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**A method for making shoes includes a first mold made of stiff material and a second mold has a concavity in which the shoe is received. The shoe includes a top portion, a connection member and an outsole, wherein the connection member and the outsole are connected to the top portion. The second mold transmits ultra-sonic thermo energy to the connection member and the outsole, so that the connection member and the outsole are properly shrank and securely matched to the top portion.**

Fortsættes ...

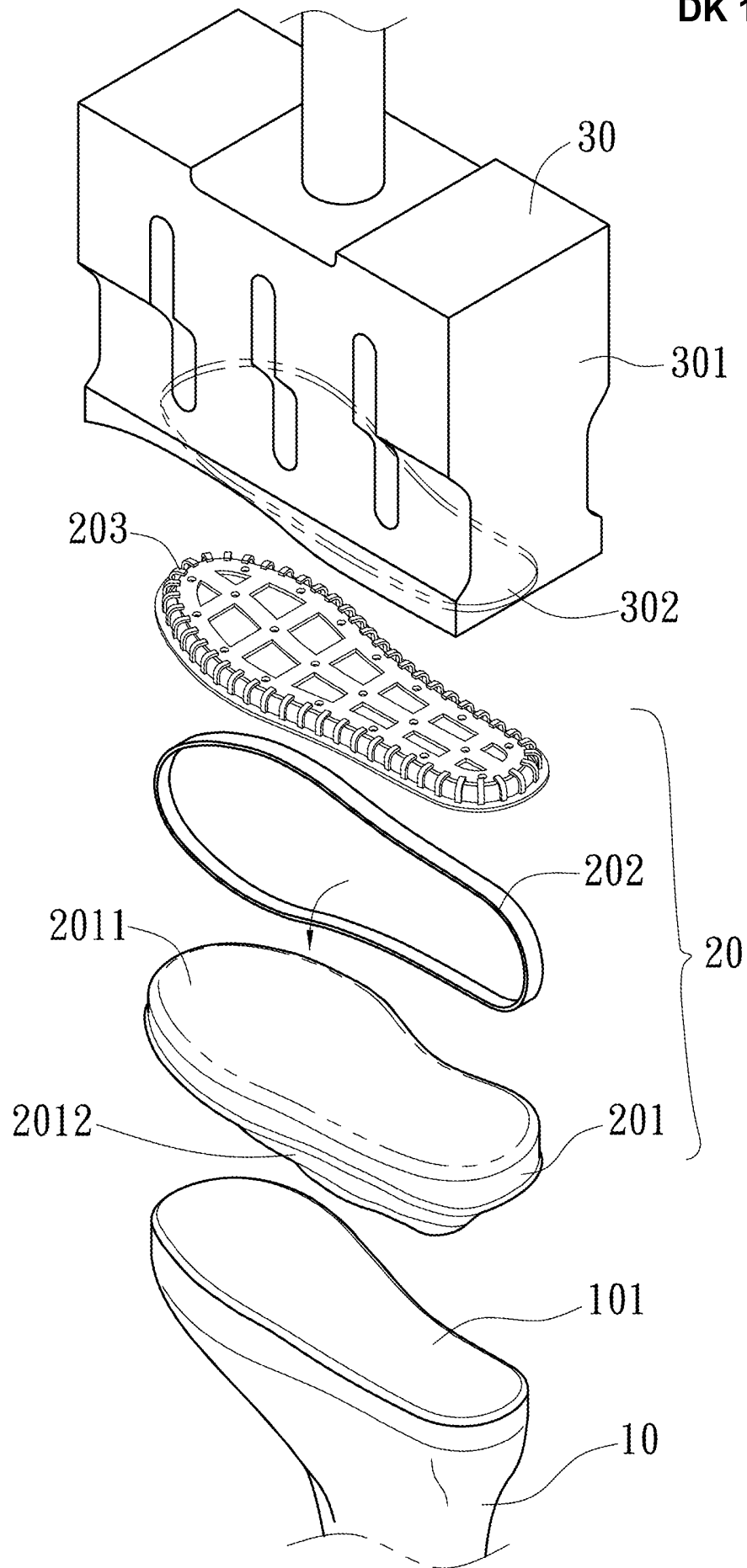


FIG. 2

## METHOD FOR MAKING SHOES

### FIELD OF THE INVENTION

The present invention relates to a method for making shoes, and more particularly, to an improved method for making shoes by using ultra-sonic conductive mold to securely attach the connection to the top portion of the shoes.  
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### BACKGROUND OF THE INVENTION

A conventional way to make shoes is shown in Fig. 1 and generally includes top portion 1, a connection member 2 and an outsole 3, wherein the outsole 3 is connected to the top portion 1 by way of pouring molding or adhering. The outsole 3 has to be connected with the connection member 2 before being connected with the top portion and the methods for the connection between the connection member 2 and the outsole 3 are adhering or stitching. However, it is noted that the sizes of the connection member 2 generally includes tolerances which make the connection member 2 be larger than the outsole 3. When adhering or stitching the connection member 2 to the outsole 3, the shoe will have lumps on the periphery thereof and which are not accepted in the market.  
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US 2008/0083485 A1 discloses a method for making a shoe including the steps of: a) placing a foamed sole blank and an upper in a mold, the upper being superimposed on the sole blank and having a last inserted therein; b) heating the mold to a temperature ranging from 110 to 150 DEG C, so that the sole blank is softened and bonded to the upper, and so that the sole blank is formed into a shape of a sole of the  
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shoe; and c) cooling the mold. The mold may be heated by passing a heating medium through main and side circulating passages in the mold.

The present invention intends to provide a method for making shoes by using ultra-sound to vibrate the mold to generate heat to securely connect and shrink the connection member and the outsole to the top portion of the shoe to eliminate the drawbacks happened in the conventional way.

### SUMMARY OF THE INVENTION

The present invention relates to a method for making shoes and comprises a first mold made of stiff material and a second mold. The second mold includes a concavity and the shoe is received in the cavity. The shoe comprises a top portion, a connection member and an outsole. The connection member and the outsole are connected to the top portion and the second mold transmits ultra-sonic thermo energy to the connection member and the outsole.

The primary object of the present invention is to provide a method for making shoes and the method reduces defective products when connecting the connection member and the outsole to the top portion of the shoes.

The present invention will become more obvious from the following description when taken in connection with the accompanying drawings which show, for purposes of illustration only, a preferred embodiment in accordance with the present invention.

**BRIEF DESCRIPTION OF THE DRAWINGS**

Fig. 1 is an exploded view to show a conventional way to make a shoe;

Fig. 2 is an exploded view to show the method for making shoes of the present invention, and

5 Fig. 3 is a cross sectional view to show the method for making shoes of the present invention.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

Referring to Figs. 2 and 3, the method for making shoes comprises a first mold 10 made of stiff material and is shaped as a shoe. The first mold 10 has a first surface 101 to which the shoe 20 is mounted.

A shoe 20 comprises a top portion 201, a connection member 202 and an outsole 203. The top portion 201 includes a bottom 2011 and a vamp 2012. The connection member 202 and the outsole 203 are mounted to the bottom 2011 of the top portion 201. The connection member 202 and the outsole 203 are made of thermo-plastic material.

A second mold 30 has a concavity and the shoe 20 is received in the cavity. The second mold 30 is electrically connected with an ultra-sound generating device (not shown) and is able to transmit ultra-sonic thermo energy to the connection member 202 and the outsole 203. The second mold 30 includes an ultra-sonic wave transmittal portion 301 and an ultra-sonic wave non-transmittable portion 302.

The ultra-sound generating device vibrates the second mold 30 at a frequency range between 15, 000 to 20, 000 times per second which make the second mold 30 to transmit ultra-sonic thermo energy to the connection member 202 and the outsole 203. The thermal energy properly shrinks and melts the connection member 202 and the outsole 203, and the connection member 202 and the outsole 203 are securely mounted to the bottom 2011 of the top portion 201. Therefore, when stitching, there will be no lumps formed on the connection member 202 and the outsole 203.

By the method of the present invention, the connection member 202 and the outsole 203 are perfectly matched with the top portion 201 and the method makes the stitching processes easy and efficient. There will be no lumps or gaps formed between the connection member 202 and the top portion 201.

While we have shown and described the embodiment in accordance with the present invention, it should be clear to those skilled in the art that further embodiments may be made without departing from the scope of the present invention.

**Patentkrav**

1. Fremgangsmåde til fremstilling af sko, hvor en sko (20) omfatter en overdel (201), et forbindelseselement (202) og en ydersål (203), og hvor fremgangsmåden omfatter de følgende trin:  
5 at forbinde skoens (20) overdel (201) med en første form (10) fremstillet af stift materiale,  
at forbinde forbindelseselementet (202) og ydersålen (203) med skoens (20) overdel (201), og  
10 at placere skoen (20) i en konkavitet af en anden form (30),  
at få den anden form (30) til at overføre ultrasonisk varmeenergi til forbindelseselementet (202) og ydersålen (203).
  
2. Fremgangsmåde ifølge krav 1, hvor forbindelseselementet (202) er fremstillet af termoplastisk materiale.  
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3. Fremgangsmåde ifølge krav 1, hvor ydersålen (203) er fremstillet af termoplastisk materiale.

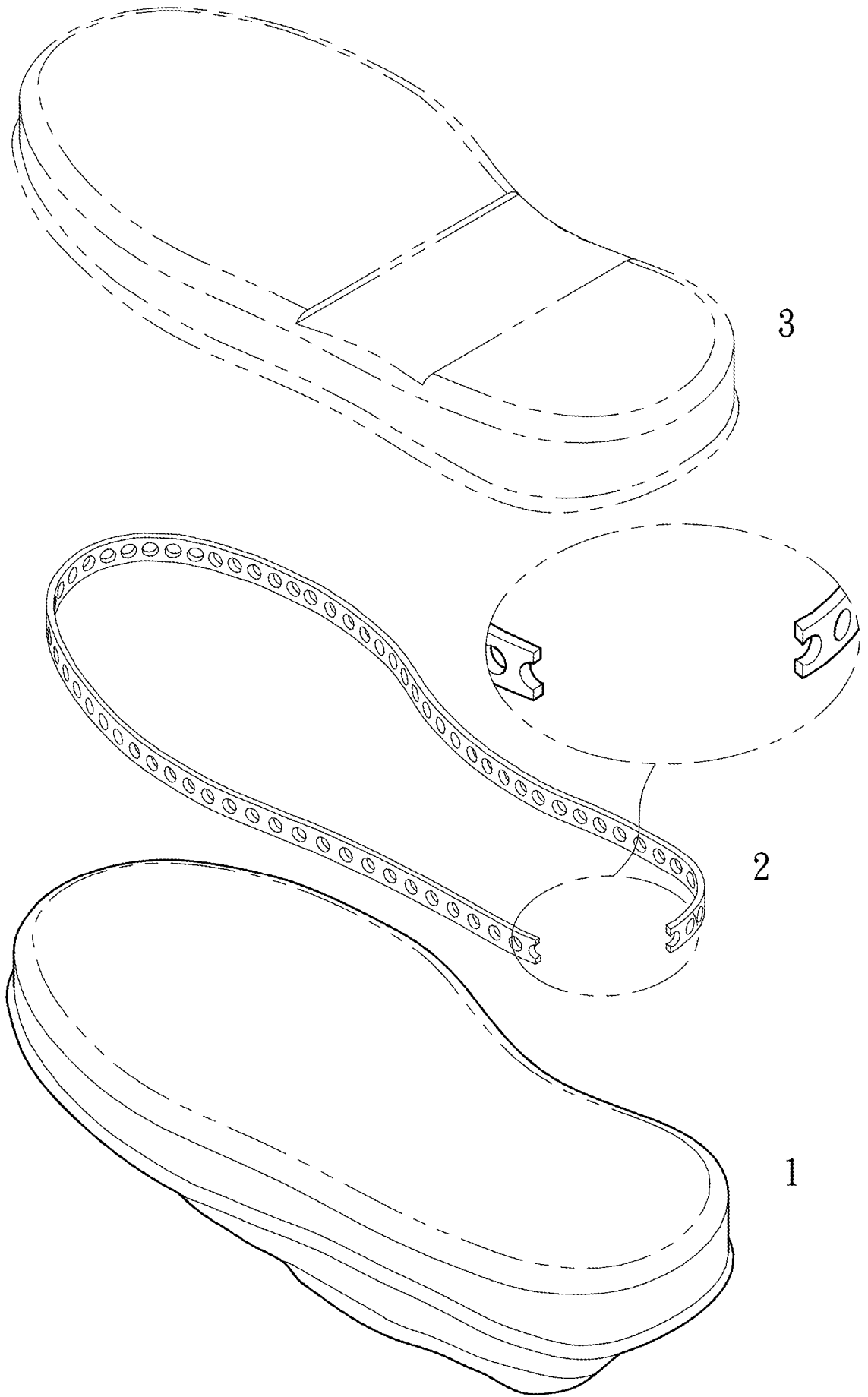


FIG. 1  
Prior Art

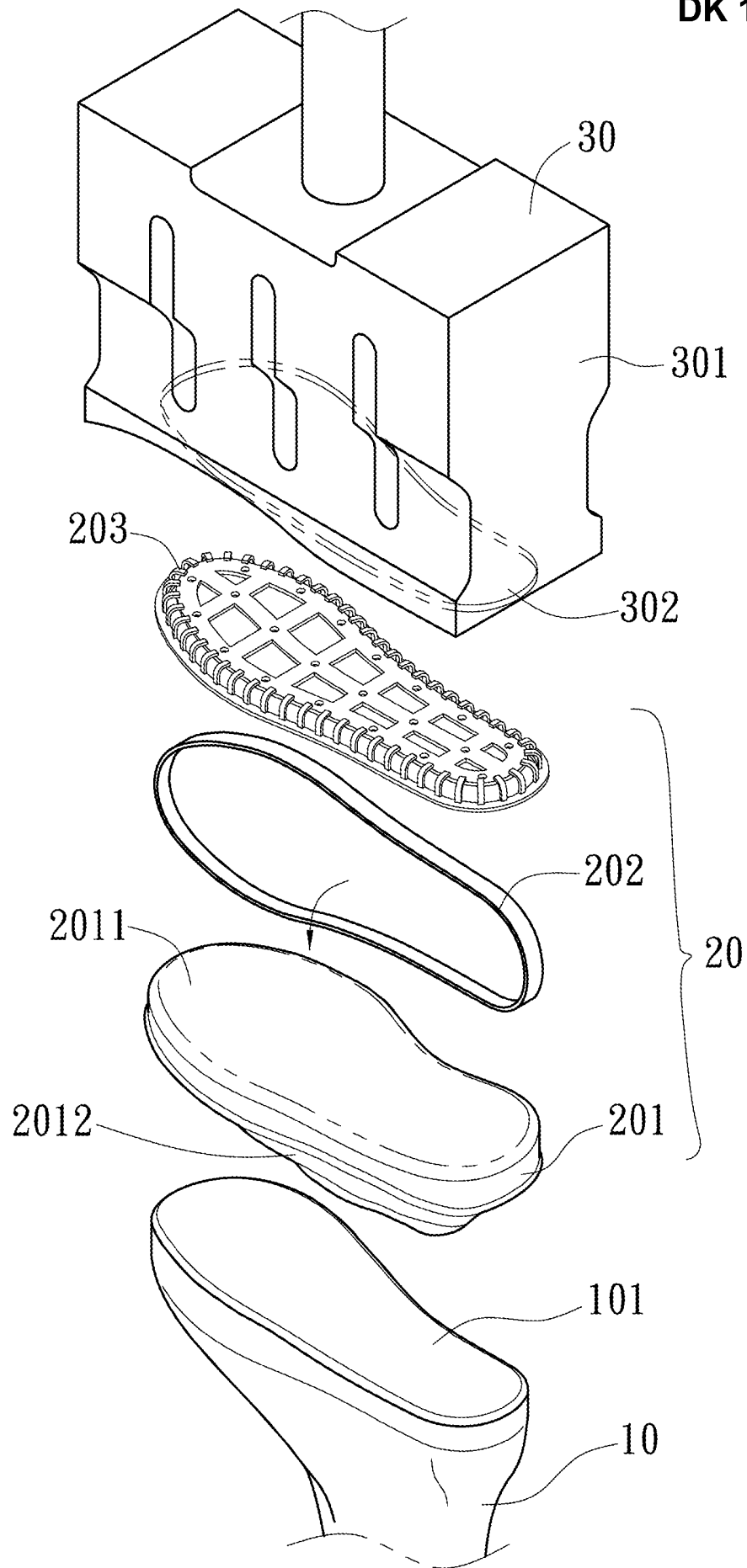


FIG. 2

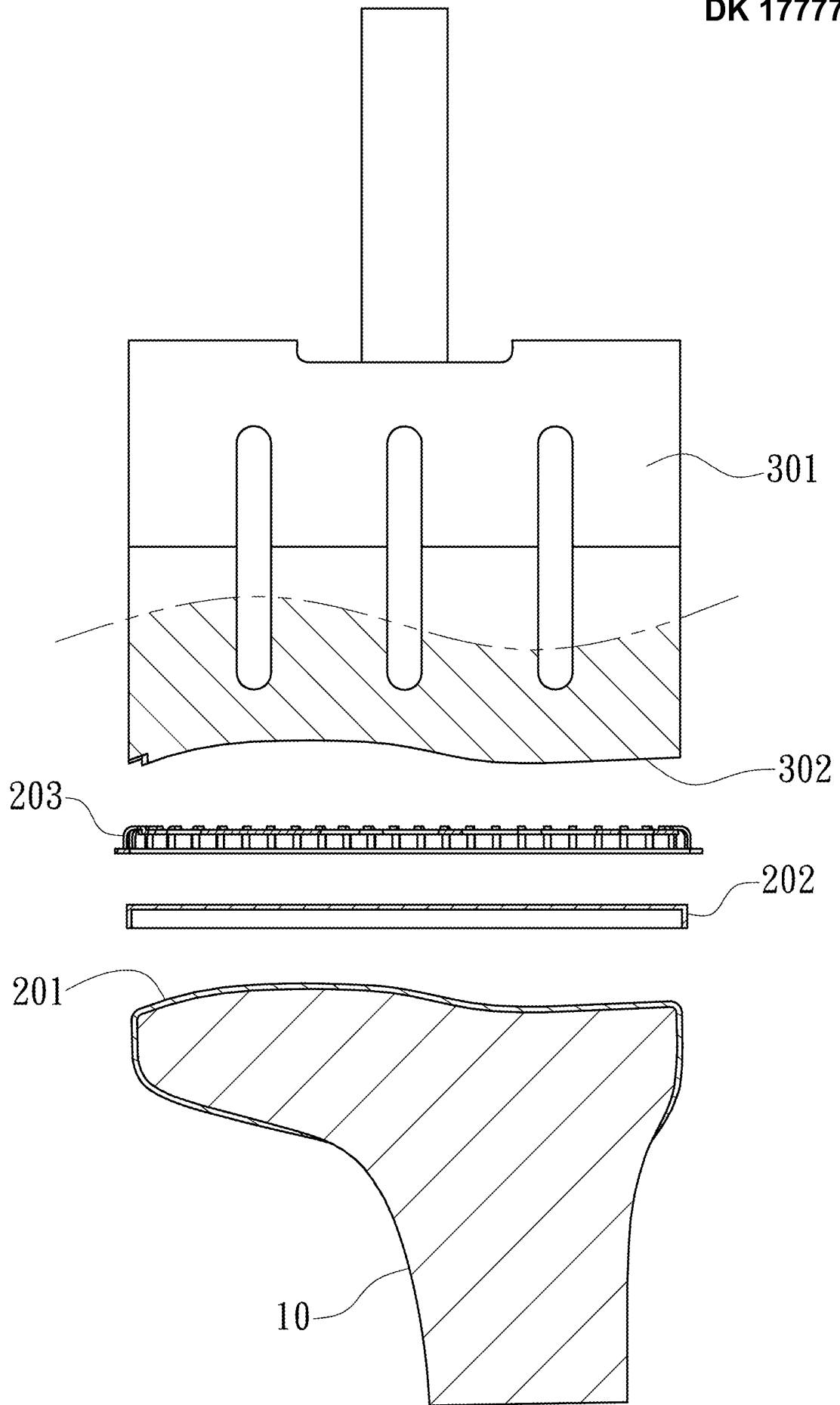


FIG. 3