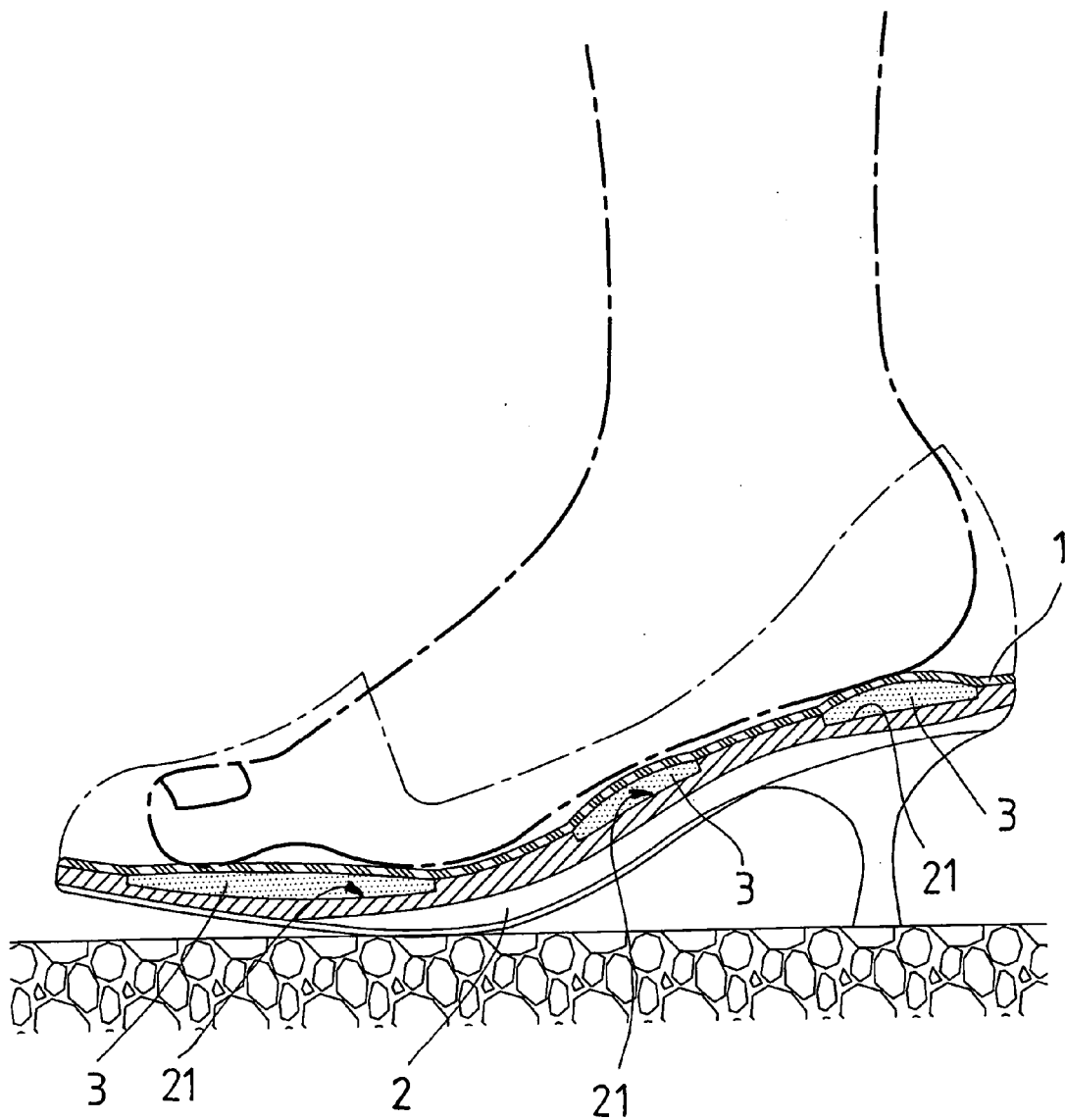


FIG. 5

**WOMAN'S SHOE**

**BACKGROUND OF THE INVENTION**

**[0001]** 1. Field of the Invention

**[0002]** This invention relates to a woman's shoe, particularly to one able to absorb an impact force or a pressure so as to reduce a burden on a foot and provide a comfortable and healthy wearing.

**[0003]** 2. Description of the Prior Art

**[0004]** As shown in FIG. 1, a conventional woman's shoe mainly includes a sole 82, a soft cushion 83 laid on the sole 82 and an insole surface layer 81 covered on the soft cushion 83. The soft cushion 83, usually a regular sponge, is used to absorb an impact force or a pressure from a person's weight so as to reduce some burden a foot. But, the soft cushion 83, after having being used for a period of time, is to gradually lose its elasticity, gradually becoming unable to absorb the impact force or the pressure.

**[0005]** As shown in FIG. 2, another conventional woman's shoe mainly includes a sole 92, an insole surface layer 91 laid on the sole 92 and a plural soft cushions 93 worn under a foot before wearing a shoe, so as to reduce some burden on the foot. But, it is very bothering to wear the soft cushions 93 before wearing a shoe and the soft cushions 93 are to move away easily from where they should stay, losing their effectiveness.

**SUMMARY OF THE INVENTION**

**[0006]** The prime object of this invention is to offer a woman's shoe with comfort and health.

**[0007]** The main characteristics of the invention are an insole surface layer, a sole under the insole surface layer and at least a thermoplastic rubber member. The sole is cut at least a recess for fitting the thermoplastic rubber member at a spot corresponding to a portion of a foot supporting a person's weight while walking or standing. Accordingly, the thermoplastic rubber member can absorb an impact force or a pressure as high as one third to two thirds of a body's weight while wearing such high-heel shoes. Moreover, it can soothe the sourness of wearer's shoulders, soften the cervical vertebra and prevent insomnia, achieving a comfortable and healthy effect.

**BRIEF DESCRIPTION OF DRAWINGS**

**[0008]** This invention is better understood by referring to the accompanying drawings, wherein:

**[0009]** FIG. 1 is side perspective view of a conventional woman's shoe;

**[0010]** FIG. 2 is a perspective view of another conventional woman's shoe;

**[0011]** FIG. 3 is a perspective view of a preferred embodiment of a woman's shoe in the present invention;

**[0012]** FIG. 4 is a perspective view of the preferred embodiment of a woman's shoe in the present invention, showing it assembled; and

**[0013]** FIG. 5 is a side cross-sectional view of the preferred embodiment of a woman's shoe in the present invention.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

**[0014]** As shown in FIGS. 3-5, a preferred embodiment of a woman's shoe in the present invention includes an insole surface layer 1, a sole 2 under the insole surface layer 1 and a piece (a plural pieces) of thermoplastic rubber (TPR) member 3.

**[0015]** The sole 2 possesses at least one recess 21 located at a spot corresponding to a portion of a foot that is to bear a person's weight while walking or standing and shaped semi-circular or oval etc. in accordance with the portion of a foot—such as a front portion of the sole, an intermediate portion of the sole or a heel.

**[0016]** The TPR member 3 made of a strongly elastic, abrasive and recycled thermoplastic material is shaped in the same shape as the recess 21 correspondingly and fitted therein. Moreover, the thickness of the TPR member 3 is slightly higher than the depth of the recess 21, enabling a foot to feel soft and comfortable.

**[0017]** The invention has the following advantages as can be seen from the foresaid description.

**[0018]** 1. Since the TPR member 3 is made of a strongly elastic and abrasive thermoplastic material, uneasy to get an elastic fatigue, it can last a very long term to reduce a burden on a foot, achieving a comfortable and healthy effect.

**[0019]** 2. Because the TPR member 3 is fitted in the recess 21 and covered by the insole surface layer 1, it is very convenient for wearing owing to its strong elasticity

**[0020]** 3. Because the TPR member 3 is fitted in the recess 21 and covered by the insole surface layer 1, the shoe cannot slip off, when it is worn, absorbing pressure and trembling of the foot, reducing the burden of the foot, and not impairing comfortable healthy effect.

**[0021]** While the preferred embodiment of the invention has been described above, it will be recognized and understood that various modifications may be made therein and the appended claims are intended to cover all such modifications that may fall within the spirit and scope of the invention.

What is claimed is:

1. A woman's shoe comprising:

an insole surface layer laid on a sole;

a sole at least provided with a recess; and

at least a thermoplastic rubber member fitted in said recess so that said insole surface layer may rest on said sole.

2. A woman's shoe as claimed in claim 1, wherein said recess is located at the spot corresponding to a spot where a foot is to support the weight of a body while walking or standing.

3. A woman's shoe as claimed in claim 1, wherein said recess is shaped semi-circular.

4. A woman's shoe as claimed in claim 1, wherein said recess is shaped oval.

5. A woman's shoe as claimed in claim 1, wherein said recess is shaped in other figures than a semicircle or an oval.

6. A woman's shoe as claimed in claim 1, wherein said thermoplastic rubber member is shaped in the same figure as said recess and swells up slightly after being fitted in said recess so a foot of a wearer may feel soft and comfortable.