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STATIC ELECTRICITY CONDUCTING SHOES

Filed July 6, 1967

Fig. 1.

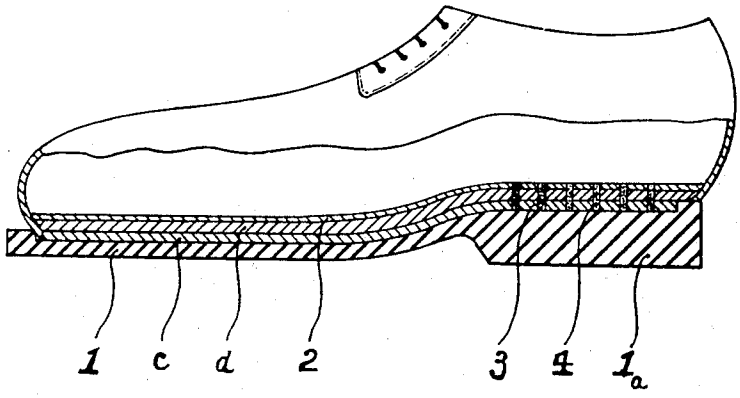


Fig. 2.

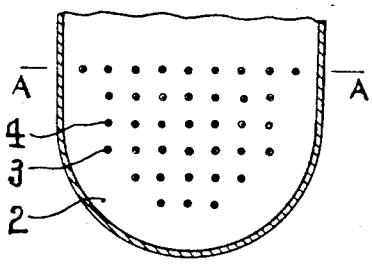
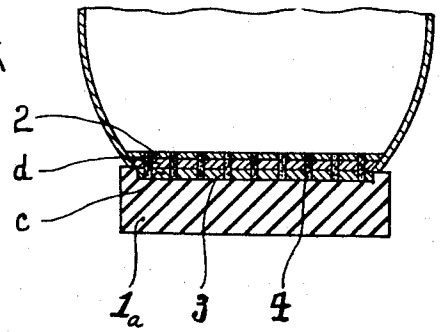


Fig. 3.



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STATIC ELECTRICITY CONDUCTING SHOES

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ABSTRACT OF THE DISCLOSURE

Static electricity conducting shoes in which a plurality of perforations are pierced in parallel with each other and from the upper surface of a heel member of said shoe sole to the uppermost surface of an insole thereof, said shoe sole made from static electricity conducting rubber material and said perforations filled up with static electricity conducting rubber material which sticks tightly therein thus said shoes being made static electricity conducting.

BACKGROUND OF THE INVENTION

Field of the invention

The field of art to which this invention pertains is the footgear, and particularly the shoes.

Description of the prior art

Nowadays, there are many workshops in which static electricity generally generates and as such examples, there are chemicals handling factories in which are being used solvents, painting materials, rubber, synthetic resins and the like. Working people have suffered from electric shocks quite often in such work shops. Also in surgeries of hospitals, static electricity which accumulated on surgical doctors engaging in surgical operation has caused often the knives and other surgical tools to spark due to it. And such spark incidents have injured both the doctors and their patents during surgical operation.

On investigating for causes of such disasters, it was disclosed that the troubled working people or the surgical doctors wore ordinary shoes at that time of accidents.

SUMMARY OF THE INVENTION

Whereupon the use of such electricity conducting shoes is recommended as the general preventative measures against the occurence of electric shocks and other electricity troubles in order to assure the safety of personnel in the work shops.

One object of this invention is to furnish static electricity conducting shoes with a feature such that static electricity, which generates on the human body wearing such shoes, is released to the floor from the sole surface of the shoes without spark.

Another object of this invention is to furnish static electricity conducting shoes with structure such that the full span from the point of contact of the heel of wearers to the floor surface is pierced through and inserted in with electric conducting rubber material.

Therefore, by virtue of this invention, if people who work in dangerous chemicals handling factories or surgeries in hospitals wear static electricity conducting shoes, they are made to protect their lives safely and to perform their tasks without any anxiety.

BRIEF DESCRIPTION OF THE DRAWING

This invention will be better understood and additional advantages of it will become apparent upon perusal of the following description taken in connection with the appended drawings, in which:

FIG. 1 shows a vertical sectional view of the essential part of a shoe embodying this invention;

FIG. 2 shows a plan view of the inside structure of a heel thereof; and

FIG. 3 shows a sectional view along the A—A line of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to the appended drawings more thoroughly, a shoe sole **1** is made with layer of static electricity conducting rubber. This layer is overlaid and fastened in succession with an inner layer *c* and an inside bottom layer *d*. Such stratified heap of the shoes bottom structure is further covered and stratified with an insole **2**. A plurality of static electricity conducting member **4** of rubber protruded upward from the upper surface of the heel member **1***a* to said insole **2** are made to pierce through a plurality of perforations **3** which are provided at suitably equal intervals and in parallel with each other in an inner part of said shoe heel **1**, namely the full span of depth of said stratified structure which covers said inner layer *c*, said inside bottom layer *d* and said insole **2** and are fastened tight by sticking into position as explained.

The shoes of this invention being constituted as explained, the wearers of such shoes, while in work in their work shop, are protected from dangers of static electricity accumulating within themselves and are earthed to the floor (not shown in the drawings) due to the wearer having been made to touch the static electricity conducting member **4** of rubber on their heels, releasing thus static electricity to the floor by way of said heel member **1***a*. For example, the surgical doctors, on wearing such shoes while in surgical operations in the surgeries of hospitals, are protected from the disaster of electric sparks breaking out from knives and other surgical tools while handling them, and thus the doctors, being released from endangering human lives, are able to perform jobs quite safely.

This invention has particularly an advantage to supply such shoes in large quantity and at a moderately cheap price to consumers because of the simplicity of structure of said shoes.

Finally, I like to comment that the static electricity conducting shoes of this invention may be used not only at such work shops in which are being handled solvents, painting materials, rubber, synthetic resins and the like as well as the surgeries at hospitals but also with advantage at such other work shop as petroleum refining factories or propane gas handling shops and the like.

While a particular embodiment of the invention has been illustrated and described, modifications thereof will readily occur to those skilled in the art. It should be understood therefore that the invention is not limited to the particular methods and arrangements disclosed but that the appended claims are intended to cover all modifications which do not depart from the true spirit and scope of the invention.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. In an electrically conductive shoe, in combination, an outer sole including a heel portion and consisting of electrically conductive material, said outer sole having an upper surface; at least one first layer of electrically non-conductive material overlying said upper surface; an electrically non-conductive second layer overlying said first layer and having an exposed upper face adapted to face the foot of a wearer, said first layer and second layer being provided in the region of said heel portion with a plurality of perforations each extending from said upper face to said upper surface; and a plug of electrically conductive material overlying said upper surface; an ing from said upper face to said upper surface into conductive contact with the latter.

2. In an electrically conductive shoe as defined in claim 1, wherein said electrically conductive material is an elastomeric material.

3. In an electrically conductive shoe as defined in claim 2, wherein said electrically conductive elastomeric material is rubber.

4. In an electrically conductive shoe as defined in claim 1, wherein said heel portion is integral with the remainder of said sole.

5. In an electrically conductive shoe as defined in claim 1, wherein said perforations each have a predetermined length and cross-sectional area, and wherein said plugs each have a slightly greater length and cross-sectional area so as to upon insertion into a respective perforation extend axially slightly therebeyond while being frictionally retained therewithin.

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