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(71) Applicant *(for all designated States except US)*: **THE COLEMAN COMPANY, INC.** [US/US]; 3600 North Hydraulic, Wichita, KS 67219 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **MCCLINTOCK, Jason, T.** [US/US]; 845 Bracken Circle, Wichita, KS 67206 (US).

(74) Agent: **ELSEA, Kelly, S.**; The Coleman Company, Inc., Intellectual Property Counsel, IP Legal 11702, 3600 North Hydraulic, Wichita, KS 67219 (US).

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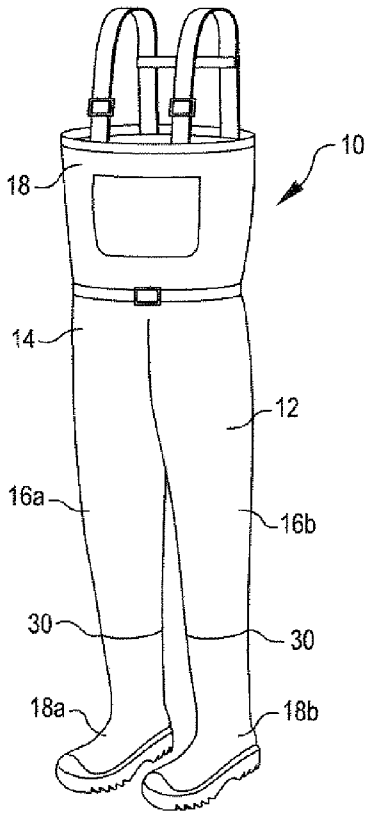
(54) Title: WADER BOOT

(57) Abstract: A first embodiment of the present disclosure provides a hip, waist or chest height wader comprising attached boots made of blown EVA. A second embodiment of the present disclosure provides a boot having an interchangeable outsole wherein the boot may comprise a felt outsole, a heavy lug outsoie, a sticky outsole or the like and said outsoles may be interchangeably attached to the bottom of the boot using a hook and loop fastener and a lip extending around the periphery of the bottom surface of the boot.

FIG. 1



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Wader Boot

FIELD OF THE INVENTION

[0001] The present disclosure relates to a hip or chest wader having advantageous features with respect to comprising an attached EVA boot.

BACKGROUND OF THE INVENTION

[0002] Waders are a critical piece of equipment for anglers or hunters who spend lots of time either fishing or hunting in cold rivers, fishing or hunting in colder weather or wading in shallow lakes or ponds that have colder water. The waders keep the angler dry and also keep the angler warm.

[0003] Waders are made of many different materials such as neoprene, breathable fabric (such as Gore-Tex), coated nylon, rubber, canvas, or a combination of these materials. Waders are available in different thicknesses, and different styles such as hip-high, waist-high and chest-high. Waders may also be stocking foot waders comprising a neoprene sock attached to the bottom of the waders or may be boot-foot waders comprising a rubber boot attached to the bottom of the waders. Stocking foot waders require the user to also wear a separate pair of wading boots. Conventional boot-foot waders comprise boots made of rubber that are attached directly to the bottom of the waders. While convenient because the waders are a unitary piece of equipment and the attached boot removes the hassle of dealing with laces or having rocks or sand slip into the user's boot, such attached rubber boots are typically somewhat heavy and cumbersome and may not fit snugly enough around a user's ankle area for personal comfort.

[0004] Wading boots comprise various materials on the bottom outsole of the boot, depending on the characteristics of the locale where the user is fishing or hunting. For instance, felt outsoles are generally worn for stream fishing to enable the wearer to have a

better grip on slippery rock. Rubber clear or lug outsoles are generally worn in sand and mud. A more recent alternative is a sticky rubber outsole that provides good grip like felt outsoles, but which are not as affected by ice. In order for a user to fish or hunt in all available environments, the user must have a different pair of boots or boot-foot waders for each type of terrain.

SUMMARY OF THE INVENTION

[0005] A first embodiment of the present disclosure provides a hip, waist or chest height waterproof fabric wader having an attached boot made of ethylene vinyl acetate (EVA). EVA is an alternative to rubber and is a copolymer of ethylene and vinyl acetate. The polymer has the softness and flexibility of elastomeric materials, yet can be processed like other thermoplastics. EVA has good water barrier properties, stress-crack resistance and durability. EVA is also lighter weight and more flexible for the wearer than rubber and is a more economical material for manufacturing products than rubber. The boot is preferably formed by injection molding as a unitary piece and is then attached to the bottom of the legs of the fabric wader, preferably by bonding.

[0006] A second embodiment of the present disclosure provides a wader boot having an interchangeable outsole such that the boot may comprise a felt outsole, a rubber cleat outsole, a sticky rubber outsole and the like. The outsole inserts comprise a hook or loop backing that is matable with the opposite hook or loop mechanism located in a shallow cavity formed on the bottom surface of the boot.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] A more complete understanding of the present invention, and the attendant advantages and features thereof, will be more readily understood by reference to the following detailed description when considered in conjunction with the accompanying drawings wherein:

[0008] FIG. 1 depicts a front view of a wader according to a first embodiment of the present disclosure;

[0009] FIG. 2 depicts a side view of a boot that is attached to a wader of a first embodiment of the present disclosure;

[0010] FIG. 3 depicts a cut-away side view of the boot of FIG. 2;

[0011] FIG. 4 depicts a bottom view of the boot of FIG. 2;

[0012] FIG. 5 depicts a cut-away view of the interior of the boot of FIG. 2;

[0013] FIG. 6 depicts a top view of the boot of FIG. 2;

[0014] FIG. 7 depicts a perspective view of a wading boot of a second embodiment of the present disclosure;

[0015] FIG. 8 depicts a bottom view of the boot of FIG. 7, shown with a felt outsole insert partially attached;

[0016] FIG. 9 depicts a front view of a felt outsole insert for use with the boot of FIG. 7;

[0017] FIG. 10 depicts a front view of a rubber cleat outsole insert for use with the boot of FIG. 7.

DETAILED DESCRIPTION OF THE INVENTION

[0018] The present disclosure provides a boot-foot wader, wherein the boot is made of EVA and is attached to the bottom of the legs of the wader. Referring now to the drawing figures in which like reference designators refer to like elements, there is shown in FIG. 1 a pair of waders 10 having front portion 12, rear portion 14, and two leg portions 16a, 16b made from part of said front portion and said rear portion. Waders 10 may optionally have a bib portion 18 as conventional chest-height waders have. Although depicted as a conventional chest-height wader, waders 10 may be other standard wader heights, such as waist-height or hip-height with the wader material terminating at the appropriate point. Waders 10 are of conventional construction that is known in the art and will not be discussed in detail herein. As such, waders 10 may additionally comprise various straps, suspenders, fastening belts, buckles, pockets, D-rings, insulation, padded knees, chafe guards and the like for adjusting waders to fit the user, for comfort, and for added functionality. The fabric portion of waders 10 is preferably made of waterproof material known in the art such as rubber, PVC, urethane coated nylon (laminated nylon), neoprene or coated canvas or a combination of such materials.

[0019] As shown in FIG. 1, each leg portion 16a, 16b has a boot 18a, 18b secured at the bottom of the leg portions 16a, 16b, respectively. The wading boots 18a, 18b are an integral part of the wader 10. As shown in FIGS. 2-6,each boot 18a, 18b is of generally conventional boot construction and has bottom surface 20, side surfaces 22, 24, top surface 26 and shaft section 28. Shaft 28 extends partway up the leg of the user and preferably extends approximately to the user's mid-calf area. Shaft section 28 has an upper periphery edge 30 that extends around the periphery of the boot opening where a user's foot would be inserted. Boot 18a, 18b is preferably a unitary molded piece of material. Preferably, the shaft section 28 is narrower around the ankle area (as shown in FIG. 5) to assist in securing the boot to the

user. It is also within the scope of the present invention for boot 18a, 18b to not have a shaft section such that it resembles more of a shoe or clog (not shown) rather than a boot. Such shoe has an upper periphery edge similar to that of boot and is attached to wader legs 16a, 16b in a similar manner.

[0020] Boot 18a, 18b is made by an injection molding process using EVA. Conventional injection molding methods known in the industry are used to form the boot. Boot 18a, 18b is preferably molded to generally fit a human foot and has an arch portion 32, a heel portion 34, and front foot portion 36. It is within the scope of the present invention for the bottom surface of the boot 20 to have a rubber outsole (not shown) attached to assist in providing additional traction. Rubber outsole may be attached by bonding. Materials other than rubber may be used for such an outsole, including but not limited to felt or sticky rubber. Additionally, boot 18a, 18b may have an optional insole of foam or other padding insert (not shown) for comfort and fit, as well as an additional insulated insert for warmth. Such optional inserts may be attached to the interior of boot 38 with adhesive or may merely be placed in the interior of boot 38 on the insole area or interior wall area.

[0021] As shown in FIG. 1, upper periphery edge 30 of boot is attached to the lower edge of wader leg 16a, 16b by thermal or adhesive bonding. The thermal or adhesive bonding is performed in the conventional manner known for the materials used. Preferably, upper periphery edge 30 of boot is overlapped onto bottom edge of legs 16a, 16b for a secure bond. It is within the scope of the present invention for attachments means other than bonding to secure wader legs 16a, 16b to boot 18a, 18b. Such other means include sewing and fabric tape reinforcement either in addition to or in lieu of bonding, as well as other methods known in the art.

[0022] A second embodiment of the present disclosure is depicted in FIGS. 7-10 wherein a wading boot 110 comprises interchangeable outsole inserts 112. Outsole inserts 112 are

generally shaped in the silhouette of a human foot such that they are easily received within the bottom surface of wading boot 114. One type of outsole insert is made of a desired thickness of felt 112a, as shown in FIG. 9. Another type of outsole insert is made of a desired thickness of rubber 112b, also having a desired number and height of cleats, as shown in FIG. 10. A third type of outsole insert (not shown) is made of a desired thickness of sticky rubber which may have cleats or nubs, as desired. The interior side of outsole inserts 112 comprises hook or loop material 124 which is matable with the opposing hook or loop material 126 located on boot 110.

[0023] Wading boot 110 comprises an upper portion 116 and a bottom surface 114 defining a cavity 118 therein for accommodation of a human foot. Wading boot 110 includes an elongated shallow cavity 120 formed about the bottom surface 114 of the boot. The elongated shallow cavity 120 is formed by a lip 122 extending around the periphery of the bottom surface 114 of the boot. The removable outsole insert 112 is removably positioned within the cavity 120, where the insert 112 can be secured using hook and loop type fasteners. Such hook and loop fasteners may extend over the surface of the interior side of insert 112 and cavity 120 or may comprise matable strips or other shape of such hook and loop material. Other types of removable fasteners may also be used. It is also within the scope of the present invention for boot 110 to not have a lip 122 and for insert 112 to cover virtually the entire bottom surface 114 of boot. As described above, removable fasteners such as hook and loop fasteners may be employed in this embodiment. It is also within the scope of the present invention for insert 112 to be attached to boot 110 in a more permanent fashion using adhesive.

[0024] Interchangeable outsole inserts 112 may be used with a separate wading boot as shown in FIG. 7 or may be used in the boot of a boot-foot wader (not shown with inserts). Optionally, wading boots 110 may comprise other features available in conventional wading

boots such as cushioned insoles, steel shank soles, toe caps and the like. Wading boot 110 is preferably made of EVA, rubber, leather, or other water-resistant yet durable material.

[0025] All references cited herein are expressly incorporated by reference in their entirety.

[0026] It will be appreciated by persons skilled in the art that the present invention is not limited to what has been particularly shown and described herein above. In addition, unless mention was made above to the contrary, it should be noted that all of the accompanying drawings are not to scale. A variety of modifications and variations are possible in light of the above teachings without departing from the scope and spirit of the invention, which is limited only by the following claims.

What is claimed is:

1. A wader, comprising:
leg portions; and
a pair of boots, wherein said pair of boots are made of EVA.

2. A wader as set forth in claim 1, further comprising two leg portions, wherein each one of said pair of boots is attached to one of said two leg portions.

3. A wader as set forth in claim 2, wherein said pair of boots is attached to said two leg portions by bonding.

4. A wader as set forth in claim 3, wherein a top edge of said wader extends above the waist of a user.

5. A wader as set forth in claim 3 or 4, wherein each of said pair of boots further comprises a rubber outsole.

6. A wading boot, comprising:
an upper portion;
a bottom surface, said bottom surface and said upper portion defining a cavity within;
a lip surrounding the periphery of said bottom surface, defining a shallow cavity; and
a removable outsole retainable within said shallow cavity.

7. A wading boot as set forth in claim 6, wherein said removable outsole is retainable within said shallow cavity by means of hook and loop fasteners.

8. A wading boot as set forth in claim 6, wherein said removable outsole comprises a layer of felt.

9. A wading boot as set forth in claim 6, wherein said removable outsole comprises a layer of rubber.

FIG. 1

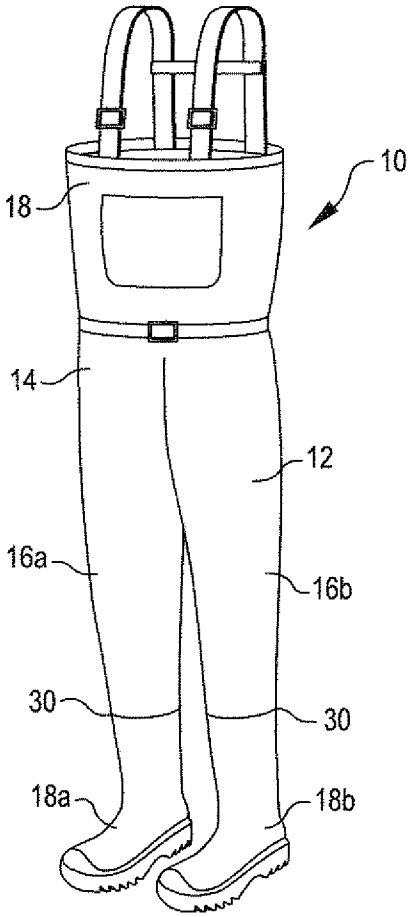

FIG. 2

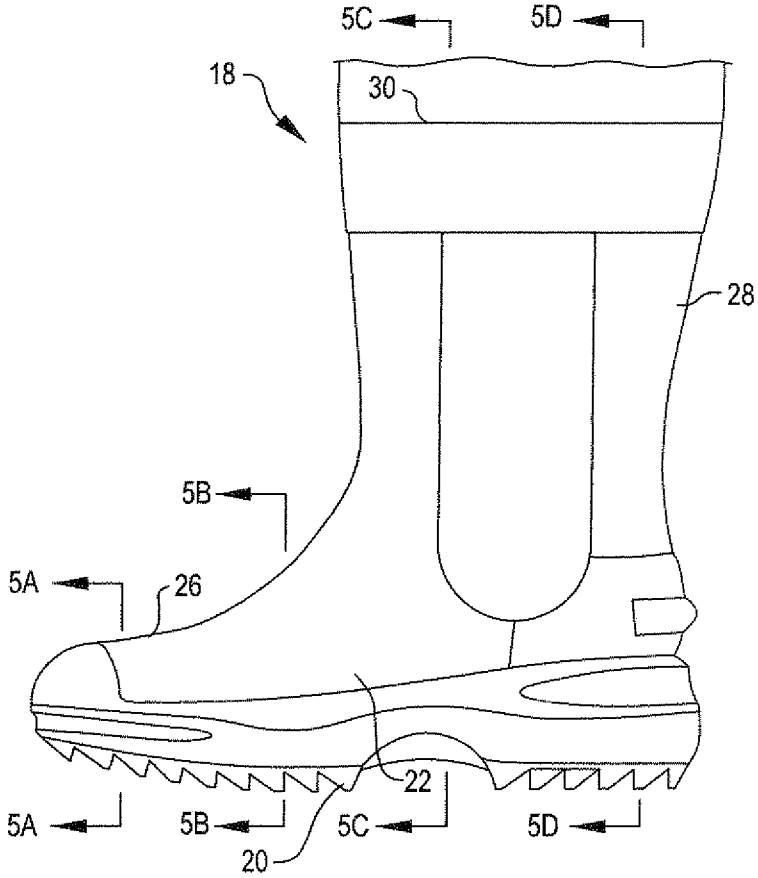

FIG. 3

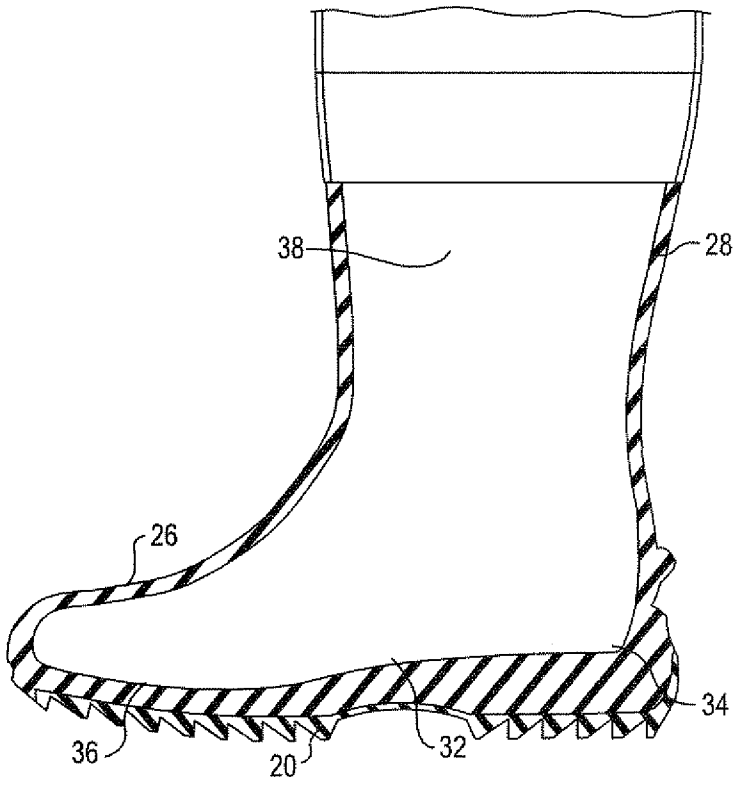

FIG. 4

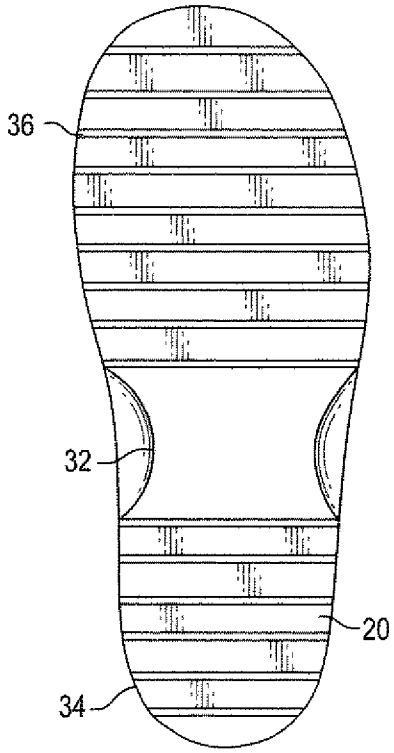

FIG. 5A

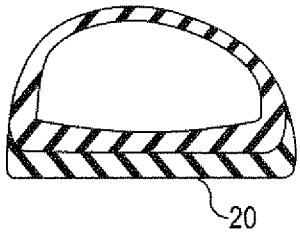

FIG. 5B

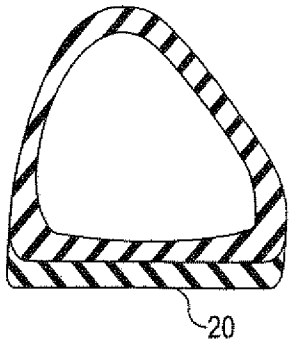

FIG. 5C

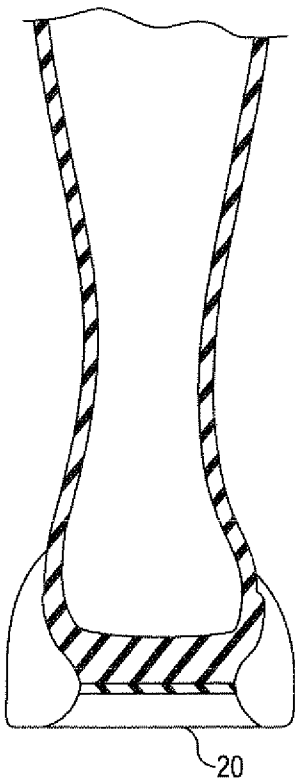

FIG. 5D

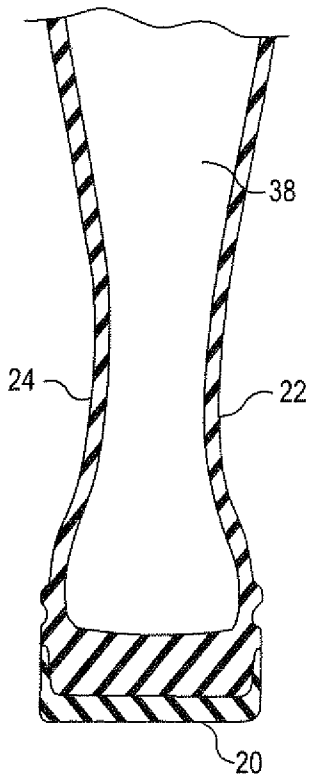

FIG. 6

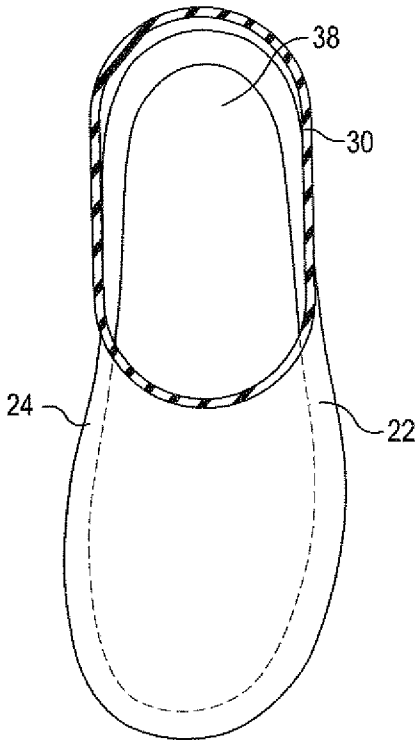

FIG. 7

FIG. 8

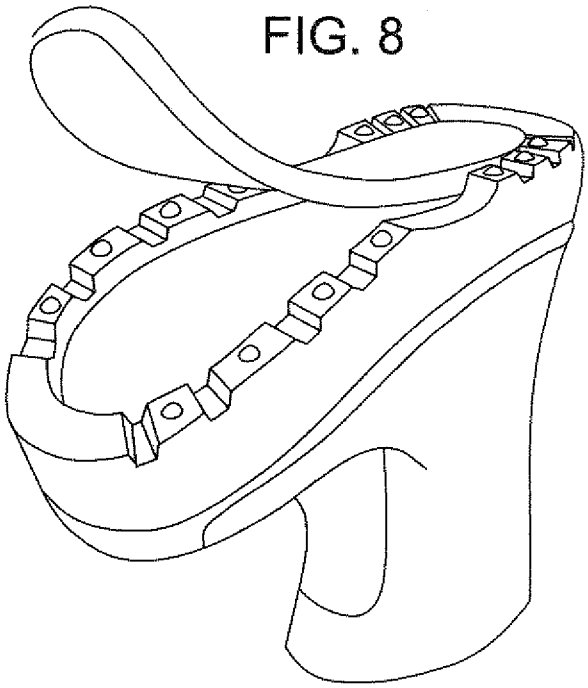

FIG. 9

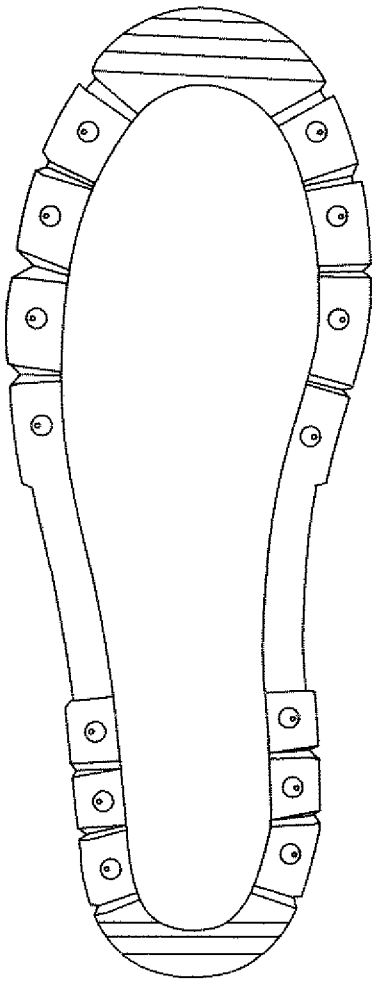

FIG. 10