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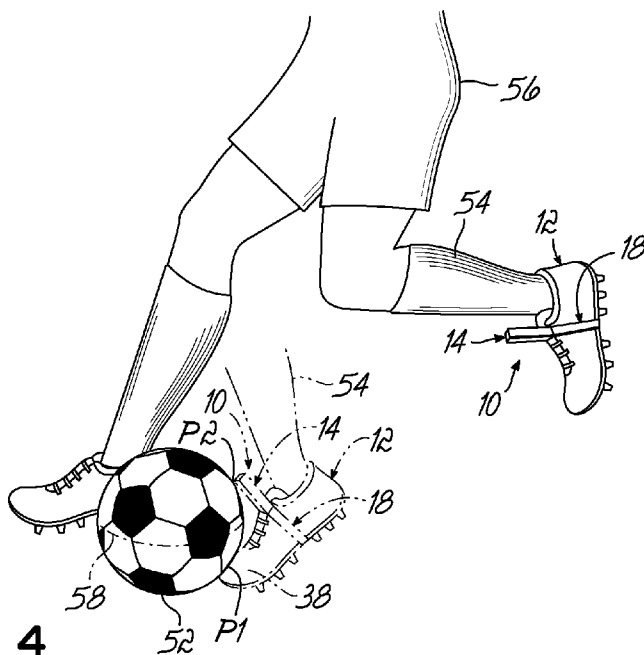


FIG. 4

(57) Abstract: A kicking aid (10) to be used with a shoe (12) for kicking a ball (52) includes a connecting member (18) adapted to secure the kicking aid (10) to the shoe (12) and a contacting member (14) coupled to the connecting member (18) and adapted to extend away from an instep portion (16) of the shoe (12) when the kicking aid (10) is coupled to the shoe (12). In another embodiment, the kicking aid (10) is secured to a shin guard 150, instead of a shoe (12). In either embodiment, when a person kicks the ball (52), the kicking aid (10, 100) contacts the ball (52) above the equator (58) when the shoe (12) contacts the ball (52) below the equator (58).



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SOCCER KICKING AID AND METHOD OF USING THE SAME

Field of the Invention

[0001] The invention relates generally to athletic equipment and, in particular, to a device to aid in kicking a soccer ball.

Background of the Invention

[0002] Soccer, or football as it is referred to in most countries outside of the United States, is one of the most popular team sports in the world. During a soccer match, players use their feet to control and manipulate a soccer ball. Points are awarded by successfully placing the soccer ball into a goal protected by a goalkeeper. As a result, it is imperative to be able to effectively and accurately pass the soccer ball to teammates, and to execute well placed shots past the goalkeeper.

[0003] When kicking any object resting on the ground, such as a soccer ball, the normal inclination is to approach the object head-on, and attempt to make contact with the toe or lower instep of the shoe. While this method is satisfactory for ensuring contact with the soccer ball, this method is not well suited for those athletic purposes when both distance and accuracy are important, such as kicking or passing a soccer ball. With this approach, the momentum imparted to the soccer ball is generally below the midline or equator of the spherically-shaped ball. As a result, this approach limits the amount of energy that can be transferred to the ball in a horizontal direction and tends to transfer significant energy to the ball in the vertical direction. Because a significant portion of the force from a kick of this technique directs the soccer ball vertically instead of horizontally, valuable energy and force intended for horizontal ball travel is wasted. Instead, the ball tends to sail upward away from the field of play thereby reducing horizontal ball travel. Although significant vertical ball travel is not completely undesirable in soccer, excessive vertical ball travel should be minimized. Horizontal ball travel without excessive vertical ball travel is imperative in some soccer situations, such as shots on goal and passing from teammate to teammate. For instance, it is common for many shots on goal to sail above and over the crossbar of the goal resulting in a lost scoring opportunity.

[0004] By contrast, an ideal kicking device for distance and accuracy would enhance the momentum transferred to the ball in a horizontal direction and minimize excess vertical ball travel. However, many modern athletic shoes, and more particularly, many soccer shoes, do not provide the wearer with an adequate kicking

environment conducive to accurate and effective momentum transfer in a horizontal direction.

[0005] Accordingly, there is a need for a kicking aid and a method of using the same capable of being fitted over a shoe, or integrated in a shoe, that provides an environment that will allow accurate and effective horizontal momentum transfer.

Summary of the Invention

[0006] Embodiments of the invention provide a kicking aid that overcomes this inherent limitation of athletic shoes, by providing a kicking surface that will accurately and effectively reduce vertical momentum transfer and enhance horizontal momentum transfer.

[0007] To this end, an apparatus, adapted to be used with a shoe for kicking a ball having an equator, includes a connecting member adapted to secure the apparatus to the shoe and a contacting member coupled to the connecting member and adapted to extend away from an instep portion of the shoe. As a person kicks the ball, the contacting member is adapted to contact the ball above the equator when the shoe contacts the ball below the equator.

[0008] In one embodiment of the invention, the contacting member includes a base portion coupled to the connecting member and a tower portion that is removably coupled to the base portion. A plurality of tower portions, each having a different height, may be provided so as to customize the apparatus for a particular position on the field, such as a striker or defender, or a particular player. For example, in one embodiment, the tower portion may include a generally flat, rectangular plate. In another embodiment, the tower portion may be smooth and continuous and includes a generally bulbous member (e.g., generally hemispherically shaped). An extension portion may be disposed between the bulbous member and the base portion to vary the height of the kicking aid.

[0009] In another embodiment, the contacting member is secured to a downwardly extending portion of shin guard instead of a shoe. In one configuration, the downwardly extending portion may be a stirrup that is used to secure the shin guard to the leg. In another configuration, the downwardly extending portion is a flexible flap that is attached the lower edge of the shin guard. In either configuration, the contacting member is adapted to contact the ball above the equator when the shoe contacts the ball below the equator. The contacting member may be adjusted vertically along the

downwardly extending portion so as to alter where the contacting member contacts the ball relative to the equator.

[0010] In yet another embodiment, the contacting member is attached to a sock-like garment, which is worn over a regular sock. Like the other embodiments, the contacting member is adapted to contact the ball above the equator when the shoe contacts the ball below the equator.

[0011] A method for kicking a ball having an equator includes providing a shoe having a kicking aid, the kicking aid including a contacting member extending from an instep portion of the shoe, kicking the ball so that the shoe contacts the ball below the equator, and contacting the ball with the contacting member above the equator when the shoe contacts the ball below the equator. The method further includes varying the height of the kicking aid by removing a tower portion of the contacting member and replacing it with another tower portion having a different height. For example, the tower portion may include a generally flat, rectangular plate that is replaced with another rectangular plate having a different height. Alternatively, the method may include using an extension member to vary the height of the kicking aid.

[0012] These and other objects, advantages, and features of the invention will become more readily apparent to those of ordinary skill in the art upon review of the following detailed description taken in conjunction with the accompanying drawings.

Brief Description of the Drawings

[0013] The accompanying drawings, which are incorporated in and constitute a part of this specification, illustrate embodiments of the invention and, together with a general description of the invention given above, and the detailed description given below, serve to explain the invention.

[0014] Fig. 1 is perspective view of an exemplary embodiment of a kicking aid in accordance with the invention;

[0015] Fig. 2 is a side perspective view of the kicking aid of Fig. 1 mounted on a shoe of a player;

[0016] Fig. 3 is a perspective view of the kicking aid of Fig. 1, but with a connecting member configured as connectable straps;

[0017] Fig. 4 is a side perspective view illustrating the use of the kicking aid shown in Fig. 1 to kick a soccer ball;

[0018] Fig. 5 is a side perspective view of a second embodiment of a kicking aid in accordance with the invention;

- [0019] Fig. 6 is a diagrammatic perspective view of a third embodiment of a kicking aid in accordance with the invention;
- [0020] Fig. 7 is a side perspective view of a fourth embodiment of a kicking aid in accordance with the invention;
- [0021] Fig. 8 is a partial dis-assembled cross-sectional view of the kicking aid shown in Fig. 7 generally taken along line 8-8;
- [0022] Fig. 9 is a side perspective view of the kicking aid shown in Fig. 7 attached to a shin guard in accordance with another embodiment of the invention;
- [0023] Fig. 10 is a side perspective view illustrating the use of the kicking aid shown in Fig. 9 to kick a soccer ball;
- [0024] Fig. 11 is a side perspective view of the kicking aid shown in Fig. 7 attached to a shin guard in accordance with yet another embodiment of the invention; and
- [0025] Fig. 12 is a side perspective view of the kicking aid shown in Fig. 7 attached to a sock-like garment in accordance with still another embodiment of the invention.

Detailed Description

[0026] Referring to Figs. 1 and 2 and in accordance with one embodiment of the invention, a kicking aid 10 is adapted to be removably coupled to a shoe 12 and includes a contacting member 14 adapted to be positioned along an instep portion 16 of shoe 12, and a connecting member 18 adapted to secure the contacting member 14 to shoe 12. The connecting member 18 may be configured as a closed loop 20 defining an opening 22 through which shoe 12 may be positioned. In one embodiment, the connecting member 18 may be an elastic strap as illustrated in Fig. 1. In this way, the strap may be resiliently expanded so as to fit over the shoe 12 and selectively positioned along the instep portion 16. Once positioned, the strap may be released so as to contract about at least a portion of the shoe 12 to thereby secure the kicking aid 10 to the shoe 12.

[0027] In another embodiment, and as illustrated in Fig. 3, the connecting member 18 may be configured as a pair of straps 24, 26 each having a free end, wherein the straps 24, 26 are capable of wrapping around shoe 12. One of the straps may include a hook type of fastener 28 and the other strap may include a loop type of fastener 30, the hook and loop fasteners being mated with each other to secure the straps 24, 26 around the shoe 12. In this way, with the straps 24, 26 uncoupled, the

kicking aid 10 may be selectively positioned along the instep portion 16 of shoe 12 and the straps 24, 26 wrapped around shoe 12. The hook and loop fasteners 28, 30 may then be mated together to secure the kicking aid 10 to shoe 12. Such hook and loop fasteners are known in the art as Velcro™. The hook and loop fasteners 28, 30 may be selectively positioned along their respective straps 24, 26 so as to adjust to a wide range of shoe sizes. As recognized by those of ordinary skill in the art, instead of having two straps, the kicking aid 10 may have only one strap that wraps around shoe 12. In this case, the strap would include one of the hook or loop fastener and the contacting member 14 or another portion of the strap would include the other of the hook or loop fastener. Those of ordinary skill in the art will further recognize that the invention is not limited to hook and loop fasteners but that a wide variety of fasteners may be used, including snaps, hooks, buttons, etc.

[0028] Depending on where the kicking aid 10 is positioned along the instep portion 16 of shoe 12, connecting member 18 may also include one or more apertures, eyelets, slits, loops, etc., that cooperate with the shoestring 32 of the shoe 12 to additionally secure the kicking aid 10 to shoe 12. In addition to the above-described embodiments of the connecting member 18, those of ordinary skill in the art will recognize other ways to removably couple the kicking aid 10 to shoe 12 within the scope of the invention.

[0029] As shown in Figs. 1 and 2, the kicking aid 10 includes a contacting member 14 coupled to connecting member 18 and adapted to be positioned on the instep portion 16 of shoe 12 when coupled thereto. The contacting member 14 may be configured as a generally rectangular block or plate 34 having a front contacting wall 36, adapted to face a toe portion 38 of shoe 12, a back wall 40 opposite front wall 36 adapted to face the rear portion 42 of shoe 12, a bottom wall 44, a top wall 46 opposite bottom wall 44 and projecting away from instep portion 16 of shoe 12, and opposed end walls 48, 50. Contacting member 14 extends in a generally perpendicular manner with respect to instep portion 16 of shoe 12. Additionally, the bottom wall 44 may be slightly concave for improved mating with the instep portion 16 of shoe 12.

[0030] In one embodiment, the contacting member 14 is integrally formed with the connecting member 18. Alternatively, the contacting member 14 may be coupled to the connecting member 18 by a suitable adhesive, sewing, or other type of fastener as is known in the art. In an exemplary embodiment, the contacting member 14 may be made of a high strength, lightweight plastic, such as polypropylene. The invention, however, is not so limited as other suitable materials may also be used. The contacting

member 14 may be formed so as to be solid, or alternatively, formed so as to be hollow. Although plate 34 is configured to have generally planar walls, those of ordinary skill in the art will recognize that the walls may also be curved. For example, front wall 36 may be slightly concave in shape to provide a mating surface for a ball.

[0031] Fig. 4 illustrates operation of the kicking aid 10 to kick a ball, such as soccer ball 52. In one aspect of the invention, as the leg 54 of a player 56 is moved so that shoe 12 contacts ball 52, at least a portion of contacting member 14 also contacts the ball 52. In particular, the toe portion 38 or the lower end of instep portion 16 of shoe 12 contacts ball 52. As shown in Fig. 4, the point of contact P1 between the toe portion 38 or lower instep portion 16 and ball 52 is typically below the midline or equator 58 of the ball 52. If the kicking aid 10 were not used, the shoe 12, via contact point P1, would impart a force on the ball 52 with a relatively significant vertical component. As a result, much of the energy used to kick the ball 52 would go to vertical ball travel. When the kicking aid 10 is used, however, at least a portion of contacting member 14 contacts the ball 52 at a point P2 above the equator 58 of ball 52 as shown in Fig. 4. Such engagement between the contacting member 14 and the ball 52 above its equator 58 provides some advantages.

[0032] One primary advantage is that the kicking aid 10 decreases the net vertical force applied to ball 52 relative to that normally applied to ball 52 during kicking without kicking aid 10. As a result, the ball 52 does not vertically rise as high as it would otherwise. In this way, for example, shots on goal have an increased chance of scoring as the ball 52 stays closer to the ground and therefore below the cross bar of the goal. In essence, using the kicking aid 10 reduces the likelihood of a ball getting away from a player and sailing over an intended target. Instead, the ball 52 stays lower to the ground within the field of play and increases a player's chances of scoring or accurately passing to a teammate. Another advantage is that some of the energy that would otherwise go into the vertical component of the force is now used to generate an additional net horizontal component. Hence, when kicking, using the kicking aid 10, horizontal ball travel is enhanced as well. This allows the ball 52 to travel further and likely faster down the field of play.

[0033] Although the kicking aid 10 described above may be configured as an add-on feature to an existing shoe 12, the invention is not so limited. Thus, in accordance with another embodiment of the invention, and as shown in Fig. 5, in which like reference numerals refer to like features in Figs. 1 and 2, a kicking aid 60 may be integrally formed with a shoe 62. To this end, the kicking aid 60 may be formed with

the tongue 64 and/or sidewalls 66 of shoe 62. The shoe 62 may be made with a rear or side lacing, or other closure means (not shown), instead of instep lacing to provide an uninterrupted instep at which to integrally form the kicking aid 60.

[0034] Depending on the size of a player's foot relative to the equator of the ball, it may be desirable to position the kicking aids 10, 60 at different locations along the instep portion 16 of shoes 12, 62. For instance, for some players, the kicking aid 10, 60 may be placed nearer the toe portion 38 of the shoe 12, 62. For other players, the kicking aid 10, 60 may be placed nearer the rear portion 42 of shoe 12, 62. For the embodiment shown in Fig. 1, the kicking aid 10 may simply be moved or adjusted along the instep portion 16 so as to locate the contacting member 14 at the desired location on shoe 12. For the embodiment shown in Fig. 5, a plurality of shoes 62 may be provided with the position of the contacting member 14 along the instep portion 16 different for each of the shoes 62.

[0035] Moreover, depending on the position of the player on the field (e.g. striker, defender, etc.) it may be advantageous to vary the height (i.e., length extending away from the instep portion of the shoe) of the contacting member. With reference to Fig. 6 and in accordance with another embodiment of the invention in which like reference numerals refer to like features in Fig. 1, a multi-piece kicking aid 70 may be provided for coupling with a shoe, such as shoe 12. As with kicking aid 10, kicking aid 70 includes a contacting member 72 and a connecting member 74. Connecting member 74 is similar to connecting member 18 as described above and will not be described further. In this embodiment, however, the contacting member 72 includes a lower base portion 76 and an upper tower portion 78 adapted to couple with base portion 76 and extend therefrom.

[0036] The base portion 76 may be integrally formed with connecting member 74. Alternatively, base portion 76 may be coupled to connecting member 74 by a suitable adhesive, sewing, or other fasteners known in the art. Base portion 76 may be generally rectangular and includes a front wall 36a adapted to face a toe portion 38 of shoe 12, a back wall 40a opposite front wall 36a adapted to face the rear portion 42 of shoe 12, a bottom wall 44a, a top wall 46a opposite bottom wall 44a and projecting away from instep portion 16 of shoe 12, and opposed end walls 48a, 50a. Base portion 76 extends in a generally perpendicular manner with respect to instep portion 16 of shoe 12 and bottom wall 44a may be slightly concave to approximate the curvature of shoe 12. The top wall 46a of base portion 76 includes at least one and preferably a plurality of apertures 80 for coupling to tower portion 78.

[0037] In a similar manner, tower portion 78 may be generally rectangular and includes a front contacting wall 36b adapted to face a toe portion 38 of shoe 12, a back wall 40b opposite front wall 36b adapted to face the rear portion 42 of shoe 12, a bottom wall 44b adapted to be coupled to base portion 76, a top wall 46b opposite bottom wall 44b, and opposed end walls 48b, 50b. Tower portion 78 is adapted to be removably coupled to base portion 76. To this end, the bottom wall 44b of tower portion 78 includes at least one and preferably a plurality of studs 82 adapted to be received in respective apertures 80 in base portion 76. The studs 82 are sized so that the tower portion 78 and base portion 76 are frictionally mated. Those of ordinary skill in the art will recognize that other methods for removably coupling the tower portion and base portion may be used. For example, a threaded stud and threaded aperture arrangement, such as along a central axis of the kicking aid, may be used to couple the various components of kicking aid 70.

[0038] In one aspect, the multi-piece construction allows the tower portion 78 to be easily and conveniently switched out or exchanged with another tower portion 78' that has a different height than tower portion 78. In addition to the above aspects, the kicking aid in accordance with embodiments of the invention may also impart a top spin on the ball depending on the height of the contacting member. In particular, generally the greater the height of the contacting member the greater the top spin on the ball. Strikers, whose main function is to score goals, may desire a contacting member having an increased height with respect to other players, such as defenders who must often kick the ball long distances. The multi-piece construction of kicking aid 70 essentially allows players to customize the kicking aid 70 for their particular position and their particular style of play through interchangeability of the tower portion 78. While the multi-piece kicking aid shown and described in Fig. 6 is directed to a kicking aid that is removably coupled to a shoe, those of ordinary skill in the art will recognize that the base portion 76 may be integrally formed with the shoe, as described above in reference to Fig. 5.

[0039] In some applications, it may be advantageous to provide a kicking aid that has a contacting member that is relatively smooth and continuous so as to be devoid of any sharp corners or discontinuities. In this regard, and as shown in Figs. 7 and 8, in which like reference numerals refer to like features in Fig. 1, a multi-piece kicking aid 100 may be provided for coupling with a shoe, such as shoe 102. As with kicking aid 10, kicking aid 100 includes a contacting member 104 for contacting a ball above its equator, and a connecting member 106 for coupling the kicking aid 100 to shoe 102.

Unlike previous embodiments, however, contacting member 104 has been configured so as to be relatively smooth and continuous.

[0040] In this embodiment, connecting member 106 may include one or more threaded fasteners for securing the kicking aid 100 to shoe 102. More particularly, connecting member 106 may include one or more screws 108 for securing the kicking aid 100 to shoe 102. The screws 108 may additionally include retaining members 110 to enhance the securement to the shoe 102. As shown in Fig. 8, the screws 108 may be configured to secure the kicking aid 100 to an upper surface 112 of a folded over tongue extension 114 having a securing strap 115, as is generally known in the art. Thus in this embodiment, tongue extension 114 not only serves to cover shoe strings 32, but also provides a surface for locating kicking aid 100. While the connecting member 106 is shown herein as screws 108, those of ordinary skill in the art will recognize that the kicking aid 100 may be secured to tongue extension 114 or shoe 102 in other ways, including those described above in previous embodiments.

[0041] Similar to the previous embodiment, the contacting member 104 has a multi-piece construction that includes a lower base portion 116 and an upper tower portion 118 adapted to couple with base portion 116 and extend therefrom. The base portion 116 is adapted to be coupled to connecting member 106, such as in a manner described above, and in one embodiment is generally cylindrical. Base portion 116 includes a front portion 36c adapted to face toe portion 38 of shoe 102, a back portion 40c opposite front portion 36c adapted to face the rear portion 42 of shoe 102, a bottom portion 44c, and a top portion 46c opposite bottom portion 44c and projecting away from the instep 16 of shoe 102. Base portion 116 extends in a generally perpendicular manner with respect to instep portion 16 of shoe 102 and bottom wall 44c may be slightly concave to approximate the curvature of shoe 102. A pad 117 may be disposed between the base portion 116 of kicking aid 100 and the instep portion 16 of shoe 102 to absorb the impact from kicking the ball. In one embodiment, the pad 117 may be integrally formed with base portion 116 or alternatively, pad 117 may be separate and inserted between the kicking aid 100 and shoe 102 during coupling of kicking aid 100 to shoe 102. The top portion 46c of base portion 116 includes at least one and preferably a plurality of apertures 80 for coupling to tower portion 118.

[0042] Tower portion 118 includes a generally bulbous member 120. For example, in one embodiment, the bulbous member 120 may be generally hemispherically shaped. As used herein, hemispherically shaped refers to any generally blended shape and includes surfaces that are concave, convex, combinations

thereof, and may include one or more flattened areas. Nevertheless, hemispherically shaped implies being generally devoid of sharp corners or discontinuities so as to be generally smooth and continuous. In this regard, tower portion 118 includes a front portion 36d adapted to face a toe portion 38 of shoe 102, a back portion 40d opposite front portion 36d adapted to face the rear portion 42 of shoe 102, a bottom portion 44d adapted to be coupled to base portion 116 and a top portion 46d opposite bottom portion 44d. Tower portion 118 is adapted to be removably coupled to base portion 116. To this end, the bottom portion 44d of tower portion 118 includes at least one and preferably a plurality of studs 82 adapted to be received in respective apertures 80 in base portion 116. The studs 82 are sized so that the tower portion 118 and base portion 116 may be frictionally mated. Those of ordinary skill in the art will recognize that other methods for removably coupling tower portion 118 and base portion 116 may be used. For example, a threaded stud and threaded aperture arrangement, such as along a central axis of the kicking aid, may be used to couple the various components of kicking aid 100.

[0043] In the previous embodiment, to adjust the height of the kicking aid 70, tower portion 78 was exchanged for a different tower portion 78' having a height different than tower portion 78 (e.g., see Fig. 6). In this embodiment, however, the tower portion 118 may include an extension member 122 to vary or adjust the height of the kicking aid 100. In this regard, extension member 122 is configured to be disposed between the bulbous member 120 and the base portion 116. Extension member 122 is generally cylindrically shaped and includes a front portion 36e adapted to face a toe portion 38 of shoe 102, a back portion 40e opposite front portion 36e adapted to face the rear portion 42 of shoe 102, a bottom portion 44e, and a top portion 46e opposite bottom portion 44e. For example, extension member 122 may be configured as a right cylinder or alternatively, generally cone shaped (e.g., the extension member 122 may have a constant cross-sectional diameter or a varying one).

[0044] As mentioned above, the extension member 122 is disposed between bulbous member 120 and base portion 116. Accordingly, the upper portion 46e of extension member 122 includes at least one and preferably a plurality of apertures 80 adapted to receive respective studs 82 of bulbous member 120. In a similar manner, the bottom portion 44e of extension member 122 includes at least one and preferably a plurality of studs 82 adapted to be received in respective apertures 80 in base portion 116. The apertures 80 and studs 82 of extension member 122 are sized so that the bulbous member 120 and base portion 116 are frictionally mated thereto. Those of

ordinary skill in the art will recognize that other methods for removably coupling extension member 122 to bulbous member 120 and base portion 116 may be used. For example, a threaded stud and threaded aperture arrangement, such as along a central axis of the kicking aid, may be used to couple the various components of kicking aid 100.

[0045] The multi-piece construction of tower portion 118 allows the height of kicking aid 100 to be easily and conveniently varied by switching out or exchanging extension member 122 with another extension member 122' having a height different than extension member 122. In an alternative embodiment, however, and similar to the embodiment shown in Fig. 6, those of ordinary skill in the art will appreciate that instead of using extension member 122 to vary the height of kicking aid 100, a different bulbous member (not shown) that varies the height of kicking aid 100, may be exchanged for bulbous member 120. Moreover, while the multi-piece kicking aid 100 shown and described in Figs. 7 and 8 is directed to a kicking aid that is coupled to the tongue extension of a shoe, those of ordinary skill in the art will recognize that the base portion 116 may be integrally formed with the shoe, as described above in reference to Fig. 5. Similarly, those of ordinary skill in the art will recognize that the base portion 116 may be coupled to a connecting member in the form of a closed loop, or a pair of straps, as previously described.

[0046] In another aspect in accordance with an embodiment of the invention, the kicking aid 100 may include a cover 124 (shown in phantom in Fig. 8) overlying the tower portion 118 and base portion 116. The cover 124 may be formed of leather, cloth or other suitable materials. In one embodiment, the cover 124 may be a separate component that couples to the base portion 116 or shoe 102 using suitable fastening members, such as hook and loop fasteners. Alternatively, cover 124 may be configured as the outer flap of the tongue extension 114 of tongue 64. In such a case, the kicking aid is formed integral with tongue extension 114.

[0047] In some applications, it may be advantageous to attach the kicking aid 100 to a shin guard instead of shoe 102. Fig. 9 shows a shin guard 150 attached to the leg 54 of player 56. The shin guard 150 includes an upper strap 152 wrapped around calf 154 of leg 54 and a stirrup 156 secured to the bottom of the shin guard 150. The kicking aid 100 is affixed to the stirrup 156 using any number of fasteners such as rivets, stitches, glue, hook and loop fasteners, screws, and the like. The kicking aid 100 could be added to the stirrup 156 while the shin guard 150 is being manufactured.

Alternatively, the kicking aid 100 could be added after the shin guard 150 is manufactured.

[0048] Like Fig. 4, Fig. 10 illustrates the kicking aid 100 being used to kick a ball, such as soccer ball 52. In one aspect of the invention, as the leg 54 of a player 56 is moved so that shoe 102 contacts ball 52, at least a portion of kicking aid 100 also contacts the ball 52. In particular, the toe portion 38 or the lower end of instep portion 16 contacts the ball 52 at P1 below the equator 58 and the kicking aid 100 contacts the ball 52 at P2 above the equator 58. The kicking aid 100 may be vertically repositioned on the stirrup 156 in order to alter where the kicking aid 100 contacts the ball 52 relative to the equator 58.

[0049] Fig. 11 illustrates the kicking aid 100 associated with a different style shin guard. With shin guard 150 in Fig. 9, the stirrup 156 is integrally formed with the shin guard 150. As such, the stirrup 156 and upper strap 152 serve to secure the shin guard 150 to leg 54. Shin guard 160 in Fig. 11 does not include an integrally formed stirrup, but instead has upper and lower straps 162, 164 to secure the shin guard 160 to the leg 54. A flexible flap 166 is affixed to the bottom end of shin guard 160 and the kicking aid 100 is attached to the flap 166. The kicking aid 100 may be attached to flap 166 with any known fastener 168 such as rivets, screws, stitching, glue, hook and loop fasteners, and the like. Optionally, the kicking aid 100 may be attached to flap 166 so that the kicking aid 100 may be vertically repositioned along flap 166 in order to alter where the kicking aid 100 contacts the ball 52 relative to the equator 58. For example, the flap 166 may include a series of vertically disposed holes and the kicking aid 100 can be repositioned using those holes. Or, the flap 166 may include a vertical slot along which the kicking aid may slide in order to reposition it. Flap 166 may include a strip of Velcro to which the kicking aid 100 can be affixed and repositioned.

[0050] Fig. 12 illustrates the kicking aid 100 attached to a sock-like garment 180. The sock-like garment 180 is pulled over a regular sock 182 worn by player 56. As illustrated, the sock-like garment 180 is open toed as shown by phantom line 184. The sock-like garment may also be shaped like the stirrup 156. The kicking aid 100 may be attached to the sock-like garment 180 with any known fastener such as rivets, screws, stitching, glue, hook and loop fasteners, and the like. Optionally, the kicking aid 100 may be attached to sock-like garment 180 so that the kicking aid 100 may be vertically repositioned along sock-like garment in order to alter where the kicking aid 100 contacts the ball 52 relative to the equator 58. As an alternative to the sock-like garment 180, the kicking aid may be attached directly to a player's sock.

[0051] While the invention has been illustrated by a description of various preferred embodiments and while these embodiments have been described in some detail, it is not the intention of the Applicant to restrict or in any way limit the scope of the appended claims to such detail. Additional advantages and modifications will readily appear to those skilled in the art. Features described with regard to certain embodiments and figures are readily adaptable to other embodiments and figures. For example, the bulbous shape shown in Figs. 7 and 8 may be adapted to work in any embodiment. In use, the various features of the invention may be used alone or in numerous combinations depending on the needs and preferences of the user.

WHAT IS CLAIMED IS:

1. An apparatus adapted to be used with a shoe for kicking a ball, the shoe having a toe portion, an instep portion and a rear portion, the ball having an equator, the apparatus comprising:
 - a connecting member adapted to secure the apparatus to the shoe; and
 - a contacting member coupled to said connecting member and adapted to extend from the instep portion of the shoe when said apparatus is coupled thereto, wherein said contacting member is adapted to contact the ball above the equator when the shoe contacts the ball below the equator.
2. The apparatus of claim 1, wherein said connecting member includes an elastic strap.
3. The apparatus of claim 1, wherein said connecting member includes at least one strap, said strap having at least one of a hook and loop fastener.
4. The apparatus of claim 1, wherein said contacting member includes a generally rectangular plate having a front wall adapted to face the toe portion of the shoe, a back wall adapted to face the rear portion of the shoe, a top and bottom wall, and two end walls, said plate adapted to engage the instep of the shoe along said bottom wall.
5. The apparatus of claim 1, wherein said contacting member includes a bulbous member having a front portion adapted to face the toe portion of the shoe, a back portion adapted to face the rear portion of the shoe, and a top and bottom portion, said bulbous member adapted to engage the instep of the shoe along said bottom portion.
6. The apparatus of claim 1, wherein said contacting member further comprises:
 - a base portion coupled to said connecting member; and
 - a tower portion removably coupled to said base portion.
7. The apparatus of claim 6, further comprising:
 - a plurality of tower portions, each tower portion having a different height.
8. The apparatus of claim 6, further comprising:

an extension portion removably coupled to said base portion.

9. The apparatus of claim 8, further comprising:
a plurality of extension portions, each extension portion having a different height.
10. An apparatus for kicking a ball having an equator, the apparatus comprising:
a shoe having a toe portion, an instep portion, and a rear portion; and
a kicking aid coupled to said shoe, said kicking aid including a contacting member extending from the instep portion of the shoe, wherein said contacting member is adapted to contact the ball above the equator when the shoe contacts the ball below the equator.
11. The apparatus of claim 10, wherein said kicking aid is integrally formed with said shoe.
12. The apparatus of claim 11, wherein said shoe includes a tongue or tongue extension, said kicking aid being integrally formed with said tongue or tongue extension.
13. The apparatus of claim 10, wherein said contacting member includes a generally rectangular plate having a front wall adapted to face the toe portion of said shoe, a back wall adapted to face the rear portion of said shoe, a top and bottom wall, and two end walls.
14. The apparatus of claim 10, wherein said contacting member includes a bulbous member having a front portion adapted to face the toe portion of the shoe, a back portion adapted to face the rear portion of the shoe, and a top and bottom portion.
15. The apparatus of claim 10, wherein said contacting member further comprises:
a base portion coupled to said shoe; and
a tower portion removably coupled to said base portion.

16. The apparatus of claim 10, wherein said contacting member further comprises:
an extension portion removably coupled to said base portion.
17. A method of kicking a ball having an equator, comprising:
providing a shoe having a kicking aid, the kicking aid including a contacting member extending from an instep portion of the shoe;
kicking the ball so that the shoe contacts the ball below the equator; and
contacting the ball with the contacting member above the equator when the shoe contacts the ball below the equator.
18. The method of claim 17, further comprising:
removing a tower portion of the contacting member; and
replacing the tower portion of the contacting member with another tower portion having a different height.
19. The method of claim 17, further comprising:
disposing an extension portion between a base portion and a bulbous member of a kicking aid.
20. The method of claim 19, further comprising:
removing the extension portion of the contacting member; and
replacing the extension portion of the contacting member with another extension portion having a different height.
21. An apparatus adapted to be used with a shin guard for kicking a ball, the shin guard having a stirrup to help secure the shin guard to a leg, the ball having an equator, the apparatus comprising:
a contacting member, said contacting member includes a bulbous member adapted to extend away from the leg; and
a fastener adapted to secure the contacting member to the stirrup; and
when the ball is being kicked, said contacting member is adapted to contact the ball above the equator when a shoe contacts the ball below the equator.

22. An apparatus adapted to be used with a shin guard secured to a leg for kicking a ball, the shin guard having a downwardly extending flap, the ball having an equator, the apparatus comprising:

a contacting member, said contacting member includes a bulbous member adapted to extend away from the leg; and

a fastener adapted to secure the contacting member to the downwardly extending flap; and

when the ball is being kicked, said contacting member is adapted to contact the ball above the equator when a shoe contacts the ball below the equator.

23. An apparatus adapted to be used with a sock-like garment worn on a leg for kicking a ball, the ball having an equator, the apparatus comprising:

a contacting member, said contacting member includes a bulbous member adapted to extend away from the leg; and

a fastener adapted to secure the contacting member a forward facing portion of the sock-like garment; and

when the ball is being kicked, said contacting member is adapted to contact the ball above the equator when a shoe contacts the ball below the equator.

24. An apparatus for kicking a ball, the ball having an equator, the apparatus comprising:

a shin guard having at least one strap adapted to extend around a leg to help secure said shin guard to the leg, said shin guard having a lower end;

an downwardly extending portion affixed to said lower end of said shin guard;

a contacting member, said contacting member includes a bulbous member adapted to extend away from the leg; and

a fastener adapted to secure the contacting member to the downwardly extending portion; and

when the ball is being kicked, said contacting member is adapted to contact the ball above the equator when a shoe contacts the ball below the equator.

25. The apparatus of claim 24, wherein said downwardly extending portion is a stirrup.

26. The apparatus of claim 24, wherein said downwardly extending portion is a flap.

27. A method of kicking a ball having an equator, comprising:

providing one of a shin guard or sock-like garment on a leg, said shin guard or sock-like garment having a kicking aid, the kicking aid including a contacting member extending away from the leg;

kicking the ball with a shoe so that the shoe contacts the ball below the equator; and

contacting the ball with the contacting member above the equator when the shoe contacts the ball below the equator.

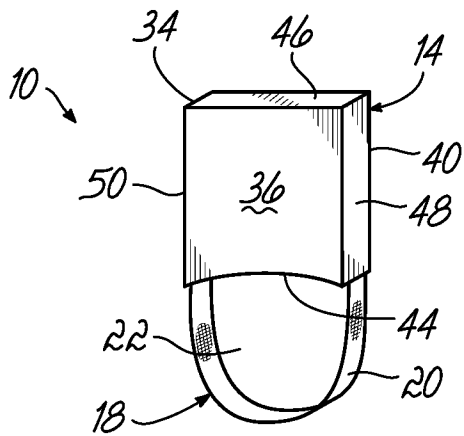


FIG. 1

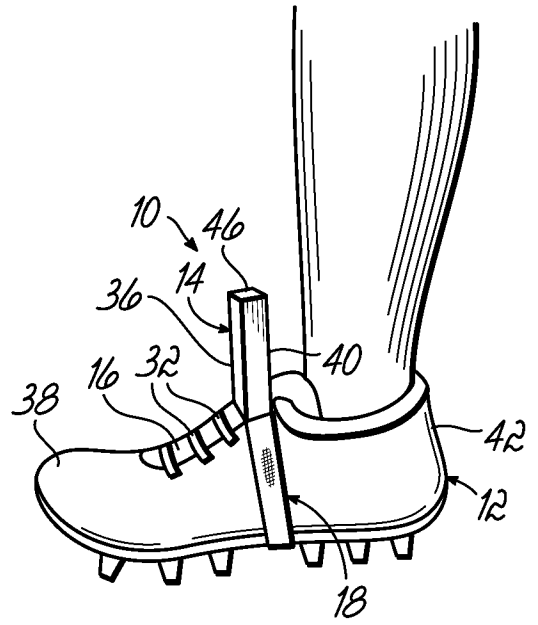


FIG. 2

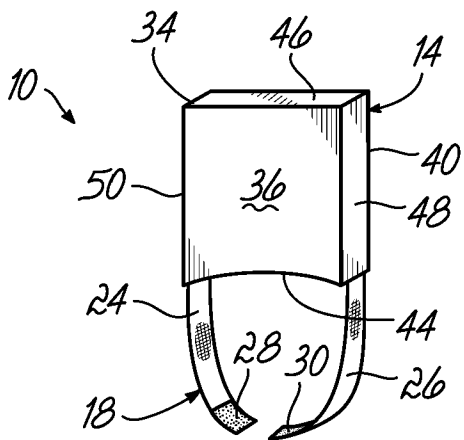


FIG. 3

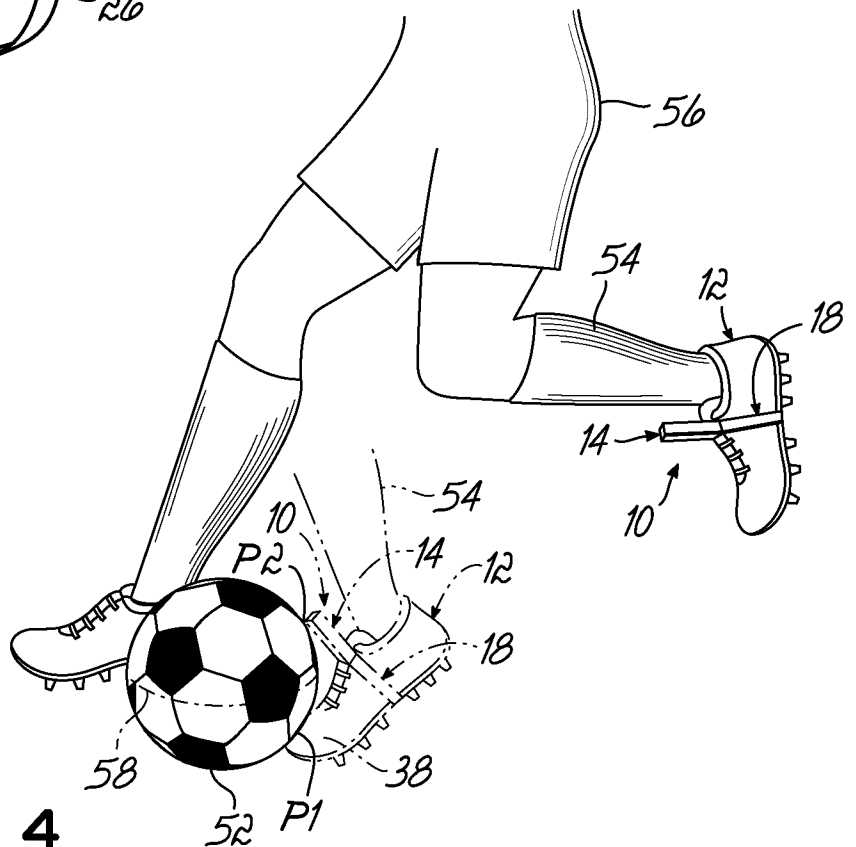


FIG. 4

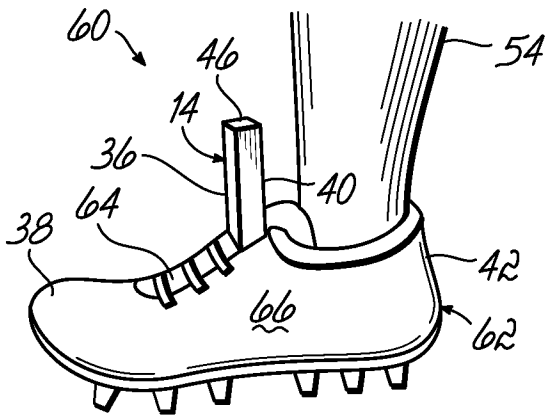


FIG. 5

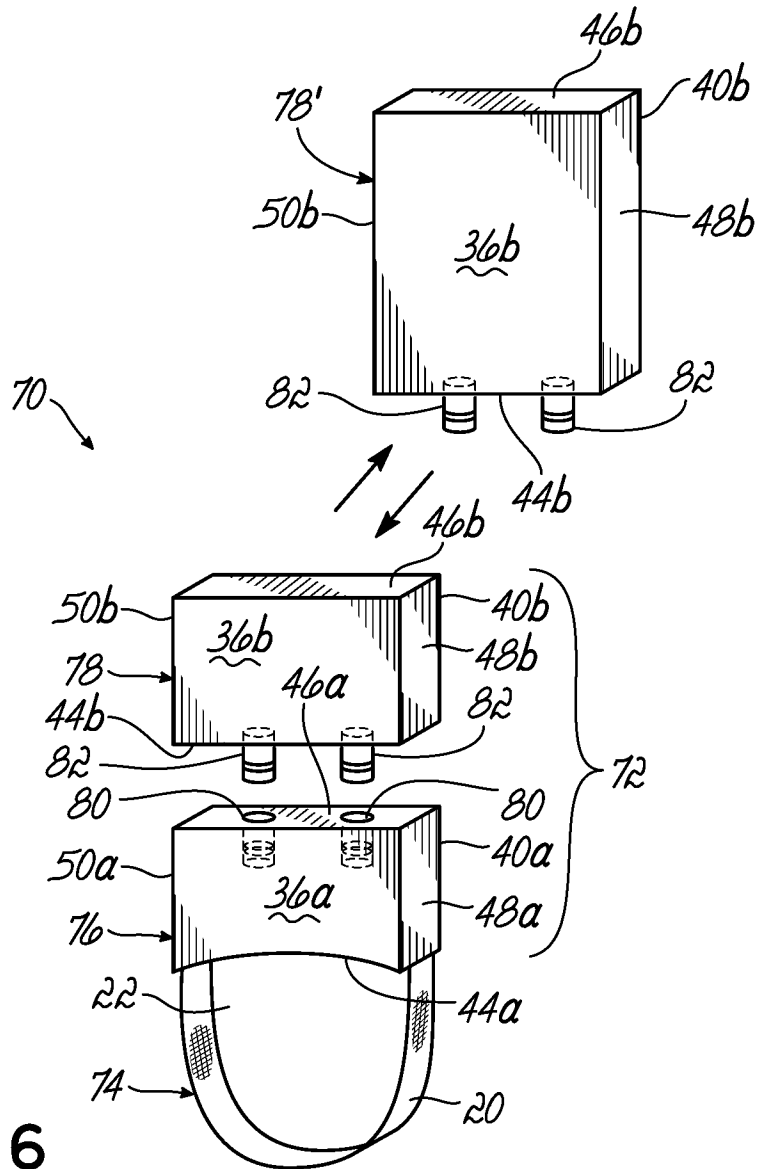


FIG. 6

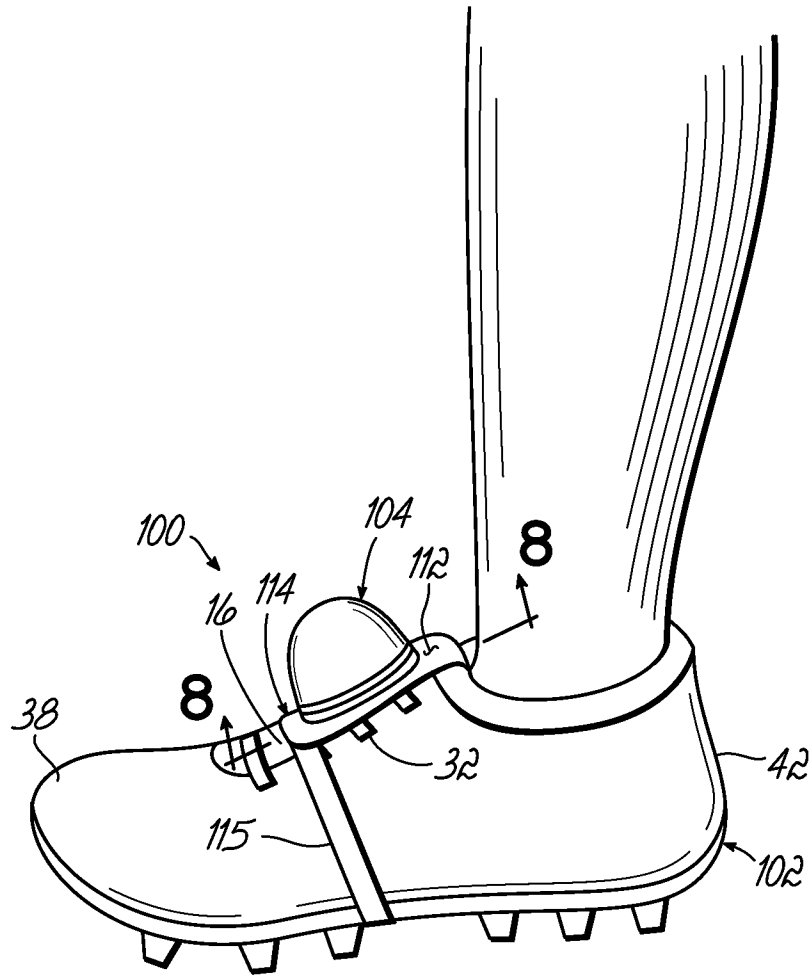


FIG. 7

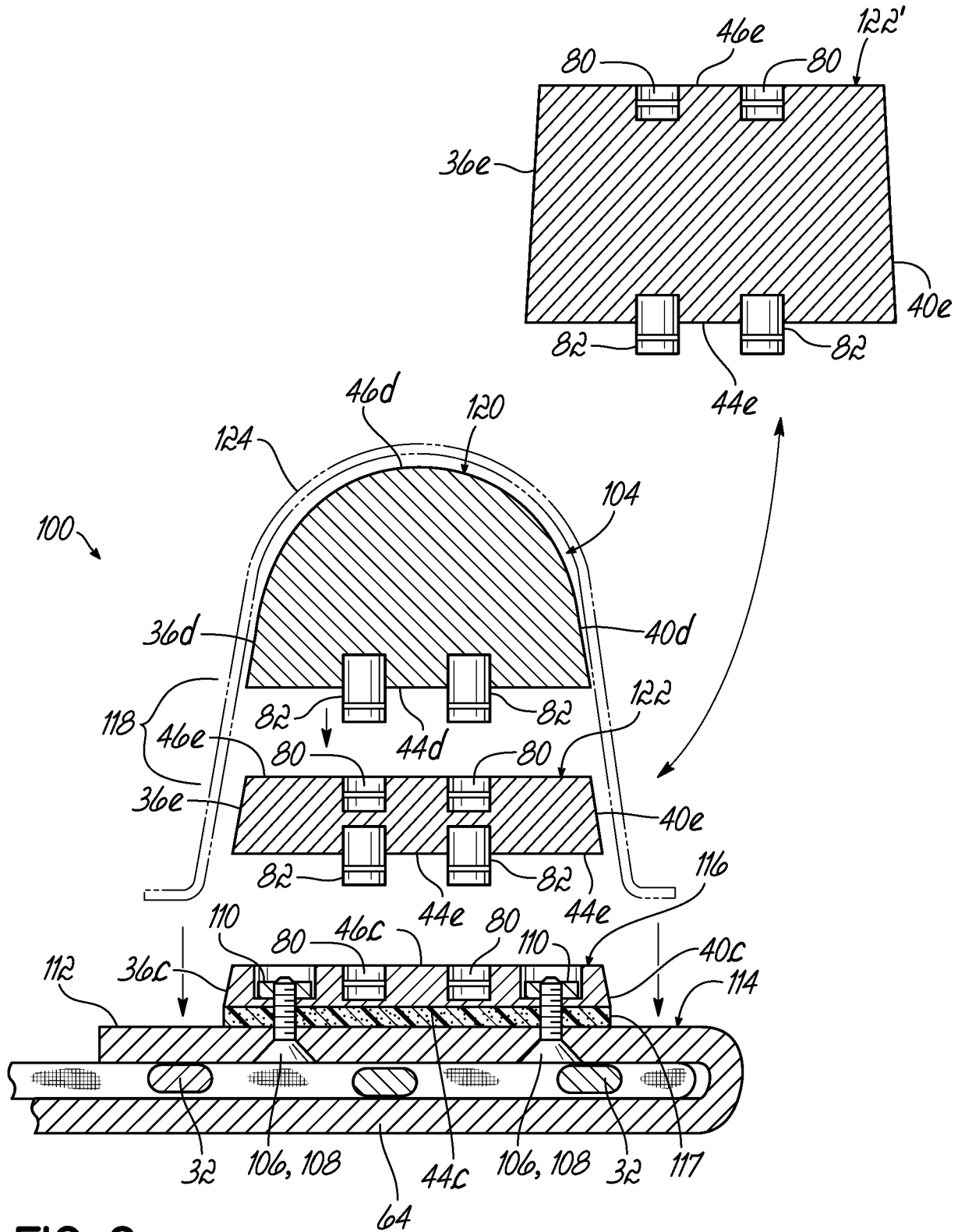


FIG. 8

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2010/025861

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - A43B 5/00 (2010.01) USPC - 36/133 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC(8) - A43B 5/00 (2010.01) USPC - 36/133,114,115,128,132,136; D2/946; 473/446,422 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) USPTO EAST System (US, USPG-PUB, EPO, DERWENT)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,433,437 A (DUDLEY) 18 July 1995 (18.07.1995) entire document	1-27
Y	DE 910,395 A (FUHRY) 04 July 1955 (04.07.1955) entire document	1-27
Y	US 6,298,484 B1 (BECKMAN) 09 October 2001 (09.10.2001) entire document	21, 22, 24-26
Y	US 4,718,676 A (COLLINS, JR.) 12 January 1988 (12.01.1988) entire document	21-27
Y	US 6,886,275 B1 (WESTFALL) 03 May 2005 (03.05.2005) entire document	3
Y	WO 96/32856 A2 (TIEFENBACHER et al) 24 October 1996 (24.10.1996) entire document	4, 13
Y	US 5,472,200 A (MILLER) 05 December 1995 (05.12.1995) entire document	6-9, 15, 16, 18-20
Y	US 2005/0144812 A1 (WHEELER) 07 July 2005 (07.07.2005) entire document	12
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		
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Date of the actual completion of the international search 19 April 2010		Date of mailing of the international search report 03 MAY 2010
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774