

## (19) United States

# (12) Patent Application Publication (10) Pub. No.: US 2002/0011009 A1 Pan

Jan. 31, 2002

(43) Pub. Date:

### (54) BREATHING SHOES

Inventor: Wan Fu Pan, Shanghai (CN)

Correspondence Address: **MERCHANT & GOULD PC** P.O. BOX 2903 **MINNEAPOLIS, MN 55402-0903 (US)** 

(21) Appl. No.: 09/781,759

Filed: (22)Feb. 12, 2001

(30)Foreign Application Priority Data

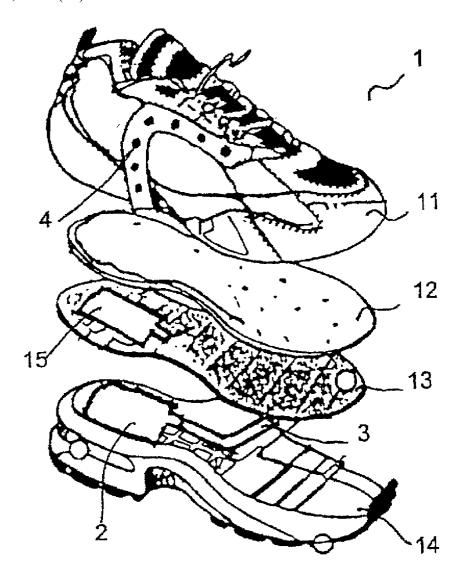
(CN) ...... 00218598.9 Jul. 27, 2000

### Publication Classification

(51) Int. Cl.<sup>7</sup> ...... A43B 7/06 

#### (57) **ABSTRACT**

A Breathing Shoes, comprising an upper and lining, socklining, insole, and outsole, wherein on the heel seat of outsole was put an airbag. The airbag was connected with an air pipe, which extends to the extension between inner layer and outer layer of upper. Portion of the air pipe on the upper was provided with air punching holes communicated with the atmosphere of in and out. The shoe could carry out circulation of air between interior and exterior of shoe for air purification and always keeping a dry and ventilating environment within the shoe.



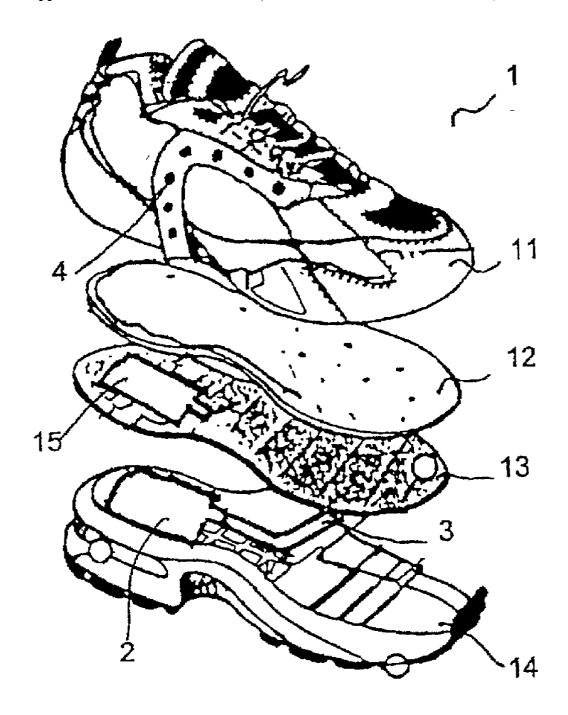


Figure 1

### **BREATHING SHOES**

[0001] The present utility model is related to a shoe, in particularly, a kind of ventilated shoe, which is called "Breathing Shoes".

[0002] As well-known, various foot diseases could be easily caused by the heat dissipation and perspiration from foot, and more wet and muggy in interior of shoes if wearing shoes for a long time, in such condition, bacteria were especially liable to grow and reproduce. At present, many solution have been utilized to solve the said problem, for example, uppers with perforation, breathing upper materials, socklining with sweat absorbent material even though socklining with medicine . . . etc.

[0003] Moreover, in the current market, air cushion shoes with a closed airbag in outsole were already developed and sold, but said airbag was only used for the enhancement of elasticity while walking, no effect at all for refreshing the air within the shoe. Therefore, no specific shoes have been utilized the circulation of air between interior and exterior of shoe to solve the problem of air purification in shoes.

[0004] In view of the above problem, the present utility model intends to provide a shoe, which could carry out circulation of air between interior and exterior of shoes for air purification and keeping the feet comfortably in a dry and ventilating environment within the shoes.

[0005] In order to achieve said purpose, the present utility model provides a shoe, which comprises an upper and lining, socklining, insole and outsole; wherein on the heel seat of the outsole was put an airbag. Said airbag was connected with a pipe which was through under insole and extend to the interior layer of upper, the pipe was punched through in several punching holes for communicating with the atmosphere of in and out.

[0006] In comparison with traditional shoes, the present utility model with those feature of airbag, air pipe and air punching holes to function on circulation of air between interior and exterior of shoes. While wearing shoes, air could be continuously renewed and circulated between interior and exterior of shoes, so that air within the shoes was kept always dry, clean and fresh.

[0007] In order to further understanding about the model on purpose and clearly identify those objects with feature, the present utility model was described in detail with a preferred embodiment shown in following drawings:

[0008] FIG. 1 is a perspective view of a Breathing shoe base on an embodiment of the present utility model.

[0009] As shown in FIG. 1, is an embodiment of sporting shoe, which comprises an upper and lining layers 11, socklining 12, insole 13, and outsole 14. According to the present utility model, on the heel seat of outsole 14, was put a

resilient airbag 2, which was connected with an air pipe 3, along the pipe channel of outsole and then it upward extends from the sole edge into the upper 11 (not shown). Portion of the air pipe within the upper was positioned between the upper and lining, in which punching holes was provided for communicating with the atmosphere of in and out.

[0010] According to the present utility model, an window 15, was provided in heel seat of insole 13, then the airbag 2, could pass through the window and over the insole slightly in height.

[0011] As people wearing the Breathing Shoe, their heel trample firstly on the airbag to press air out of the airbag and it through the air pipe into outsole, upper and lining, then air coming into inside of shoes or outside of shoes by passing through punching holes on air pipe.

[0012] When the foot lift for second step, the heel would be off the airbag, at this moment the outside fresh air would be sucked through the punching holes into interior of the shoes and the pressed airbag would be also fully filled with the air. Consequently, either people walking or running with the Breathing Shoes, the airbag would continuously be pressed and restored, and air would be always fresh, clean and dry to circulate between interior and exterior of the shoes, and this function result will prevent the foot suffer from disease also will make the foot feel comfortably.

[0013] Base on the skill in the art, we might be easy to realize the Breathing Shoes by introducing in detail with a preferred embodiment, but various modifications could be made to the upper design with conception. For example, although in said embodiment is a sporting shoe, obviously, the conception of the Breathing Shoes could be applied to any type of shoes in any upper design, it means the air pipe could be provided either inside quarter or outside quarter to meet design needs. Consequently, the scope of protection of the present utility model should be defined by the additional claims.

- 1. The Breathing Shoes, comprising an upper and lining, socklining, insole and outsole, characterized in that, on the heel seat of outsole was put an airbag, the airbag was connected with an air pipe which extends to the extension between inner layer and outer layer of upper, portion of air pipe on upper was provided with punching holes communicated with the atmosphere of in and out.
- 2. The Breathing shoes as defined in claim 1, wherein an window correspond to the position of the airbag was provided in heel seat of insole.
- 3. The Breathing Shoes as defined in claim 1, wherein at least one air pipe were provided, either in inside quarter of upper or outside quarter of upper, the circulation of air pipe would follow up with any type of shoes in any upper design.

\* \* \* \* \*