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### (54) MINIMALIST GOLF SHOE

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(60) Provisional application No. 61/491,174, filed on May 28, 2011.

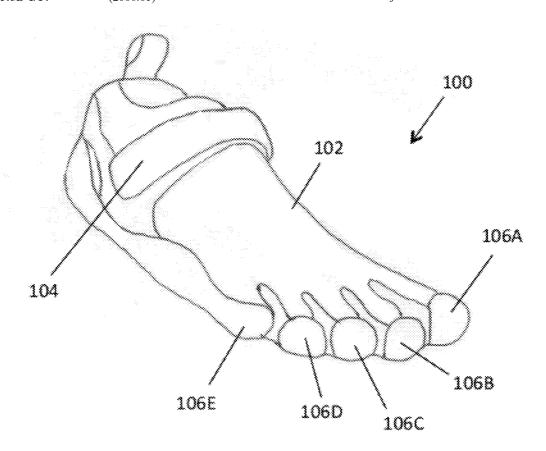
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#### (57)ABSTRACT

A golf shoe is provided having an upper, an outsole secured to the upper, and five receptacles formed in the outsole into which spikes are inserted. Two receptacles are opposite each other under a pad area of the golfer's foot behind the metatarsals, the first adjacent to an inside of the outsole and the other adjacent to the outside of the outsole. A third receptacle is in an arch area adjacent to the outside of the outsole. And two more receptacles are diagonally opposite each other in a heel area of the outsole, one adjacent to the inside of the outsole and the other adjacent to the outside of the outsole.



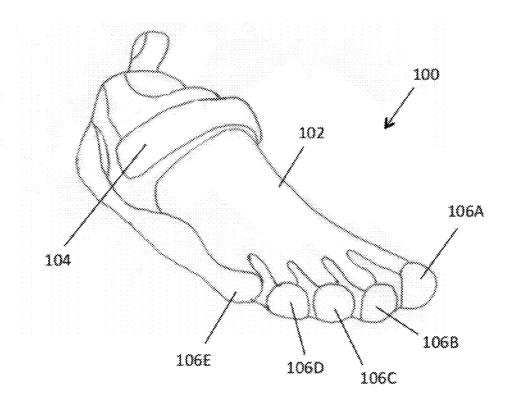
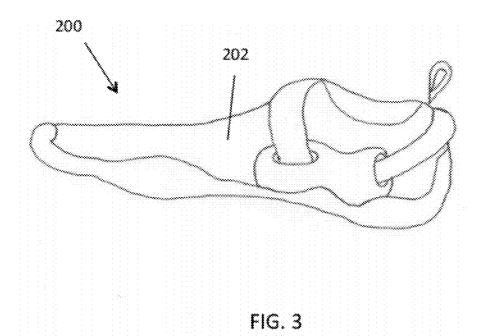
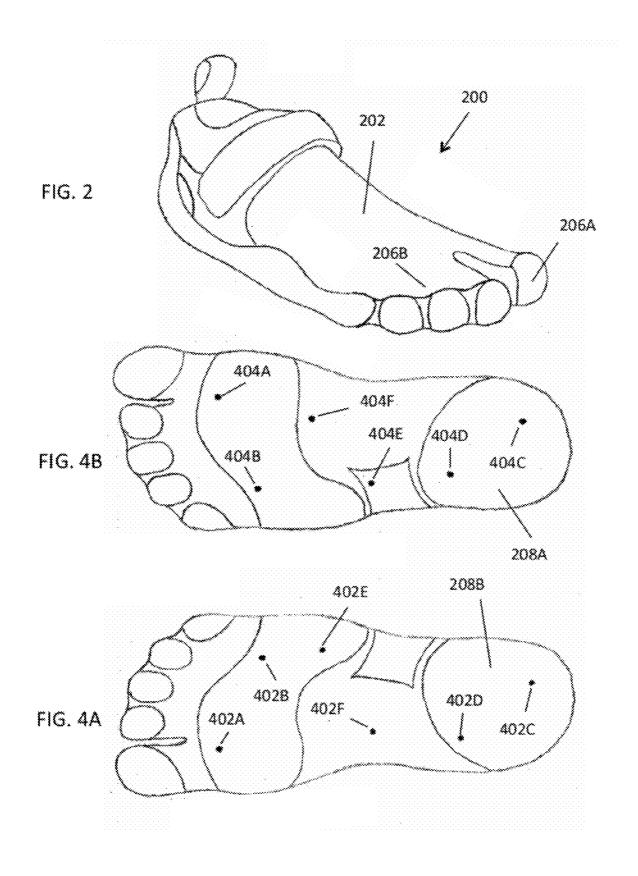
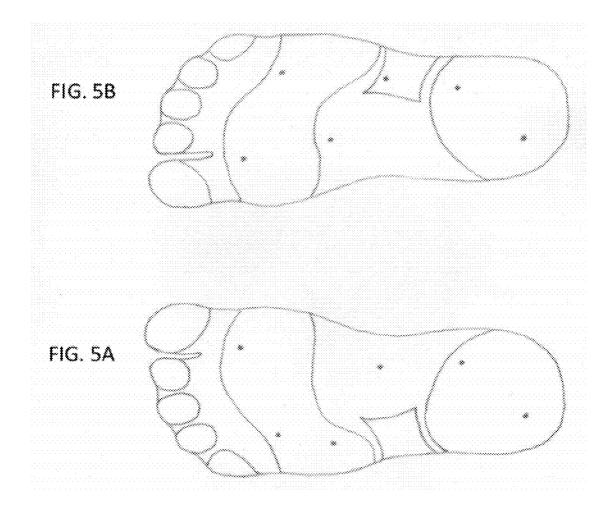


FIG. 1







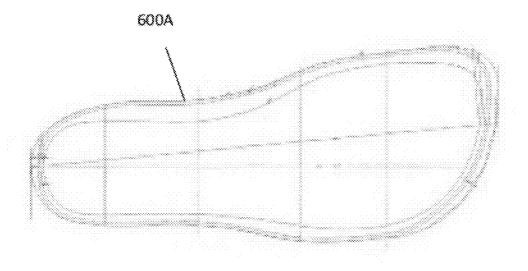
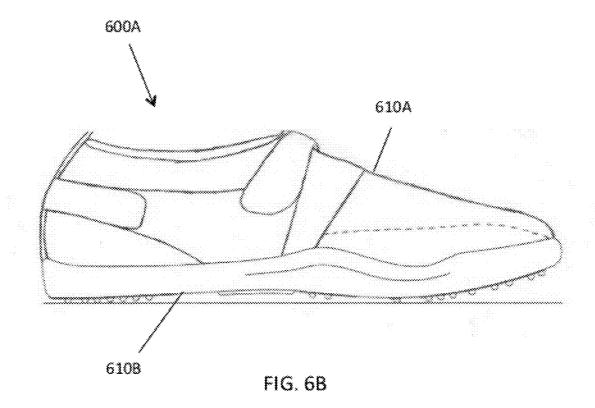


FIG. 6A



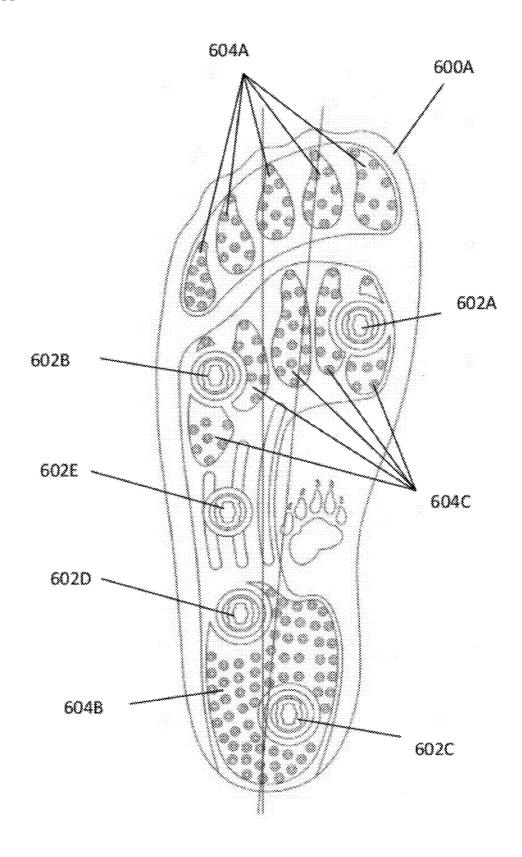


FIG. 6C

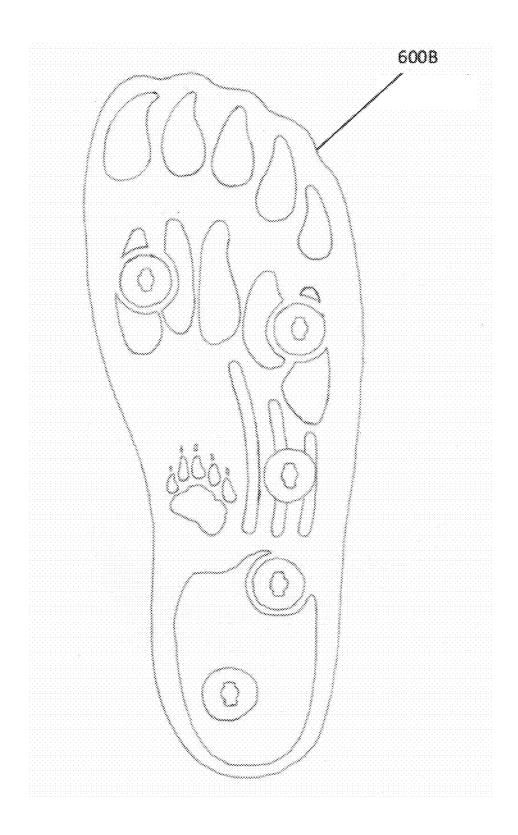


FIG. 7

### MINIMALIST GOLF SHOE

# CROSS-REFERENCE TO RELATED APPLICATION

[0001] The present application is a non-provisional application claiming the benefit of co-pending U.S. Provisional Application Ser. No. 61/491,174, entitled MINIMALIST GOLF SHOE, filed on May 28, 2011, which application is incorporated herein by reference in its entirety.

### TECHNICAL FIELD

**[0002]** The present invention relates generally to golf shoes and, in particular, to a minimalist, barefoot-style golf shoe with strategically places spikes.

### BACKGROUND ART

[0003] Golf shoes are typically worn by golfers to provide fraction, stability and prevent slipping when making a golf shot. Consequently, conventional golf shoes include various combinations of spikes, nubs, molded bars and numbs on the soles. Many golf shoes also are constructed with torsion bars and shanks in the middle of the outsole, with the goal of maintaining the entire shoe as a single, stable platform. Typically, too, golf shoes have had relatively stiff soles and uppers which are also intended to provide stability for the golfer's feet. The result is that conventional golf shoes can be uncomfortable and leave the golfer with little feel for the ground.

### SUMMARY OF THE INVENTION

[0004] An embodiment of the present invention provides a minimalist golf shoe. Each shoe comprises an upper, an outsole secured to the upper, and six receptacles formed in the outsole into which spikes are inserted. The upper includes a first compartment for a golfer's first toe and at least a second compartment for the golfer's other four toes. The first and second compartments may have sides fabricated from a flexible material whereby the first toe is flexible independently of the other four toes. The receptacles are in a pattern in which two receptacles are in a heel area of the outsole, two receptacles are in an arch area of the outsole, one receptacle is under the first toe of the golfer's foot, and one receptacle is under the fourth toe of the golfer's foot.

[0005] In a second embodiment, each shoe comprises an upper, an outsole secured to the upper, and six receptacles formed in the outsole into which spikes are inserted. The upper includes a compartment for each of a golfer's four toes. The compartments may have sides fabricated from a flexible material whereby each toe is flexible independently of the other toes. The receptacles are in a pattern in which two receptacles are in a heel area of the outsole, two receptacles are in an arch area of the outsole, one receptacle is under the first toe of the golfer's foot, and one receptacle is under the fourth toe of the golfer's foot.

[0006] In a third embodiment, each shoe comprises an upper, an outsole secured to the upper, and five receptacles formed in the outsole into which spikes are inserted. Two receptacles are opposite each other under a pad area of the golfer's foot behind the metatarsals, the first adjacent to an inside of the outsole and the other adjacent to the outside of the outsole. A third receptacle is in an arch area adjacent to the outside of the outsole. And two more receptacles are diago-

nally opposite each other in a heel area of the outsole, one adjacent to the inside of the outsole and the other adjacent to the outside of the outsole.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 is a perspective view of the upper, side and front of an embodiment of a golf shoe of the present invention for a right foot;

[0008] FIG. 2 is a perspective view of the upper, side and front of another embodiment of a golf shoe of the present invention for a right foot;

[0009] FIG. 3 is a side view of the golf shoe of FIG. 2;

[0010] FIGS. 4A and 4B are bottom views of the spike patterns on the left and right soles, respectively, of the golf shoe of FIG. 2 of a right-handed golfer;

[0011] FIGS. 5A and 5B are bottom views of the spike patterns on the right and left soles, respectively, of the golf shoe of FIG. 2 of a left-handed golfer;

[0012] FIG. 6A is a top view of the golf shoe of FIG. 6A; [0013] FIG. 6B is a side view of second alternative embodiment of a golf shoe of the present invention for a right foot; [0014] FIG. 6C is a view of the bottom of the outsole of the golf shoe of FIG. 6A; and

[0015] FIG. 7 is a view of the bottom of the outsole of the second alternative embodiment of the golf shoe for a left foot;

# DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0016] The described features, structures, or characteristics of the invention may be combined in any suitable manner in one or more embodiments. In the following description, numerous specific details are provided to provide a thorough understanding of embodiments of the invention. One skilled in the relevant art will recognize, however, that the invention can be practiced without one or more of the specific details, or with other methods, components and so forth. In other instances, well-known structures, materials, or operations are not shown or described in detail to avoid obscuring aspects of the invention.

[0017] FIG. 1 is a perspective view of an embodiment of a minimalist right golf shoe 100 of the present invention. The upper 102 of the shoe 100 may be constructed from a soft and flexible material, such as neoprene, cloth fabric, leather, or a combination of such materials. Preferably, the material of the upper 102 is also waterproof to prevent the golfer's foot from getting wet when walking on or through wet grass. In the embodiment illustrated, the upper 102 may have an adjustable Velcro<sup>TM</sup> closure strap 104. It will be appreciated that other types of closures may also be used.

[0018] In the embodiment of FIG. 1, the upper 102 also includes five individual toe compartments 106A, 106B, 106C, 106D, 106E, similar to those of a hand glove, in which the golfer's toes fit when the shoe 100 is put on. Thus, each toe is contained in a separate compartment. The sides of the toe compartments 106A, 106B, 106C, 106D, 106E may be fabricated from a thin rubber or other similar material that allows each toe to independently flex.

[0019] FIG. 2 is a perspective view of another embodiment of a right golf shoe 200 of the present invention. In the embodiment of FIG. 2, the upper 202 includes two compartments 206A, 206B for toes, with the first toe in the first compartment 206A and the other four toes sharing the other compartment 206B. Thus, the first toe may flex independently

of the other four toes, which may flex together. Further, the upper 202 may extend over the first toe compartment 206A and separately over the other three toe compartments 206A, 206B, 206C, 206D. Thus, the first toe may flex independently of the other four, which may flex together.

[0020] FIGS. 4A and 4B are bottom views of right and left soles 208A, 208B, respectively, of the embodiments of the golf shoe 200 of FIG. 2 (or of the shoe 100 of FIG. 1). The outsoles 208A, 208B (collectively referred to herein as 208) may be constructed from a thin, but resilient material, such as polyurethane, rubber, or a combination of such materials. The combination of materials of the upper and the outsole results in a golf shoe that is lightweight and flexible and provides the golfer with a feel for the ground that is close to the feeling of being barefoot.

[0021] A typical golf swing is performed with a number of bad mechanics and many swings may be fixed by having a sold base on which to turn around. A golf swing generates a great deal of torque, which can cause the feet to slip or move during the swing. Because a golfer's feet are the only part of the body that comes in contact with the ground, it is important that the feet provide as much stability as possible. In general, the feet will tend to move or slip the same way in which the golfer is swinging a golf club.

[0022] Right-handed golfers take the golf club back to the top of the back swing, first turning to the right around the feet and hips. The turning motion causes the metatarsals of the right, or front, foot to try to move or slide away from the target and the right heel to try to move toward the target, causing the golfer to become off balance. To a lesser extent, the left, or front, foot will tend to do the same thing during the back swing.

[0023] A golfer starts the down swing with the hips moving toward the target, pulling the feet in the same direction as the hips. The left metatarsals of a right-handed golfer will tend to slide toward the target, opposite of what occurs during the back swing but with more force. As illustrated in FIG. 4A, by placing a spike 402A in a receptacle on the front pad of the left foot under the large metatarsal and another 402B in a receptacle on the pad under the fourth metatarsal, the left metatarsals may be prevented from sliding toward the target.

[0024] In addition, the left and right heels of a right- or left-handed golfer may tend to slide up and away from the target. Placing two spikes in a receptacles diagonally opposite of each other on the balls of both the left and right heels in a heel area of the outsole (unlike most of the traditional golf shoes that have two spikes side-by-side), one 402C, 404C near the lower left (as viewed from above) and the other 402D, 404D near the upper right, helps prevent the left heel from moving either direction during the swing.

[0025] Two additional spikes may be placed in receptacles opposite of each other in the arch area of the left and right outsoles for extra traction during the back swing and follow through. One of the spikes 402E, 404E may be placed in the upper left of the arch for extra support of the metatarsals and the other spike 402F, 404F may be placed in the lower right of the arch for extra support of the heel.

[0026] The spike pattern of the right, or back, golf shoe of a traditional golf shoe is the same as spike pattern of the left golf shoe. However, the right foot of a right-handed golfer does not move in the same way as the left foot during the golf swing: the right foot of a right-handed golfer tends to lift up

onto the metatarsals during the follow through of the golf swing. Thus, the right and left shoes of the present invention have a different spike pattern.

[0027] As with the spike pattern on the sole 208B of the left shoe, the sole 208A of the right shoe has a spike 404A in a receptacle under the big metatarsal on the front pad of the back (right) foot and another 404B in a receptacle slightly lower under the fourth metatarsal to keep the back foot from sliding out from underneath the golfer.

[0028] As illustrated in FIGS. 5A and 5B, the spike pattern for a left handed golfer may be the mirror of the pattern for the right handed player, increasing the stability of both left and right handed golfers during the golf swing.

[0029] A second alternative embodiment of a minimalist golf shoe 600A is illustrated in FIGS. 6A-6C (right foot) and as shoe 600B in FIG. 7 (left foot). In contrast to the embodiment of FIG. 1, in which each toe has its own compartment 106A-106E, and in contrast to the embodiment of FIGS. 2-5B, in which the first toe has its own compartment 206A and the other four toes share a compartment 206B, the upper 610A of the shoe 600A, 600B of FIGS. 6A-6C and FIG. 7 includes a single compartment for the entire foot, including all of the toes (illustrated in the top view of FIG. 6A).

[0030] As illustrated in FIG. 6B, the upper 610A of the shoe 600A may have an adjustable Velcro<sup>TM</sup> closure strap although other types of closures may also be used. The upper 610A may be constructed from a soft and flexible material, such as neoprene, cloth fabric, leather, or a combination of such materials and is preferably also waterproof.

[0031] FIG. 6C is the view of the bottom of the outsole 610B of the shoe 600A. The outsole 610B includes five spikes. Two spikes may be placed in receptacles 602A, 602B in the pad area of the outsole of the shoe 600A, behind the metatarsals, to help prevent the metatarsals from sliding toward the target. One such spike may be in a receptacle 602A adjacent to the inside of the outsole and the other such spike may be in a receptacle 602B adjacent to the outside of the outsole. Two more spikes may be placed in receptacles 602C, 602D diagonally opposite each other in the heal area of the outsole of the shoe 600A. One receptacle 602C is near the lower left (as viewed from above) and the other receptacle 602D is near the upper right of the heal area, adjacent to the inside and outside, respectively, of the outsole. The spikes in these receptacles 602C, 602D help prevent the golfer's heal from moving in either direction during the swing. And, one spike may be placed in a receptacle 602E in the arch area, adjacent to the outside of the outsole of the shoe 600A for extra traction and support during the back swing and follow

[0032] In addition to the spikes in the receptacles 602A, 602B, 602C, 602D, 602E, the bottom of the outsole of the shoe 600A may also include three areas of nubs 604A, 604B, 604C. The first area 604A includes five elongated sets of nubs, one set under each metatarsal. The second area 604B includes a set of nubs in the heal area surrounding the receptacles in the heal area. And, the third area 604C includes five elongated sets of nubs across the pad area and surrounding the receptacles in the pad area. The sets of nubs 604A, 604B, 604C provide further stabilization of the foot during swings. [0033] As illustrated in FIG. 7, the spike and nub configuration for the left shoe 600B of the second alternative embodiment is the mirror of the spike and nub configuration for the

right shoe 600A illustrated in FIG. 6B.

[0034] The description of the present invention has been presented for purposes of illustration and description, but is not intended to be exhaustive or limited to the invention in the form disclosed. Many modifications and variations will be apparent to those of ordinary skill in the art. The embodiment was chosen and described in order to best explain the principles of the invention, the practical application, and to enable others of ordinary skill in the art to understand the invention for various embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

1. A minimalist golf shoe, comprising:

an upper having sides fabricated from a soft and flexible material;

an outsole secured to the upper;

five receptacles formed in a bottom of the outsole, the receptacles being in a pattern in which:

- first and second receptacles are opposite each other under a pad area of the golfer's foot behind the metatarsals, the first receptacle adjacent to an inside of the outsole and the second receptacle adjacent to the outside of the outsole;
- a third receptacle is in an arch area adjacent to the outside of the outsole; and
- fourth and fifth receptacles are diagonally opposite each other in a heel area of the outsole, the fourth receptacle adjacent to the inside of the outsole and the fifth receptacle adjacent to the outside of the outsole; and

a spike inserted in each receptacle.

- 2. The minimalist golf shoe of claim 1, further comprising:
- a first area on the bottom of the outsole comprising one elongated set of nubs under each metatarsal; and
- a second area on the bottom of the outsole comprising five elongated sets of nubs across the pad area of the golfer's foot behind the metatarsals and surrounding the first and second receptacles;
- a third area on the bottom of the outsole comprising a set of nubs in the heal area of the outsole surrounding the fourth and fifth receptacles.
- 3. The minimalist golf shoe of claim 1, wherein a pattern of the receptacles on the bottom of the outsole of a shoe for a right foot is a mirror of a pattern of the receptacles on the bottom of the outsole of a shoe for a left foot.
- **4.** The minimalist golf shoe of claim **1**, wherein the soft and flexible material is selected from a group comprising neoprene, cloth fabric, leather, and a combination of at least two of neoprene, cloth fabric, and leather.
- 5. The minimalist golf shoe of claim 1, wherein the outsole is constructed from a thin resilient material.
- **6**. The minimalist golf shoe of claim **5**, wherein the thin resilient material is selected from a group comprising polyurethane, rubber, and a combination of polyurethane and rubber.
  - 7. A minimalist golf shoe, comprising:
  - an upper having a first compartment into which a golfer's first toe is insertable and a second compartment into which the golfer's other four toes are insertable, the first and second compartments having sides fabricated from a soft and flexible material whereby the first toe is flexible independently of the other four toes;

an outsole secured to the upper; and

six receptacles formed in the outsole into which spikes are inserted, the receptacles being in a pattern in which:

two receptacles are in a heel area of the outsole; two receptacles are in an arch area of the outsole; one receptacle is under the first toe of the golfer's foot; and

one receptacle is under the fourth toe of the golfer's foot.

- 8. The minimalist golf shoe of claim 7, wherein a pattern of the receptacles on the bottom of the outsole of a shoe for a right foot is different from a pattern of the receptacles on the bottom of the outsole of a shoe for a left foot.
- 9. The minimalist golf shoe of claim 7, wherein a pattern of the receptacles on the bottom of the outsoles of the shoes for a right-handed golfer is different from a pattern of the receptacles on the bottom of the outsoles of the shoes for a left-handed golfer.
- 10. The minimalist golf shoe of claim 7, wherein all of the upper of the shoe is constructed from a soft and flexible material
- 11. The minimalist golf shoe of claim 10, wherein the soft and flexible material is selected from a group comprising neoprene, cloth fabric, leather, and a combination of at least two of neoprene, cloth fabric, and leather.
- 12. The minimalist golf shoe of claim 7, wherein the outsole is constructed from a thin resilient material.
- 13. The minimalist golf shoe of claim 12, wherein the thin resilient material is selected from a group comprising polyurethane, rubber, and a combination of polyurethane and rubber.
  - 14. A minimalist golf shoe, comprising:

an upper having five individual compartments into which a golfer's toes are insertable, the compartments having sides fabricated from a soft and flexible material whereby each toe is flexible independently of the other toes;

an outsole secured to the upper; and

six receptacles formed in the outsole into which spikes are inserted, the receptacles being in a pattern in which:

two receptacles are in a heel area of the outsole;

two receptacles are in an arch area of the outsole;

one receptacle is under the first toe of the golfer's foot;

one receptacle is under the fourth toe of the golfer's foot.

- 15. The minimalist golf shoe of claim 14, wherein a pattern of the receptacles on the bottom of the outsole of a shoe for a right foot is different from a pattern of the receptacles on the bottom of the outsole of a shoe for a left foot.
- 16. The minimalist golf shoe of claim 14, wherein a pattern of the receptacles on the bottom of the outsoles of the shoes for a right-handed golfer is different from a pattern of the receptacles on the bottom of the outsoles of the shoes for a left-handed golfer.
- 17. The minimalist golf shoe of claim 14, wherein all of the upper of the shoe is constructed from a soft and flexible material
- 18. The minimalist golf shoe of claim 17, wherein the soft and flexible material is selected from a group comprising neoprene, cloth fabric, leather, and a combination of at least two of neoprene, cloth fabric, and leather.
- 19. The minimalist golf shoe of claim 14, wherein the outsole is constructed from a thin resilient material.
- 20. The minimalist golf shoe of claim 19, wherein the thin resilient material is selected from a group comprising polyurethane, rubber, and a combination of polyurethane and rubber.

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