



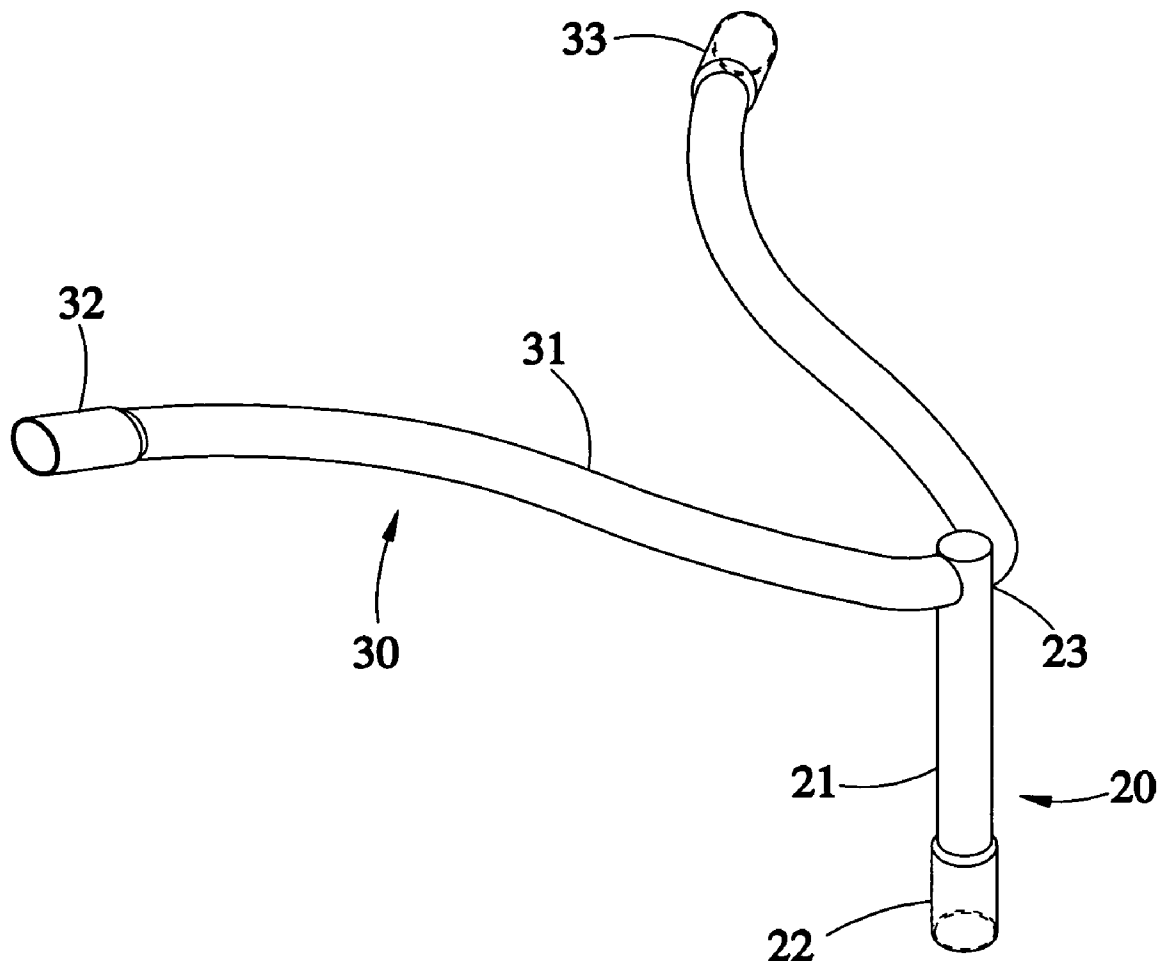
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(19) **United States**(12) **Patent Application Publication**  
**Pan**(10) **Pub. No.: US 2008/0052958 A1**(43) **Pub. Date: Mar. 6, 2008**(54) **FOOTWEAR WITH IMPROVED STRAPS**(76) Inventor: **Kung-Sheng Pan, Taichung (TW)**

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**A43B 3/12** (2006.01)(52) **U.S. Cl.** ..... **36/11.5**(57) **ABSTRACT**

A footwear with improved straps, which has a sole, a first strap, which has a hollow tubular strap body made from elastic plastics or rubber, a first mounting portion disposed at one end of the strap body and affixed to said sole and a second mounting portion disposed at the opposite end of the strap body, and a second strap, which has a hollow tubular strap body made from elastic plastics or rubber and connected to the second mounting portion of the strap body of the first strap and two mounting portions respectively disposed at the two distal ends of the strap body thereof and respectively affixed to the sole. In an alternate form of the invention, the first strap and the second strap are respectively affixed to the sole and set apart.



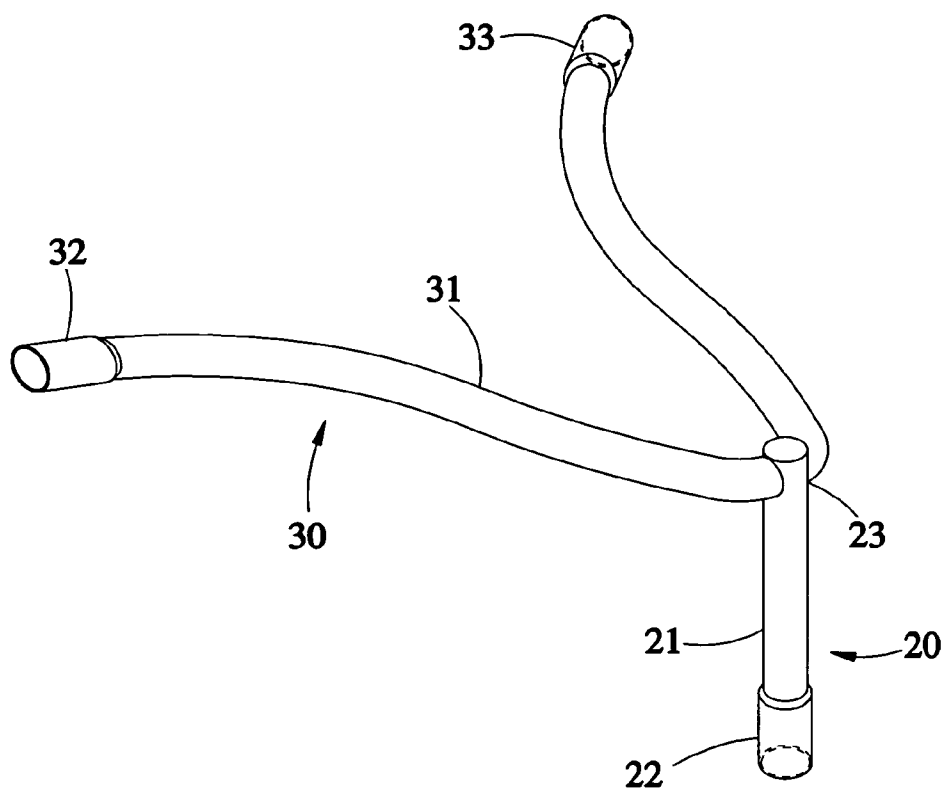


FIG.1

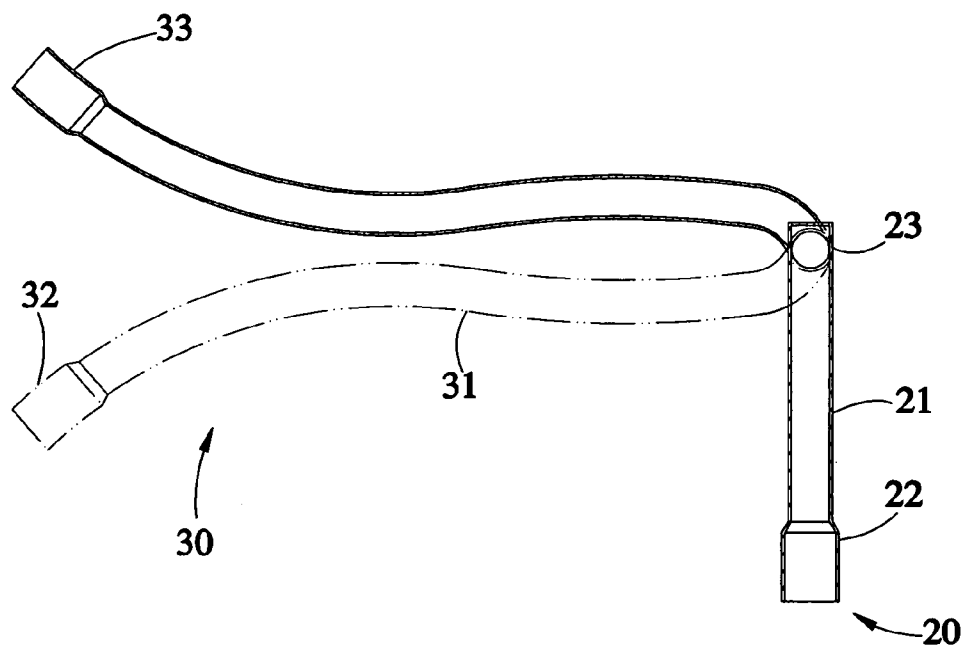


FIG.2

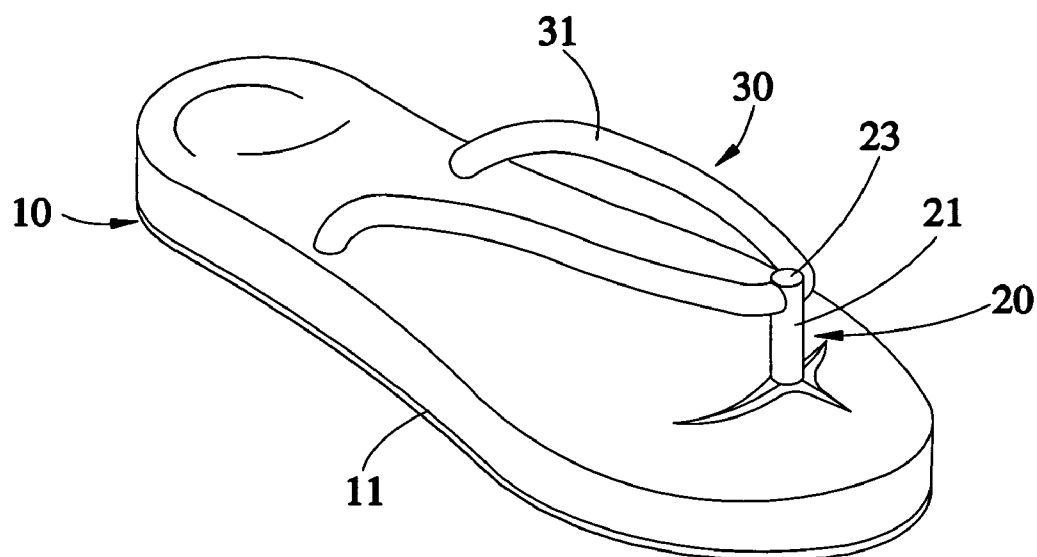


FIG. 3

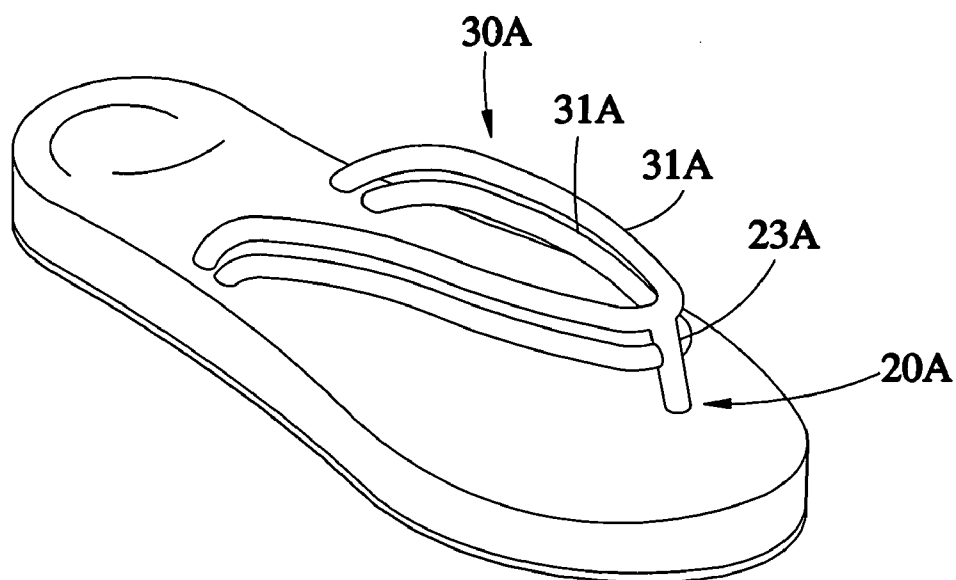
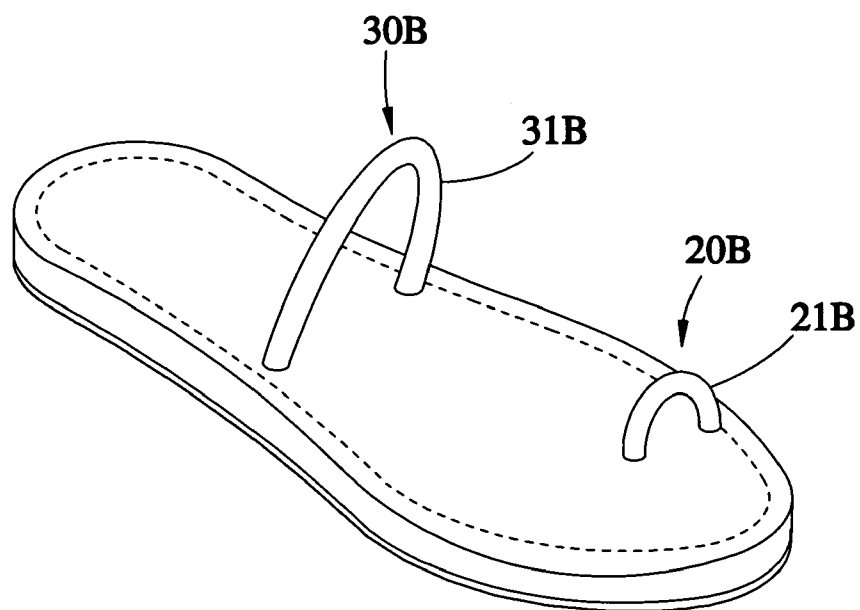
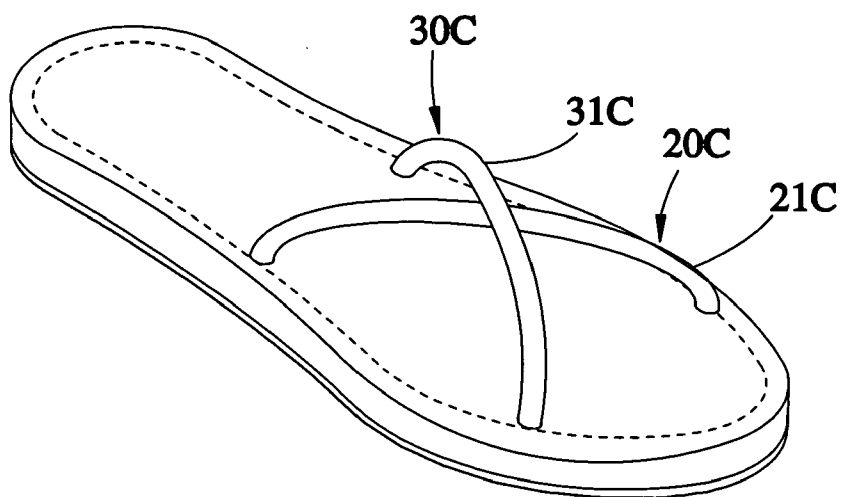


FIG. 4



**FIG.5**



**FIG.6**

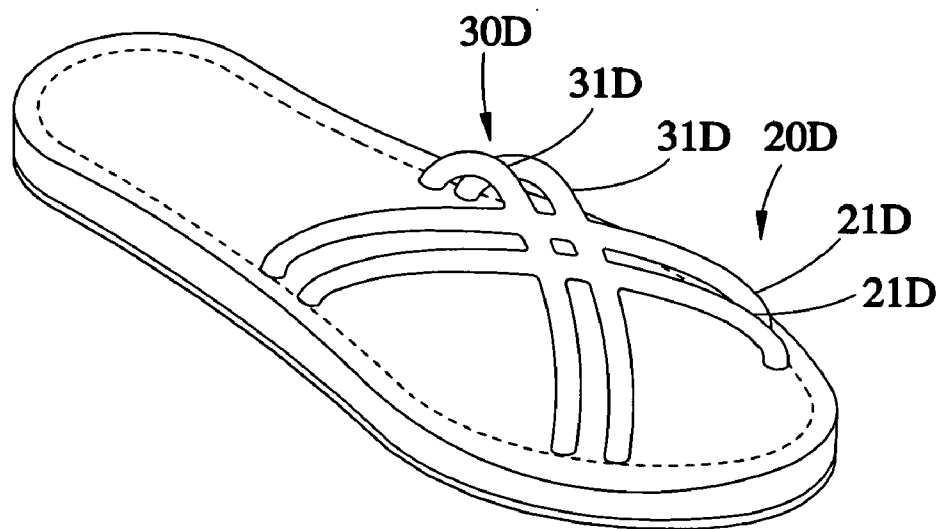


FIG. 7

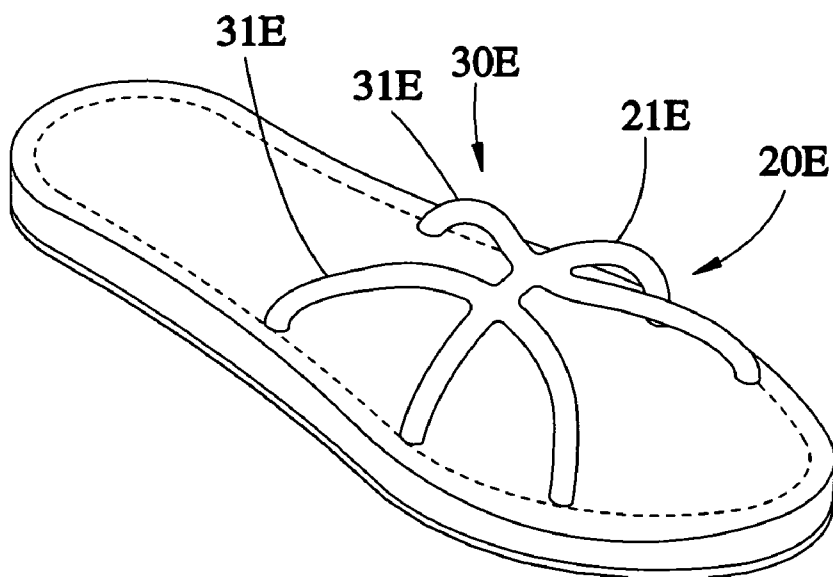
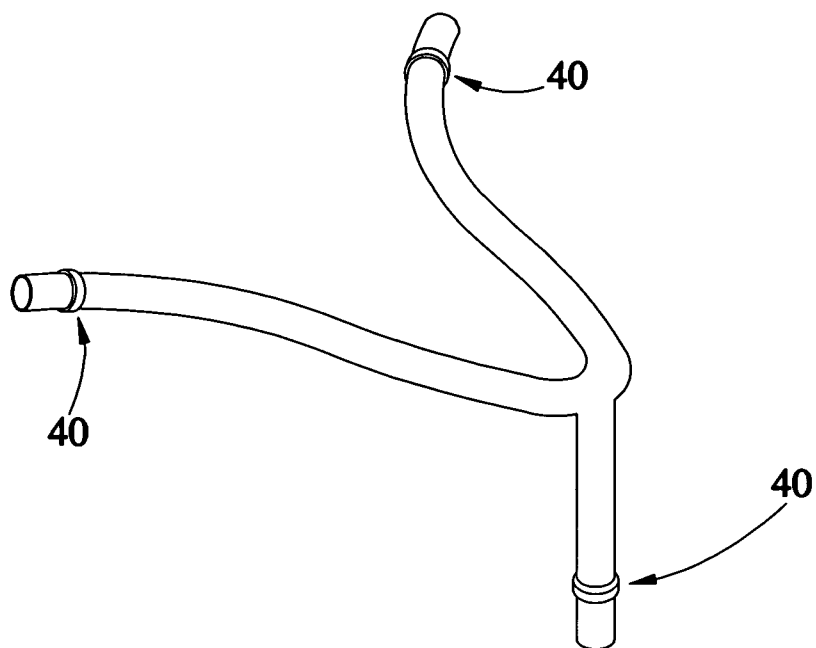
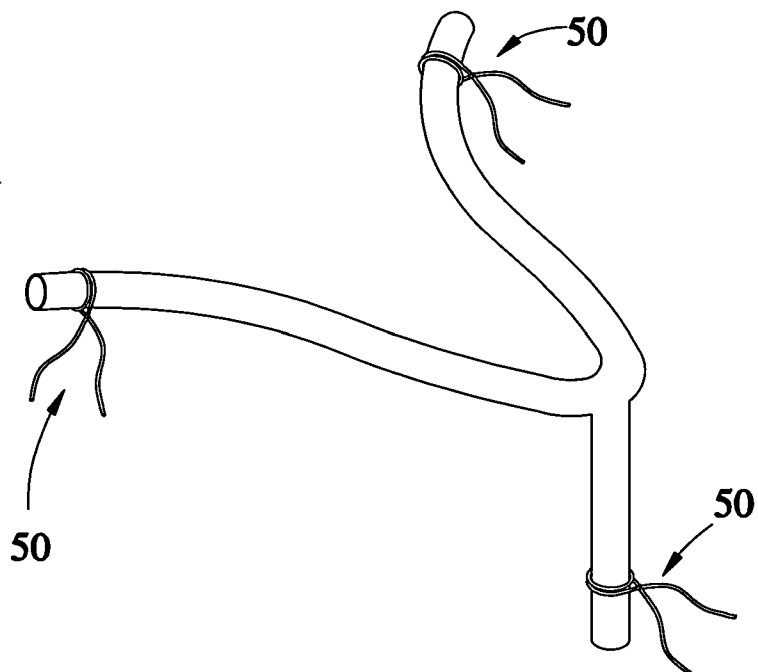


FIG. 8



**FIG. 9**



**FIG. 10**

## FOOTWEAR WITH IMPROVED STRAPS

### BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to footwear and more particularly, to a footwear having improved straps.

[0003] 2. Description of the Related Art

[0004] The straps of a conventional footwear are commonly molded from plastics or rubber, and fastened together to form a Y-shaped or X-shaped structure, or separately fastened to the sole to form a respective loop. Because the straps are solid straps and having a hard contact feeling. When the user is running or jumping, a friction resistance is produced against the user's foot, causing the foot of the user to feel uncomfortable or to be injured.

[0005] A solid strap for footwear has a hard surface. When the sink of the foot is rubbing against the hard surface of the solid strap, a great friction resistance is produced against the skin of the foot. The friction resistance is relatively increased when the user is running or jumping, thereby causing the user to feel uncomfortable or the skin of the foot to be injured.

### SUMMARY OF THE INVENTION

[0006] The present invention has been accomplished under the circumstances in view. It is one object of the present invention to provide a footwear with improved straps, which gives a comfort wear to the user. It is another object of the present invention to provide a footwear with improved straps, which has a high tensile strength.

[0007] To achieve these and other objects of the present invention, the footwear with improved straps comprises a sole, the sole having a sole member; a first strap, the first strap having a hollow tubular strap body made from elastic plastics or rubber, a first mounting portion disposed at one end of the strap body of the first strap and affixed to the sole, and a second mounting portion disposed at an opposite end of the strap body of the first strap; and a second strap, the second strap having a hollow tubular strap body made from elastic plastics or rubber and connected to the second mounting portion of the strap body of the first strap, a first mounting portion disposed at one end of the strap body of the second strap and affixed to the sole, and a second mounting portion disposed at an opposite end of the strap body of the second strap and affixed to the sole.

[0008] In an alternate form of the invention, the first strap and the second strap are respectively affixed to the sole and set apart.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is an elevational view of a first strap for a footwear with improved straps in accordance with a first embodiment of the present invention.

[0010] FIG. 2 is a schematic drawing showing the tubular structure of the straps of the footwear in accordance with the first embodiment of the present invention.

[0011] FIG. 3 is an elevational view of a footwear with improved straps in accordance with the first embodiment of the present invention.

[0012] FIG. 4 is an elevational view of a footwear with improved straps in accordance with a second embodiment of the present invention.

[0013] FIG. 5 is an elevational view of a footwear with improved straps in accordance with a third embodiment of the present invention.

[0014] FIG. 6 is an elevational view of a footwear with improved straps in accordance with a fourth embodiment of the present invention.

[0015] FIG. 7 is an elevational view of a footwear with improved straps in accordance with a fifth embodiment of the present invention.

[0016] FIG. 8 is an elevational view of a footwear with improved straps in accordance with a sixth embodiment of the present invention.

[0017] FIG. 9 illustrates locating rings affixed to the ends of the straps according to the present invention.

[0018] FIG. 10 illustrates binding cord members provided at the ends of the straps according to the present invention.

### DETAILED DESCRIPTION OF THE INVENTION

[0019] Referring to FIGS. 1~3, a footwear with improved straps in accordance with the present invention is shown comprised of a sole 10, a first strap 20, and a second strap 30.

[0020] The sole 10 has a sole member 11.

[0021] The first strap 20 has a hollow tubular strap body 21 molded from elastic plastics or rubber, a first mounting portion 22 at one end of the strap body 21, and a second mounting portion 23 at the other end of the strap body 21 relative to the first mounting portion 22.

[0022] The second strap 30 has a hollow tubular strap body 31 molded from elastic plastics or rubber for the connection of the second mounting portion 23 of the first strap 20, a first mounting portion 32 and a second mounting portion 33 respectively formed on the two distal ends of the strap body 31 and fixedly fastened to the sole member 11 of the sole 10.

[0023] Because the first strap 20 and the second strap 30 are tubular members of elastic plastics or rubber, they can absorb shocks when the user is running or jumping, giving a comfort wear to the user. Further, the first mounting portion 22 of the first strap and the two mounting portions 32 and 33 of the second strap 30 are made relatively greater in diameter than the straps 20 and 30 to enhance the tensile strength of the straps 20 and 30.

[0024] FIG. 4 shows a footwear with improved straps in accordance with a second embodiment of the present invention. According to this embodiment, the second strap 30A has two hollow tubular strap bodies 31A. The two strap bodies 31A of the second strap 30A each have a middle part respectively fixedly connected to the second mounting portion 23A of the first strap 20A and two mounting portions (not shown) respectively provided at the two distal ends and respectively fixedly fastened to the sole; whereby, the strap 30A has a plurality of hollow tubular strap bodies 31A and providing more absorbing effect.

[0025] FIG. 5 shows a footwear with improved straps in accordance with a third embodiment of the present invention. According to this embodiment, the first strap 20B and the second strap 30B have the respective two mounting portions (not shown) respectively fixedly fastened to the sole, keeping the respective strap bodies 21B and 31B spaced apart at a distance. The first strap 20B is adapted to hold the big toe.

[0026] FIG. 6 shows a footwear with improved straps in accordance with a fourth embodiment of the present invention. According to this embodiment, the strap bodies 21C and 31C of the first and second straps 20C and 30C are arranged crossed over each other.

[0027] FIG. 7 shows a footwear with improved straps in accordance with a fifth embodiment of the present invention. According to this embodiment, the first and second straps 20D and 30D each are comprised of two parallel strap bodies 21D or 31D, and the strap bodies 21D and 31D of the two straps 20D and 30D are connected together in a crossed manner.

[0028] FIG. 8 shows a footwear with improved straps in accordance with a sixth embodiment of the present invention. According to this embodiment, the first strap 20E is fastened to the sole in transverse direction; the second strap 30E has two strap bodies 31E fastened to the sole in longitudinal direction and connected to the strap body 21E of the first strap 20E in a crossed manner.

[0029] According to the embodiments shown in FIGS. 5-8, the first strap and second strap of the footwear both have a plurality of hollow tubular strap bodies and providing more absorbing effect.

[0030] In the aforesaid various embodiments, the mounting portions of the first and second straps have a relatively greater diameter for mounting. Alternatively, locating rings 40 can be affixed to the ends of the straps for mounting as shown in FIG. 9, or binding cord members 50 may be used for affixing the respective ends of the straps to the sole as shown in FIG. 10.

[0031] Further, the first strap and the second strap can be made in integrity, or fastened together by fusing or high-frequency heat sealing to save the manufacturing cost.

[0032] As indicated above, the invention has the following benefits:

[0033] 1. The elastic hollow tubular first strap and second strap of the footwear absorb shocks and reduce friction, giving a comfort wear to the user.

[0034] 2. By means of increasing the diameter of the ends of the first and second straps or providing locating rings or binding cord members at the ends of the first and second straps for mounting, the straps can bear a high pulling force.

What is claimed is:

1. A footwear with improved straps comprising:

a sole, said sole having a sole member;

a first strap, said first strap having a hollow tubular strap body made from elastic plastics or rubber, a first mounting portion disposed at one end of the strap body of said first strap and affixed to said sole, and a second mounting portion disposed at an opposite end of the strap body of said first strap; and

a second strap, said second strap having a hollow tubular strap body made from elastic plastics or rubber and connected to the second mounting portion of the strap body of said first strap, a first mounting portion disposed at one end of the strap body of said second strap and affixed to said sole, and a second mounting portion disposed at an opposite end of the strap body of said second strap and affixed to said sole.

2. The footwear with improved straps as claimed in claim 1, wherein said second strap further comprising a second strap body, which has a middle part connected to the second mounting portion of said first strap and two distal ends affixed to said sole.

3. The footwear with improved straps as claimed in claim 1, wherein the first mounting portion of said first strap and the first and second mounting portions of said second strap each have a diameter relatively greater than the respective strap body and are provided with a respective locating ring for mounting.

4. The footwear with improved straps as claimed in claim 1, wherein the first mounting portion of said first strap and the first and second mounting portions of said second strap each have a diameter relatively greater than the respective strap body and are provided with a binding cord member for mounting.

5. A footwear with improved straps comprising:

a sole, said sole having a sole member;

a first strap, said first strap having a hollow tubular strap body made from elastic plastics or rubber, a first mounting portion disposed at one end of the strap body of said first strap and affixed to said sole, and a second mounting portion disposed at an opposite end of the strap body of said first strap and affixed to said sole; and

a second strap, said second strap having a hollow tubular strap body made from elastic plastics or rubber, a first mounting portion disposed at one end of the strap body of said second strap and affixed to said sole, and a second mounting portion disposed at an opposite end of the strap body of said second strap and affixed to said sole.

6. The footwear with improved straps as claimed in claim 5, wherein the strap body of said first strap and the strap body of said second strap are kept apart.

7. The footwear with improved straps as claimed in claim 5, wherein the strap body of said first strap and the strap body of said second strap are crossed over each other.

8. The footwear with improved straps as claimed in claim 5, wherein said second strap further comprises a second strap body, which has a middle part connected to the strap body of said first strap and two distal ends respectively affixed to said sole.

9. The footwear with improved straps as claimed in claim 5, wherein the first mounting portion of said first strap and the first and second mounting portions of said second strap each have a diameter relatively greater than the respective strap body and are provided with a respective locating ring for mounting.

10. The footwear with improved straps as claimed in claim 5, wherein the first mounting portion of said first strap and the first and second mounting portions of said second strap each have a diameter relatively greater than the respective strap body and are provided with a binding cord member for mounting.

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