

[19] Patent Office of the People's Republic of China

[11] Authorized official number CN 2187379Y

[12] Utility model patent specification

[21] ZL patent number 94202604.7

[45] Authorized publication date: January 18, 1995

[51] Int.Cl<sup>5</sup>  
A43B 1/04

[22] Application date: February 1, 1994 [24] Award date: October 30, 1994

[73] Patent holder: Li Wenxue

Address: No. 48 Gongnong Road, Shijiazhuang City, Hebei Province, 050051 3-203

[72] Designer Li Wenxue

[21] Application number: 94202604.7

[74] Patent agency: Hebei Science and Technology Patent Office

Agent Mi Wenzhi

Number of pages in the Specifications:

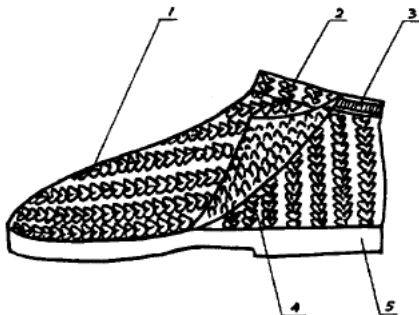
Number of pages in the attached drawing:

---

[54] Utility model name: A type of lightweight shoes

[57] Abstract

A type of lightweight shoes, which consist of an upper and a sole. Its characteristic is that the upper is made of two layers of elastic wool knitted fabric. The upper has a shaping structure at the opening of the shoe, and an elastic band is installed inside it. The utility model is light, breathable, heat-retaining and comfortable, and can be widely used as casual shoes for all ages.



(BJ) No. 1452

## Claims

1. A type of lightweight shoes, which consist of a sole and an upper. The upper is characterized in that the upper is made of two layers of elastic wool knitted fabric. The upper has a shaping structure at the opening of the shoe, and an elastic band is installed inside it.
2. The lightweight shoes as claimed in Claim 1 are characterized in that the shoe opening can be raised to make high top, boot-type lightweight shoes.

### A type of lightweight shoes

The utility model is considered footwear.

There are many types of footwear, and each pair of shoes is composed of a sole and an upper. The upper is made of leather, artificial leather, felt, wool, or cotton and so on. Due to their dense texture, these materials are generally strong but not very elastic. In order to adapt to the needs of different people's feet, shoes made of these materials with low elasticity are divided into multiple sizes strictly according to length when making shoes; although there are many sizes and types of shoes, it is difficult to fully adapt to everyone's feet. In addition, most shoes are heavy, have poor air permeability, and are uncomfortable to wear.

The purpose of this utility model is to provide a lightweight shoe with significant elasticity, light weight, good air permeability and comfortable wearing.

The utility model is achieved as follows: lightweight shoes, which consist of a sole and an upper. It is characterized in that the upper is made of two layers of elastic wool knitted fabric, and the directions of the knitting patterns of the inner and outer layers of the upper are perpendicular to each other; the upper has a shaping structure at the opening of the shoe, and an elastic band is installed inside the shaping structure.

The aforementioned lightweight shoes are characterized by the fact that the opening of the shoe can be increased to create a high-top boot-type lightweight shoe.

The wool knitted fabric has the characteristics of high elasticity, good warmth retention and breathability, so it is comfortable to wear. However, due to its high elasticity, especially in the direction of vertical knitting patterns, it has greater deformation and lower strength. In order to take advantage of its advantages and avoid its shortcomings, this utility model adopts a two-layer structure of wool knitted fabric, and makes the knitting patterns of the two-layer wool knitted fabric the same or vertical, thereby overcoming its shortcomings and adding a shaping structure at the opening of the shoe. In this way, the lightweight shoes of the present invention not only maintain a certain shape and strength, but are also comfortable to wear, breathable, light, warm, adaptable to the feet and beautiful.

To make the shoes of this utility model, the soles can be made of cloth soles, leather soles, rubber soles, plastic soles, or plastic cement soles, and various types of soles can be made according to different lengths. The wide and narrow ones are preferably medium-sized. The upper of this utility model can be made of wool, artificial wool, or mixed imitation wool, using a knitting machine or by hand. Various types of uppers can be knitted according to the size of the shoes. The yarn used for knitting can be one color or different colors. When knitting the upper, it can be knitted with flat knits or other knits. Patterns can be knitted as well. The shaping structure of the upper at the opening of the shoe is achieved by using knitted fabrics with different directions from the woven pattern of the outer upper layer.

An elastic band is installed in the shaping structure to maintain or restore the shape of the shoe opening, and connect the knitted upper to the sole, that is, when the utility model is made, the sole and the upper can be connected by bonding, rope or molding.

The uppers of the utility model are woven separately without cutting, so they will not come off. Furthermore, the uppers have a two-layer structure, and the inner and outer layers are woven in the same or vertical direction, ensuring the strength of the shoe in all directions and make it firm to wear.

The shoe upper of the present utility model is woven with wool, so it has elasticity. Each shoe can only be made into a medium type. Due to the elasticity of the shoe upper, it can be worn by either wide or narrow feet, and it is extremely comfortable to wear.

If the utility model is equipped with an emblem hole plastic sole, the shoe can be made even lighter and become a very light casual shoe.

The shoes made according to the utility model have very good air permeability, making it easy to keep feet and shoes dry and clean; the shoes also have good warmth retention properties. In order to further improve the warmth retention effect, the uppers can also be thickened or woven into multiple layers, and the top of the shoe can be heightened to make a high-top boot-type lightweight shoe as well.

Figure 1 is a schematic structural diagram of the utility model.

In the picture, 1-outer upper; 2-shaping structure; 3-elastic band; 4-inner upper; 5-sole

The utility model can be made according to the following steps:

Microporous plastic soles 5 are selected, and then wool is knitted on a knitting machine with flat knits to knit the soles and outer uppers 1 of corresponding sizes. When knitting the outer shoe upper 1, start from the front of the shoe and knit it backwards, and add knits as appropriate. When it reaches a certain length, split the knits to knit it into a herringbone shape. When certain requirements are met, the heel is then closed to make the outer upper 1. When knitting the inner shoe upper 4, start the needle according to the size of the bottom of the outer shoe upper 1 and knit it toward the opening of the shoe, so that the inner shoe upper 4 and the outer shoe upper 1 have the same or perpendicular knitting pattern direction, and knit to the opening of the shoe. That is, the inner shoe upper 4 is made, and the outer shoe upper 1 is put on the outside of the inner shoe upper 4 to make the upper of a lightweight shoe. At the opening of the shoe, select needles to knit the braid strips of the shaping structure 2 vertically in the direction of the knitting pattern of the outer upper 1. In order to effectively shape the shaping structure, an elastic band 3 is installed in the shaping structure. After the upper and the shaping structure 2 are made, the upper is connected to the sole 5 to form the lightweight shoe of the present utility model.

Patterned shoes can also be made by following these steps:

According to the method steps of Embodiment 1, when knitting the outer shoe upper 1, a pattern is woven, and the upper made by overlapping the patterned outer shoe upper 1 and the inner shoe upper 4 knitted as above is connected to the sole 5, forming patterned lightweight shoes, which are not only light, breathable and comfortable to wear, but also very beautiful.

Drawing Attached to the Specifications

