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(54) **APPARATUS FOR REBOUNding SOCCER BALLS**

(52) **U.S. Cl.**
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(57) **ABSTRACT**

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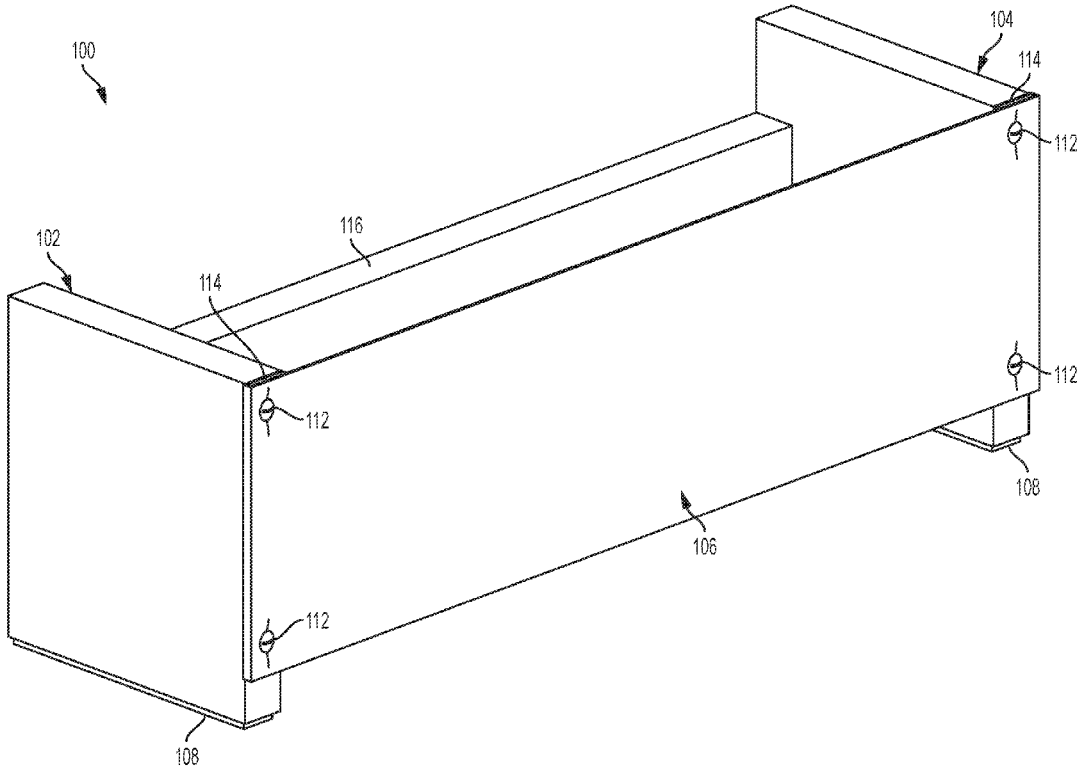
An apparatus is provided for rebounding a soccer ball to a user, in response to the soccer ball engaging the apparatus. The apparatus includes first and second legs for supporting the apparatus on a surface, and a rebounding member coupled to the first and second legs for use in rebounding the soccer ball to the user. The rebounding member is configured to resiliently deform between a receiving position and a rebounding position. In the receiving position, the rebounding member is generally planar in shape for receiving the soccer ball. And, in the rebounding position, the rebounding member is generally arcuate in shape and operates to impart kinetic energy to the soccer ball for rebounding the soccer ball to the user.

Related U.S. Application Data

(63) Continuation-in-part of application No. 14/719,687, filed on May 22, 2015.

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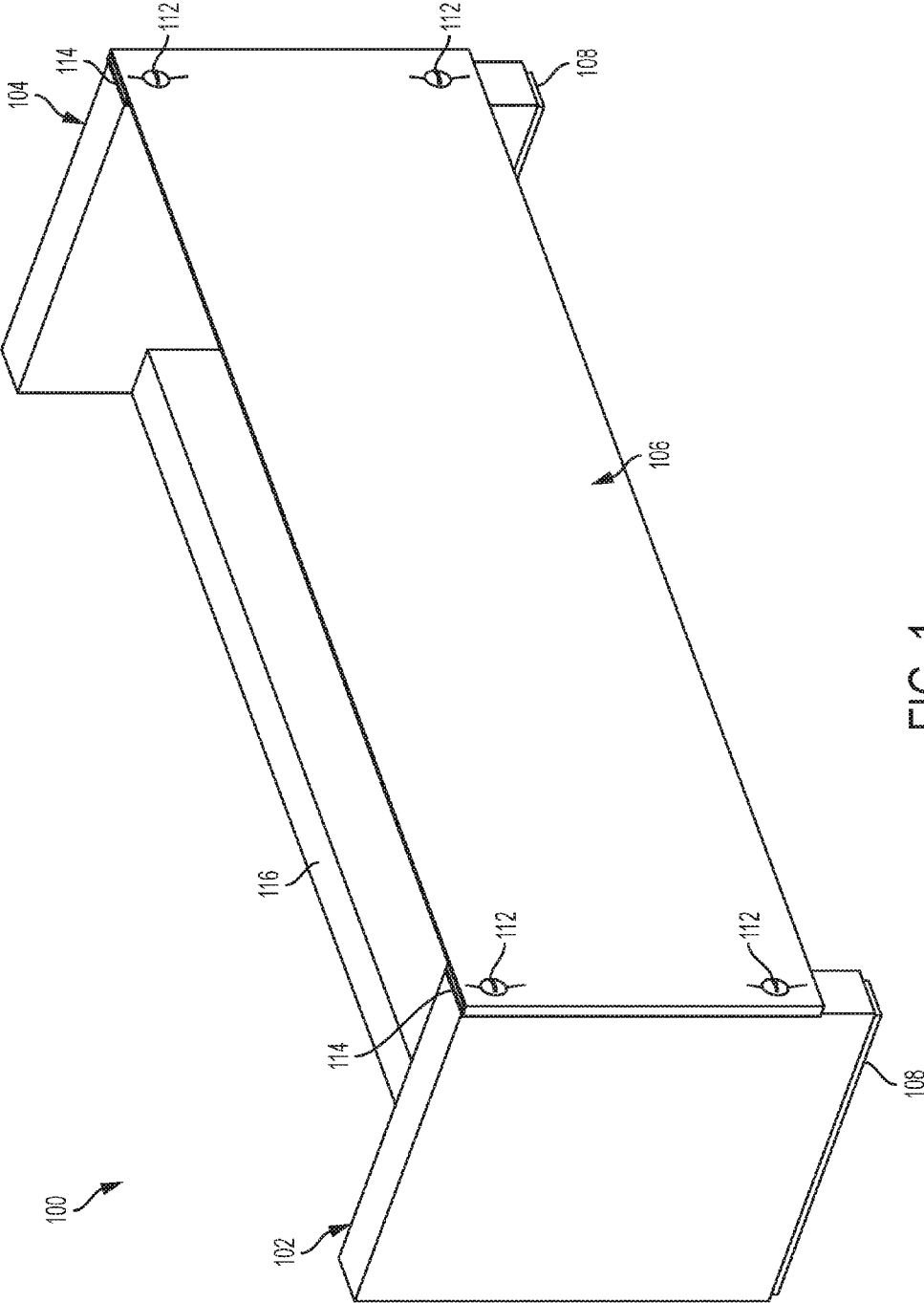


FIG. 1

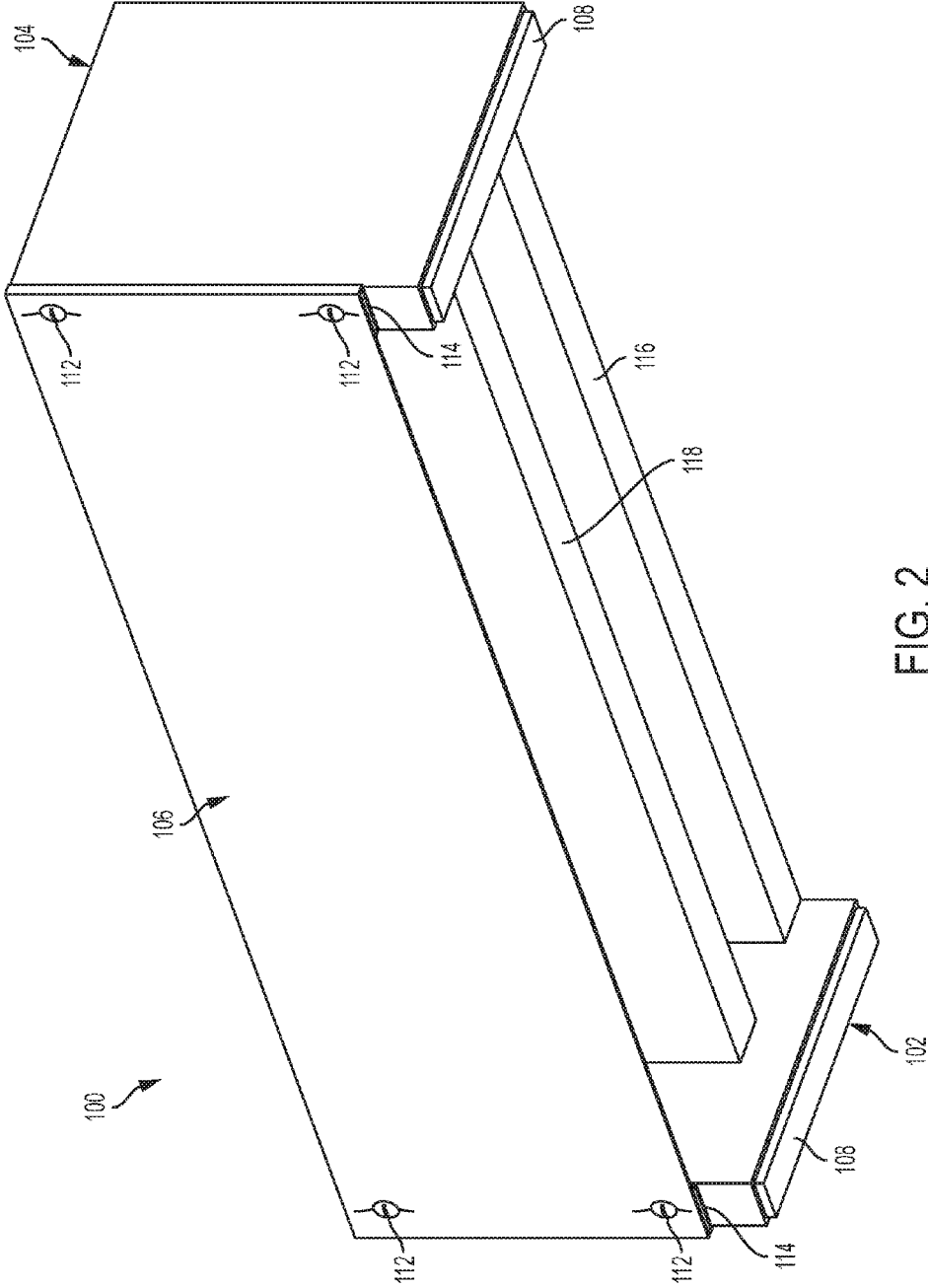


FIG. 2

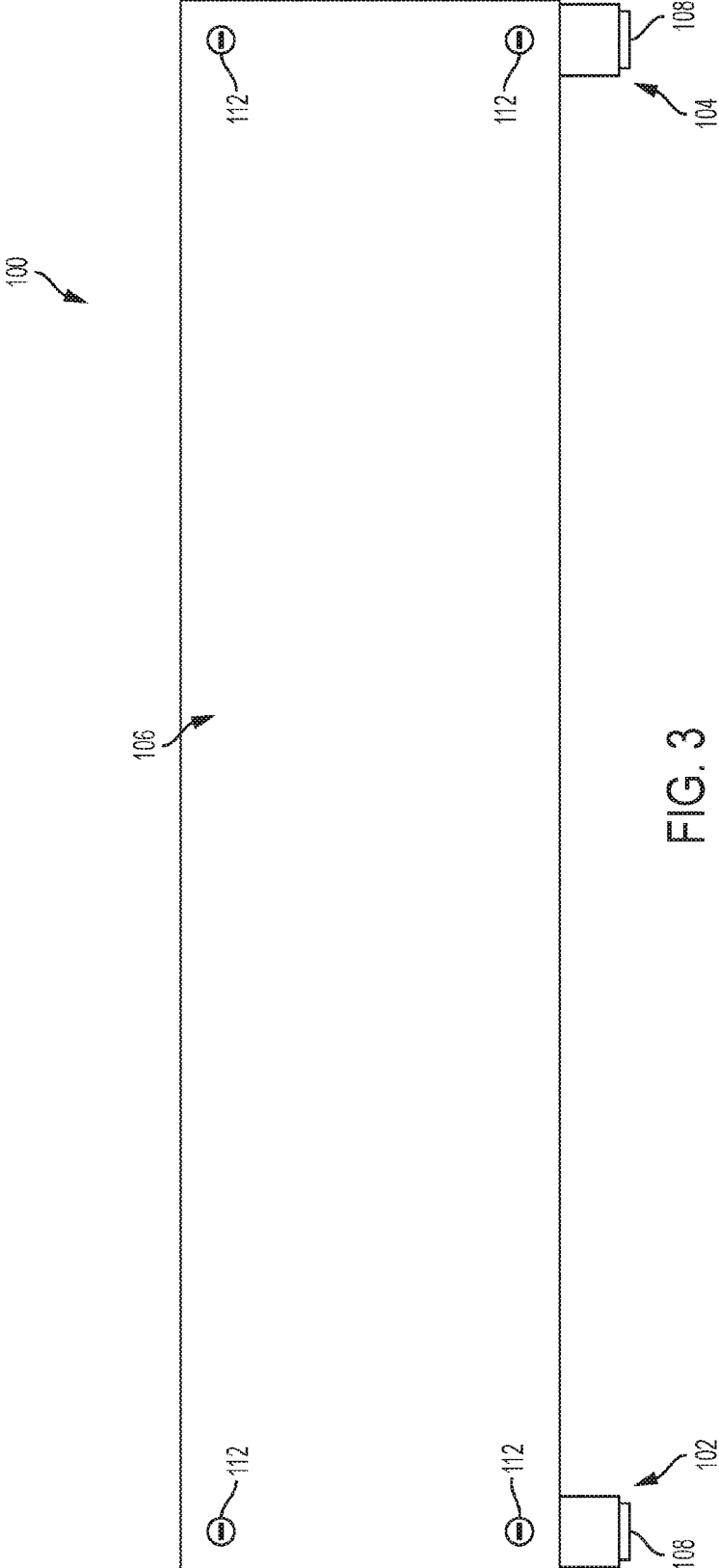


FIG. 3

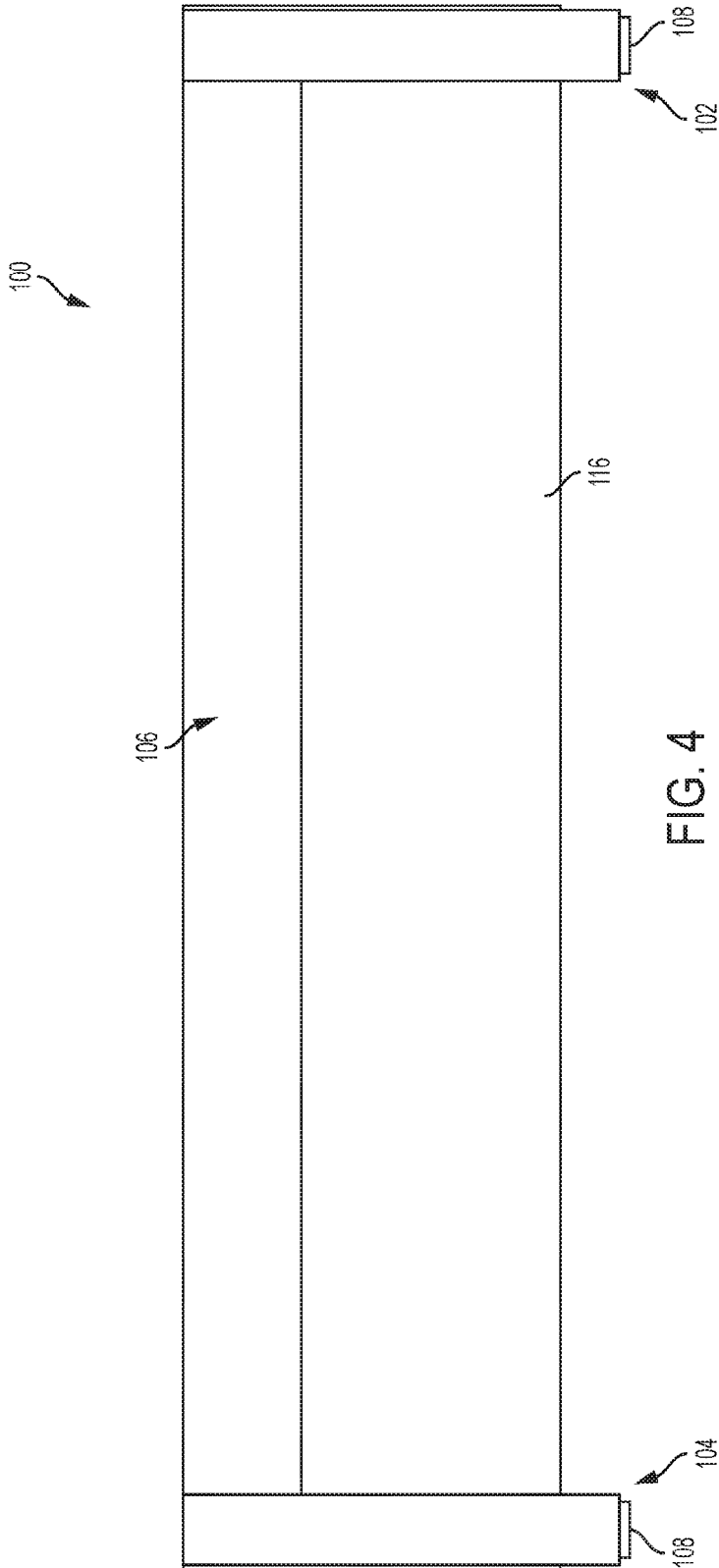


FIG. 4

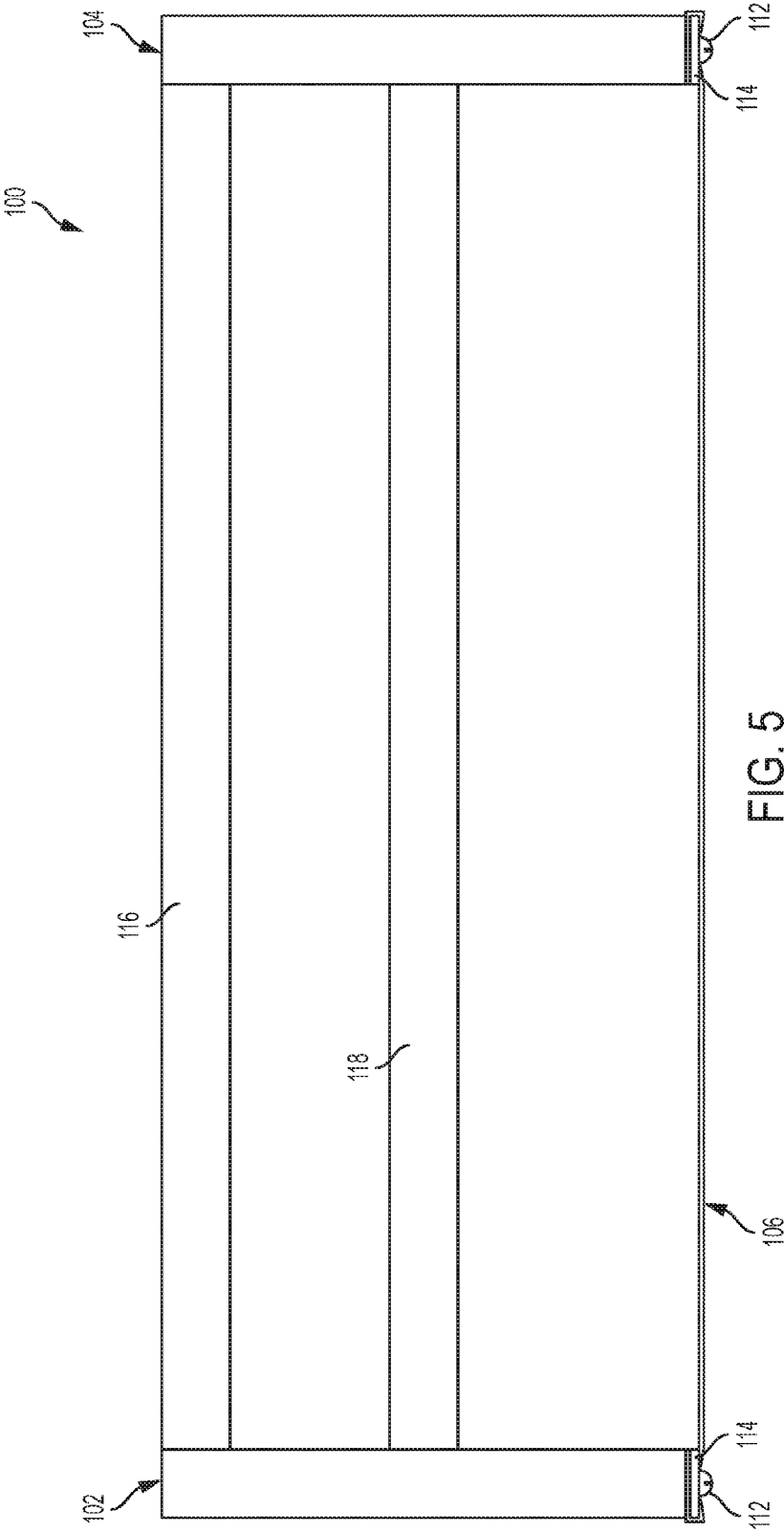


FIG. 5

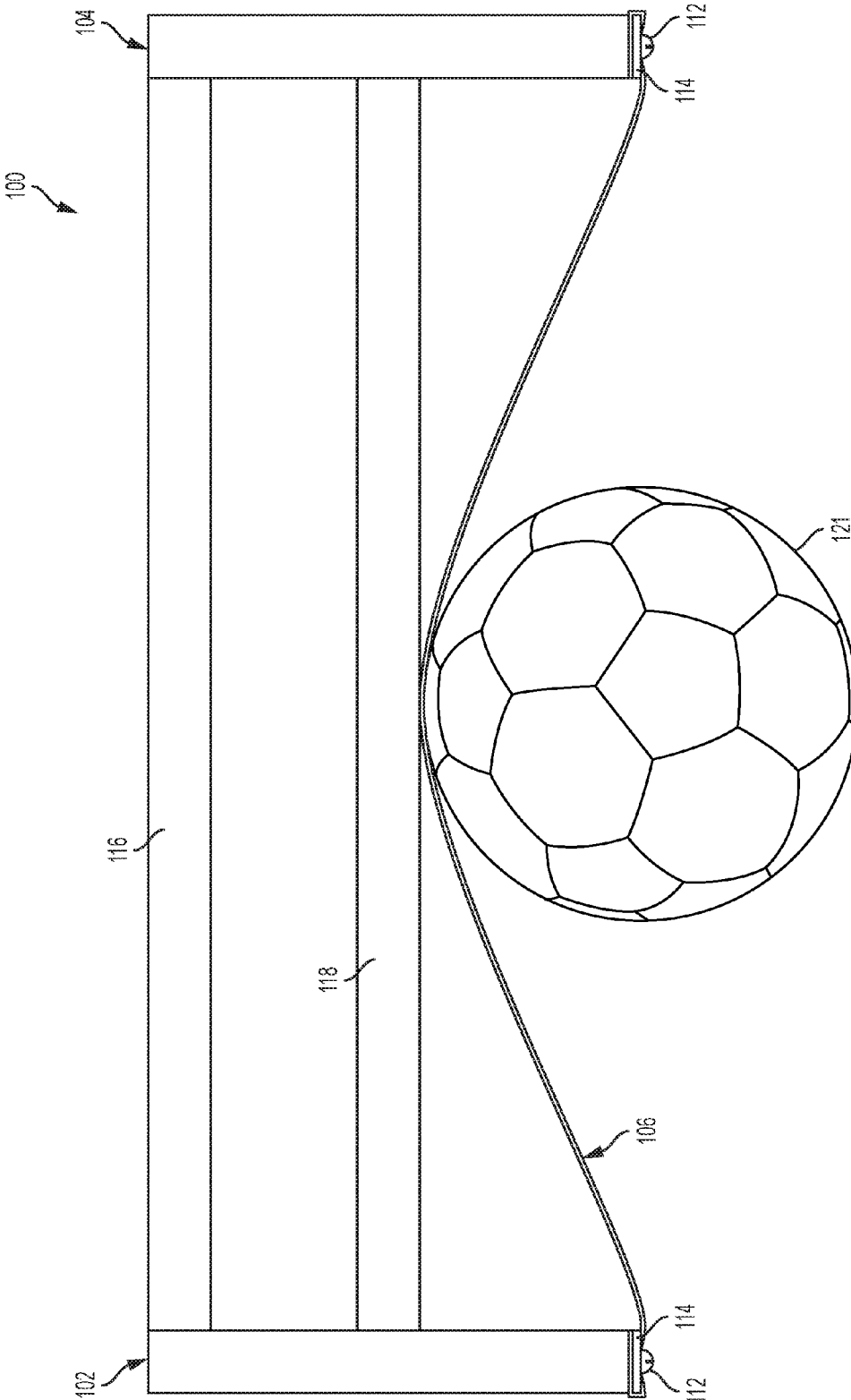
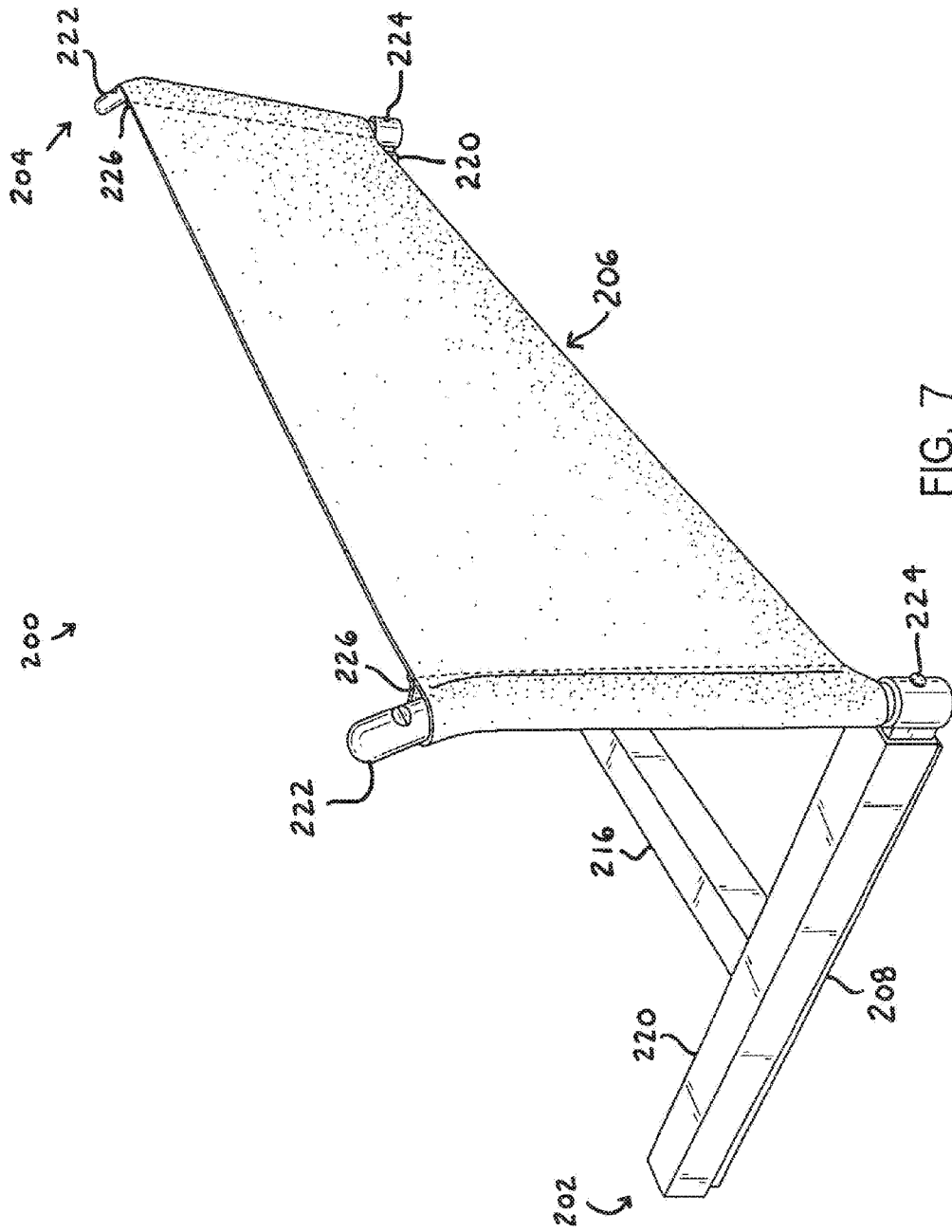


FIG. 6



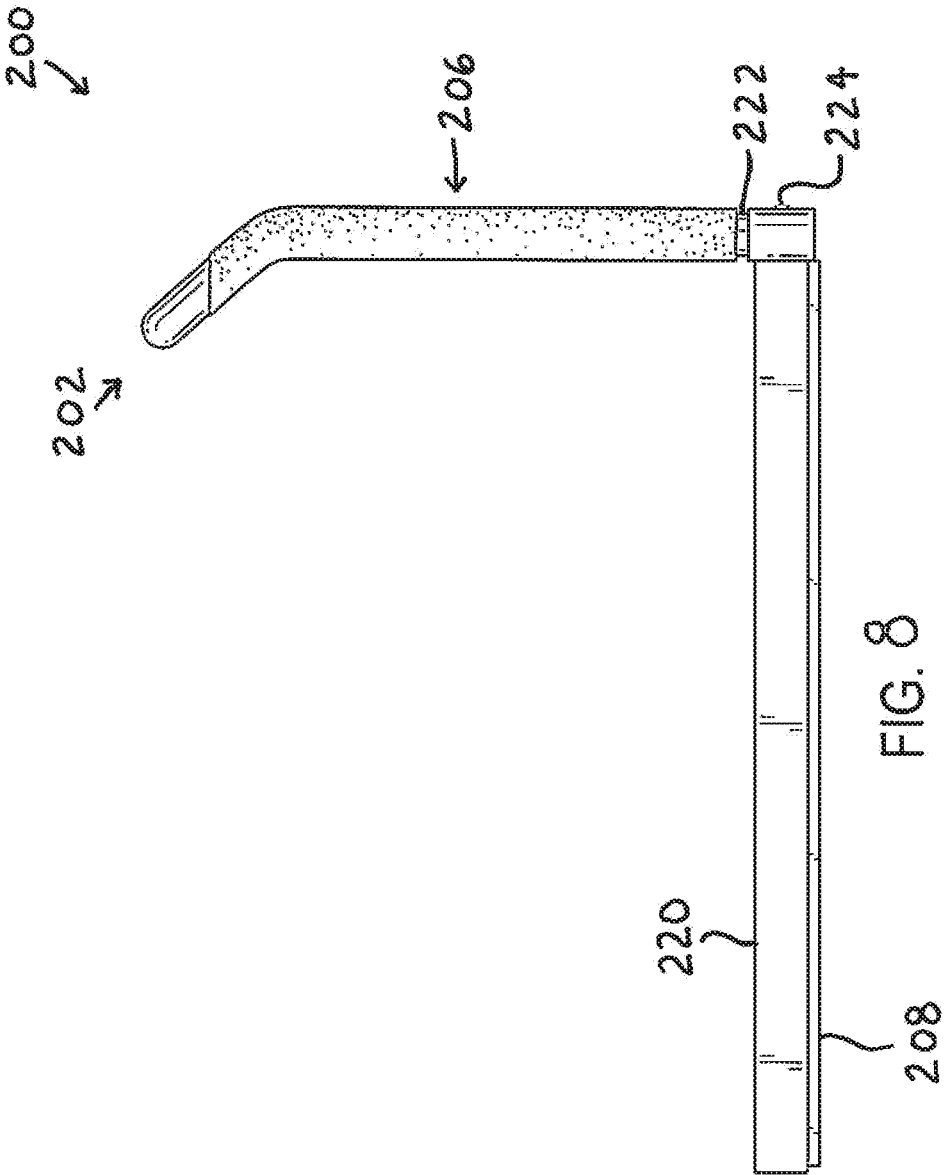
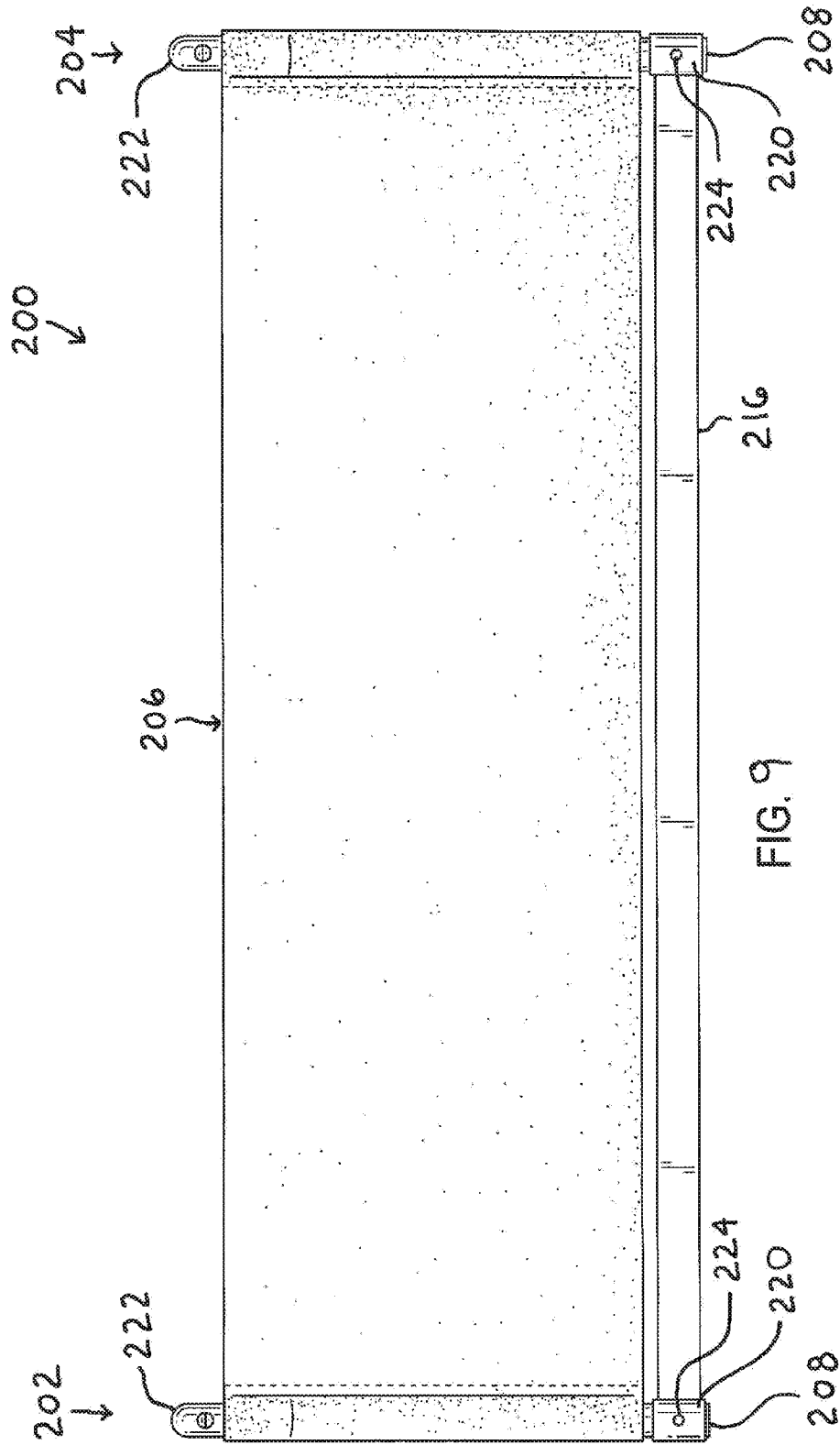


FIG. 8



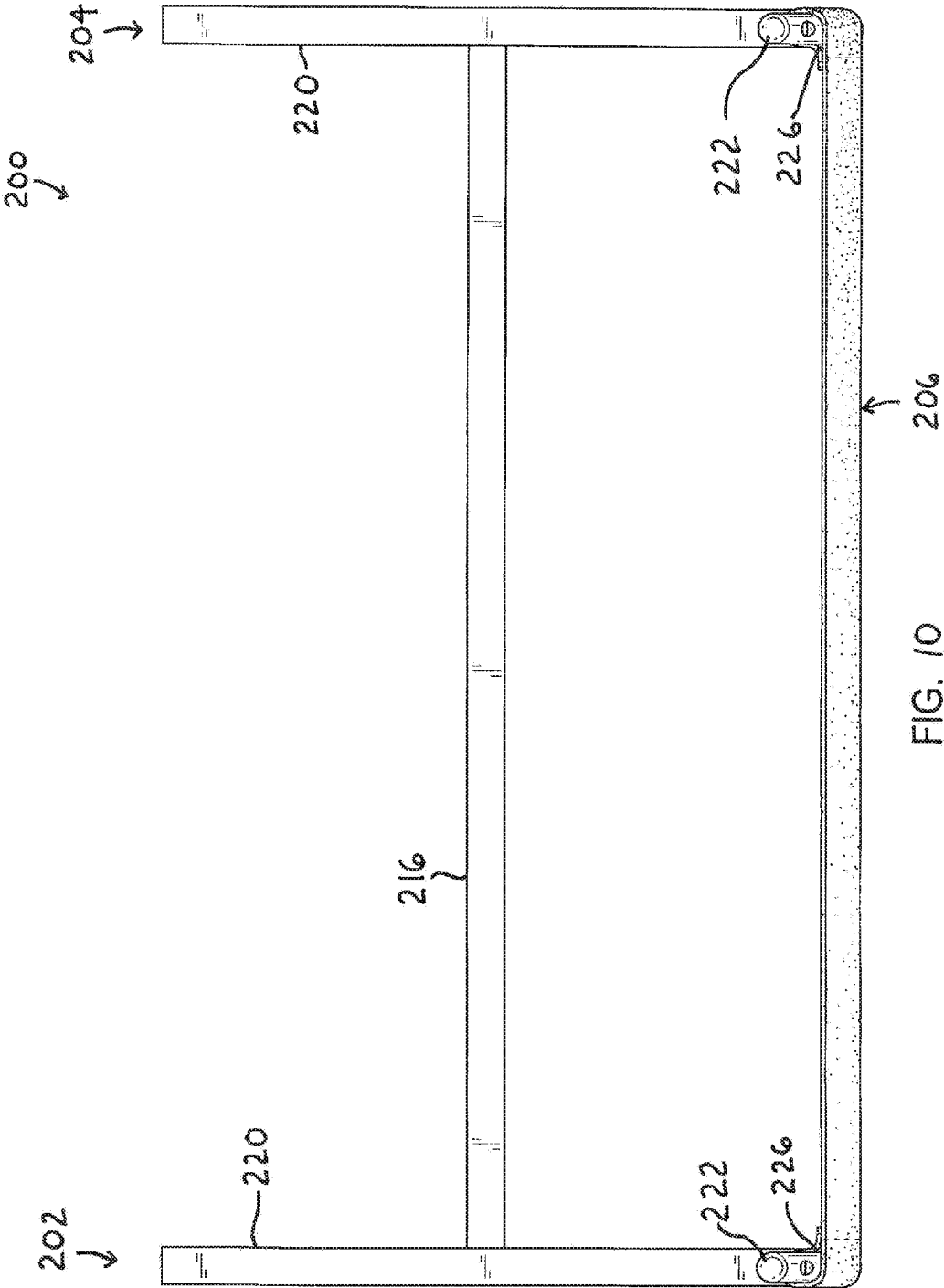


FIG. 10

APPARATUS FOR REBOUNding SOCCER BALLS

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application is a continuation-in-part of U.S. patent application Ser. No. 14/719,687, filed on May 22, 2015. The entire disclosure of the above application is incorporated herein by reference.

FIELD

[0002] The present disclosure generally relates to apparatus for rebounding soccer balls to users.

BACKGROUND

[0003] This section provides background information related to the present disclosure which is not necessarily prior art.

[0004] In soccer, or European football, players frequently pass soccer balls to other players in attempts to make goals. Typically, players practice this skill in groups, by passing a soccer ball back and forth among the players in the groups.

DRAWINGS

[0005] The drawings described herein are for illustrative purposes only of selected embodiments and not all possible implementations, and are not intended to limit the scope of the present disclosure.

[0006] FIG. 1 is an upper, front perspective view of an exemplary embodiment of an apparatus suitable for rebounding a soccer ball in accordance with the present disclosure;

[0007] FIG. 2 is a lower, front perspective view of the apparatus of FIG. 1;

[0008] FIG. 3 is a front elevation view of the apparatus of FIG. 1;

[0009] FIG. 4 is a rear elevation view of the apparatus of FIG. 1;

[0010] FIG. 5 is a top plan view of the apparatus of FIG. 1, with a rebounding member of the apparatus shown in a receiving position;

[0011] FIG. 6 is the top plan view of FIG. 5, with the apparatus shown receiving a soccer ball and with the soccer ball shown deforming the rebounding member to a rebounding position;

[0012] FIG. 7 is an upper, front perspective view of another exemplary embodiment of an apparatus suitable for rebounding a soccer ball in accordance with the present disclosure;

[0013] FIG. 8 is a side elevation view of the apparatus of FIG. 7;

[0014] FIG. 9 is a front elevation view of the apparatus of FIG. 7; and

[0015] FIG. 10 is a top plan view of the apparatus of FIG. 7.

[0016] Corresponding reference numerals indicate corresponding parts throughout the several views of the drawings.

SUMMARY

[0017] This section provides a general summary of the disclosure, and is not a comprehensive disclosure of its full scope or all of its features.

[0018] Exemplary embodiments of the present disclosure generally relate to apparatus for rebounding soccer balls to users, for example, in response to the soccer balls engaging the apparatus. In one exemplary embodiment, such an apparatus generally includes legs for supporting the apparatus on a surface. The apparatus also generally includes a resilient rebounding member coupled to the legs, such that the resilient rebounding member is spaced apart from the surface when the legs are supporting the apparatus on the surface. The resilient rebounding member is configured to resiliently deform, in response to a soccer ball engaging the apparatus at the resilient rebounding member, for use in rebounding the soccer ball to the user.

[0019] In another exemplary embodiment, an apparatus for rebounding a soccer ball generally includes a first leg and a second leg for supporting the apparatus on a surface, stabilizing material coupled to a bottom portion of each of the first and second legs, and a resiliently deformable rebounding member coupled to each of the first and second legs. The resilient rebounding member defines first and second sleeves, where the first sleeve is configured to receive at least a portion of the first leg therein and the second sleeve is configured to receive at least a portion of the second leg therein to thereby couple the resilient rebounding member to the first and second legs.

[0020] In still another exemplary embodiment, an apparatus for rebounding a soccer ball generally includes first and second legs for supporting the apparatus on a surface, and a rebounding member coupled to the first and second legs. The rebounding member is resiliently deformable between a receiving position and a rebounding position. In the receiving position, the rebounding member defines a generally planar surface oriented generally perpendicular to the first and second legs for receiving the soccer ball. In the rebounding position, the rebounding member defines a generally arcuate shape extending between the first and second legs.

[0021] Further areas of applicability will become apparent from the description provided herein. The description and specific examples in this summary are intended for purposes of illustration only and are not intended to limit the scope of the present disclosure.

DETAILED DESCRIPTION

[0022] Exemplary embodiments will now be described more fully with reference to the accompanying drawings.

[0023] FIGS. 1-6 illustrate an exemplary embodiment of a soccer ball rebounding apparatus 100 including one or more aspects of the present disclosure. The apparatus 100 is configured for rebounding a soccer ball to a player (broadly, a user), in response to the soccer ball engaging the apparatus 100. In use, for example, the player kicks, or passes, the soccer ball to the apparatus 100 and the apparatus 100 then operates to rebound the soccer ball back to the player in the form of a pass, etc. As such, through the apparatus 100, the player can practice, individually, skills involving both passing and shooting the soccer ball as well as skills involving receiving and controlling the soccer ball, as desired.

[0024] As shown in FIGS. 1 and 2, the apparatus 100 generally includes a pair of legs 102, 104, and a rebounding member 106 coupled to each of the legs 102, 104. The legs 102, 104 are configured to support the apparatus 100 on a ground surface, and the rebounding member 106 is configured to receive a soccer ball, from a player, and rebound the

soccer ball back to the player, as desired. In addition, in various aspects of the present disclosure, the rebounding member is further capable of imparting additional momentum to the soccer ball thereby increasing a return velocity of the soccer ball to the player. As used herein, the ground surface can include any desired surface such as, without limitation, a wood surface, a concrete surface, a grass surface, an artificial turf surface, a carpeted surface, etc.

[0025] In the apparatus 100, the legs 102, 104 each define a generally rectangular shape, and are each substantially similar in size. The legs 102, 104 are also oriented generally parallel to each other, and include width dimensions extending in a direction (generally from front to back of the apparatus 100) that is generally perpendicular to a planar surface defined by the rebounding member 106. In addition, the legs 102, 104 are spaced apart from each other by a distance greater than the width dimension of each of the legs 102, 104. As will be seen, this configuration of the apparatus 100 helps accommodate receipt of a soccer ball from a player, and helps facilitate efficiently rebounding the soccer ball back to the player. In other exemplary embodiments, apparatus may include legs having shapes that are other than rectangular (e.g., shapes that are square, hexagonal, etc.), and/or legs having different sizes and/or different orientations than illustrated herein (e.g., orientations other than parallel, etc.).

[0026] Also in the apparatus 100, each of the legs 102, 104 includes stabilizing material 108 disposed toward a lower edge portion thereof (broadly, toward a bottom portion thereof). The stabilizing material 108 (and, broadly, the lower edge portion or bottom portion of each of the legs 102, 104) is configured to engage the ground surface, when the apparatus 100 is positioned thereon, to help inhibit sliding movement of the apparatus 100, for example, in response to a soccer ball engaging the apparatus 100 (regardless of the ground surface). Any suitable material may be used in connection with the stabilizing material 108 including, for example, polyvinyl chloride (PVC), thermoplastic elastomer, rubber, fabric, combinations thereof, etc. In addition, the stabilizing material 108 can be disposed along the lower edge portion of each of the legs 102, 104 in any suitable manner. For example, the stabilizing material 108 may be coupled to the lower edge portion of each of the legs 102, 104 via fasteners (e.g., adhesive, mechanical fasteners such as nails or screws, hook-and-loop fasteners, combinations thereof, etc.). Or, the stabilizing material 108 may be formed integrally with the lower edge portion of each of the legs 102, 104. Further, while the stabilizing material 108 is illustrated as a continuous strip in the figures, it should be appreciated that the stabilizing material 108 may have other configurations, for example, discontinuous sections, etc.

[0027] With additional reference now to FIGS. 3 and 4, the rebounding member 106 of the apparatus 100 is coupled to a forward edge portion of each of the legs 102, 104 by fasteners 112 (broadly, coupled toward a forward portion of each of the legs 102, 104 of the apparatus 100). In particular in the illustrated embodiment, end portions of the rebounding member 106 are wrapped around mounts 114, which are then coupled to the forward edge portions of the legs 102, 104 via the fasteners 112. The mounts 114 can help facilitate pulling, or stretching, the rebounding member 106 tight prior to coupling it to the legs 102, 104, and then can also provide a structure to help securely couple the rebounding member 106 to the legs 102, 104. In addition, the rebound-

ing member 106 is positioned along the legs 102, 104 so that a lower edge portion of the rebounding member 106 is spaced apart from (or above) the lower edge portion of each of the legs 102, 104 (e.g., generally above the stabilizing material 108, etc.). In so doing, the lower edge portion of the rebounding member 106 is also spaced apart from (or above) the ground surface when the apparatus 100 is positioned thereon for use. As such, the rebounding member 106, and particularly the lower edge portion of the rebounding member 106, generally avoids engaging, or dragging on, the ground surface when rebounding a soccer ball to a player.

[0028] In the apparatus 100, the fasteners 112 are illustrated as screws. However, it should be appreciated that any suitable fasteners may be used to couple the rebounding member 106 to the legs 102, 104, for example, nails, hook-and-loop fasteners, adhesive, etc. What's more, means other than fasteners may be used to couple the rebounding member 106 to the legs 102, 104 such as, for example, rails, dowels, holding sheaths, etc. Further, in some exemplary embodiments, apparatus may include rebounding members coupled to sides of legs, but still considered positioned along forward portions of the legs (and broadly, still considered coupled to the forward portions of the legs).

[0029] Also in the apparatus 100, the rebounding member 106 defines a generally rectangular shape, and has a height dimension that is less than a width dimension. In addition, the height dimension of the rebounding member 106 is generally less than a height dimension of either of the legs 102, 104. However, it should be appreciated that the rebounding member 106 can have any desired shapes and/or dimensions within the scope of the present disclosure. For example, and without limitation, the rebounding member 106 may have a generally square shape, a generally oval shape, or any other suitable shape as desired. In addition, in some exemplary embodiments, the rebounding member 106 may be formed from multiple members (e.g., woven from multiple members, etc.). Further, in some embodiments, the rebounding member 106 may be generally rectangular in shape and have a height dimension of about nine inches or less, a height dimension greater than a height dimension of either of the legs 102, 104, etc.

[0030] In various aspects of the present disclosure, the rebounding member 106 is removable from the legs 102, 104. As such, in some implementations of the apparatus 100, the rebounding member 106 can be removed and replaced with a new or different rebounding member, or for cleaning. In addition, in some implementations, the rebounding member 106 can also be adjusted along the legs 102, 104 of the apparatus 100, for example, to change a height of the rebounding member 106 or/or to change an angle of the planar surface of the rebounding member 106 relative to the ground surface. For example, in these latter implementations of the apparatus 100, the fasteners 112 (and the rebounding member 106) can be removed from the legs 102, 104 and adjusted as desired. The fasteners 112 and the rebounding member 106 can then be recoupled to the legs 102, 104 at the new height/orientation for use by a player. In other exemplary embodiments, apparatus may include rails or other structure coupling rebounding members to legs, so that the rebounding members can be adjusted (e.g., slid, etc.) along the rails, for similar reasons as described for rebounding member 106, but without actually removing the rebounding members from the apparatus (or from the legs of the apparatus).

[0031] The rebounding member 106 of the apparatus 100 is generally resilient in nature. In connection therewith, the rebounding member 106 can be formed from any suitable resilient material. In the illustrated apparatus 100, for example, the rebounding member 106 is formed from an elastic material that defines elastic webbing. Example materials that can be used for the rebounding member 106 include, without limitation, spandex, vinyl, cotton-polyester blend materials, springs, bungee cords (e.g., multiple bungee cords arranged together to form the rebounding member 106, etc.), neoprene, boat vinyl webbing, trampoline material, woven cloth or other materials, other fabric materials, or any other suitable materials.

[0032] With continued reference to FIGS. 1-4, the apparatus 100 also includes two braces 116, 118 configured to help stabilize, support, etc. the apparatus 100. In the illustrated embodiment, the braces 116, 118 are coupled to the legs 102, 104 generally between the legs 102, 104, and the brace 118 is disposed generally between the brace 116 and the rebounding member 106. The brace 118 is also positioned generally below a midline of the legs 102, 104 to help provide a generally low center of gravity to the apparatus 100. The braces 116, 118 are oriented generally parallel to each other and to the rebounding member 106 (i.e., to the planar surface defined by the rebounding member 106), and generally perpendicular to the legs 102, 104. In addition, the braces 116, 118 are generally shorter than the legs 102, 104, i.e., each defines a height dimension that is less than a height dimension of each of the legs 102, 104. With that said, it should be appreciated that in other exemplary embodiments, apparatus may include more than or fewer than two braces, and/or braces sized and/or arranged other than illustrated herein (e.g., diagonally oriented braces, vertically spaced braces, etc.).

[0033] Use of the apparatus to receive a soccer ball 121 from a player, and to then rebound the soccer ball 121 back to the player, will be described next with reference to FIGS. 5 and 6.

[0034] Generally, as shown in FIG. 5, the apparatus 100 is positioned at a desired location on a ground surface, with the stabilizing material engaging the ground surface to help hold the apparatus 100 at the desired location. At this time, the rebounding member 106 is in a receiving position for receiving the soccer ball 121 from the player. In the receiving position, the rebounding member 106 defines the planar surface, which is oriented generally parallel to the braces 116, 118, and generally perpendicular to the legs 102, 104. As such, it should be appreciated that, in the receiving position, the rebounding member 106 itself can also be viewed as oriented generally parallel to the braces 116, 118 and generally perpendicular to the legs 102, 104.

[0035] As shown in FIG. 6, when the apparatus 100 receives the soccer ball 121 (when the soccer ball 121 engages the rebounding member 106), the rebounding member 106 resiliently deforms from the receiving position to a rebounding position. In so doing, the rebounding member 106 deforms or bends generally toward the brace 118 to accommodate the soccer ball 121. In this position, the rebounding member 106 defines a generally arcuate shape between the legs 102, 104 that, in some instances, generally matches a shape of the soccer ball 121.

[0036] Upon receiving the soccer ball 121, the rebounding member 106 stores potential energy from the soccer ball 121 as it deforms. Once the rebounding member 106 is fully

deformed in the rebounding position, it recoils and returns to its receiving position thereby converting the stored potential energy to kinetic energy. In so doing, the rebounding member 106 projects the soccer ball 121 back toward the player. In general, the amount of potential energy stored by the rebounding member 106 is determined by various factors such as, for example, the material used to form the rebounding member 106, the force imparted by the soccer ball 121 on the rebounding member 106 when received by the rebounding member 106, etc. And, the resulting kinetic energy imparted to the soccer ball 121 then generally dictates the force and/or velocity at which the soccer ball 121 returns (or rebounds) to the player.

[0037] Further in the illustrated embodiment, in connection with receiving the soccer ball 121 from the player, the rebounding member 106 can deform (or bend) up to a maximum distance generally defined by the brace 118. When the rebounding member 106 reaches this distance, it engages the brace 118. The rebounding member 106 then moves back, or recoils, to the receiving position and rebounds the soccer ball 121 to the player. As can be appreciated, varying a location of the brace 118 can alter the maximum distance of deformation by the rebounding member 106 and, in some instances, can affect the force and/or velocity at which the soccer ball 121 returns to the player. In some embodiments, the brace 118 may also impart force, or momentum, on the soccer ball 121, when engaged by the rebounding member 106 and the soccer ball 121, in addition to that provided by the rebounding member 106 alone.

[0038] At this point it should be appreciated that a height at which the rebounding member 106 engages the soccer ball 121, when the soccer ball 121 is received by the rebounding member 106, can affect how the soccer ball 121 is returned to the player (e.g., an angle or trajectory of return of the soccer ball 121, a spin of the soccer ball 121, a speed of return of the soccer ball 121, etc.). For example, to return the soccer ball 121 along the ground surface (i.e., to provide a ground pass back from the apparatus 100), a configuration (e.g., a vertical position, a size, combinations thereof, etc.) of the rebounding member 106 will typically be selected so that an upper edge of the rebounding member 106 generally aligns with an upper half, or upper hemisphere, of the soccer ball 121 when the soccer ball 121 engages the rebounding member 106. In addition, a center, or equator, of the soccer ball 121 should engage the rebounding member 106 at a location that is generally below a vertical center of the rebounding member 106, for example, about 40% upward of the full height of the rebounding member 106, etc. Further, the configuration of the rebounding member 106 can be selected and/or modified as desired to accommodate any size of soccer ball (e.g., a size 3 soccer ball, a size 4 soccer ball, a size 5 soccer ball, etc.). Thus, as can be seen, through the configuration of the rebounding member 106, the soccer ball 121 can be rebounded to, or returned to, the player in substantially any desired manner, for example, generally on the same level plane as the initial strike, or otherwise.

[0039] In various aspects of the present disclosure, the resilient rebounding member 106 of the apparatus 100 can provide reduced impact noise from the soccer ball 121 when the soccer ball 121 engages the apparatus 100, as compared to the same soccer ball 121 engaging a solid wall surface (e.g., a drywall surface, etc.). In particular, the inventor hereof has found that use of the apparatus 100, and the resilient rebounding member 106, can provide a sound

reduction of up to 60% when engaged by a soccer ball, as compared to the solid wall surface. In one example, a soccer ball hitting a solid wall surface made of wood and drywall produced a noise of approximately 91 decibels, while the same soccer ball hitting the resilient rebounding member 106 of the apparatus 100 produced a noise of approximately 48 decibels. As such, in this particular example, the apparatus 100 achieved a sound reduction of about 47%.

[0040] In various aspects of the present disclosure, the rebounding member 106 of the apparatus 100 can also impart added velocity to the soccer ball 121 upon returning the soccer ball 121 to the player. In particular, the inventor hereof has found that use of the apparatus 100, and the resilient rebounding member 106, can increase return velocity of the soccer ball 121 by up to about 20%, as compared to the original incoming velocity of the soccer ball 121 to the apparatus 100. As such, the apparatus 100 can help the player develop fast foot reflexes and techniques. In one example, a soccer ball was received by the apparatus 100 at a velocity of about 4.8 feet per second, and was returned from the apparatus 100 at a velocity of about 5.3 feet per second. In this example, the apparatus 100 added about 10.5% to the velocity of the soccer ball when returned to the player. In contrast, in a comparative example, a soccer ball was received by a solid wall surface made of wood and drywall at a velocity of about 4.8 feet per second, but was returned from the wall at a velocity of only about 4.2 feet per second. In this comparative example, the soccer ball was returned to the player at a velocity that was about 12.5% slower than the incoming velocity of the soccer ball.

[0041] In another exemplary embodiment of the present disclosure, a soccer ball rebounding apparatus, substantially similar to the apparatus 100, generally includes first and second legs, first and second braces coupled between the legs, a resilient rebounding member coupled to forward portions of the legs, and stabilizing material coupled to lower edge portions of the first and second legs. In this embodiment, the apparatus is configured to rebound a size 4 soccer ball having a circumference of about 8.25 inches. The first and second legs are both about 11.5 inches long, about 1.5 inches deep and about 9.25 inches tall. The resilient rebounding member is about 29.6 inches long and about 8 inches tall, and is coupled to the legs about one inch above the ground surface (when the apparatus is positioned on the ground surface). The first brace is positioned between the legs and is about 30 inches long, about 1.5 inches deep and about 5.5 inches tall. The second brace is also positioned between the legs and is about 30 inches long, about 1.5 inches deep and about 3.5 inches tall. And, the stabilizing material defines strips that are about 1 inch wide and about 10 inches long. What's more in this embodiment, mounts are used to couple the resilient rebounding member to the legs. The mounts are each about 8 inches tall, about 0.2 inches deep and about 1.5 inches wide. With that said, the rebounding member can be adjusted upward or downward, along the legs, to accommodate different sizes of soccer balls, for example, size 3 soccer balls, size 5 soccer balls, etc.

[0042] FIGS. 7-10 illustrate another exemplary embodiment of a soccer ball rebounding apparatus 200 including one or more aspects of the present disclosure. Similar to the apparatus 100, the apparatus 200 is also configured for rebounding a soccer ball to a player (broadly, a user), in response to the soccer ball engaging the apparatus 200. In use, for example, the player kicks, or passes, the soccer ball

to the apparatus 200 and the apparatus 200 then operates to rebound the soccer ball back to the player in the form of a pass, etc. As such, through the apparatus 200, the player can practice, individually, skills involving both passing and shooting the soccer ball as well as skills involving receiving and controlling the soccer ball, as desired.

[0043] As shown in FIGS. 7 and 8, the apparatus 200 generally includes a pair of legs 202, 204, and a rebounding member 206 coupled to each of the legs 202, 204. The legs 202, 204 are configured to support the apparatus 200 on a ground surface, and the rebounding member 206 is configured to receive a soccer ball, from a player, and rebound the soccer ball back to the player, as desired (in generally the same manner as described above for the apparatus 100). In addition, in various aspects of the present disclosure, the rebounding member 206 is further capable of imparting additional momentum to the soccer ball thereby increasing a return velocity of the soccer ball to the player. As used herein, the ground surface can include any desired surface such as, without limitation, a wood surface, a concrete surface, a grass surface, an artificial turf surface, a carpeted surface, etc.

[0044] In the apparatus 200, the legs 202, 204 each include a base 220, and an upright 222 (e.g., a dowel, etc.) coupled to and extending from the base 220. In addition, for each of the legs 202, 204, the upright 222 is releasably/removably coupled to the base 220 via pin 224 (e.g., a spring-biased pin, etc.). As such, for each of the legs 202, 204, the upright 222 can be selectively removed from the base 220, for example, to allow for storage of the apparatus 200 (e.g., in a generally flat manner, etc.), etc., and then to allow for recoupling the upright to the base 220 to allow for use of the apparatus 200. With that said, it should be appreciated that, for each of the legs 202, 204, the upright 222 may be coupled to the base 220 in any desired manner within the scope of the present disclosure, for example, by means other than the pin 224, etc., and/or the upright 222 may be fixedly coupled to the base 220, or the upright 222 may be pivotally coupled to the base 220, etc.

[0045] Also in the apparatus 200, each of the legs 202, 204 includes stabilizing material 208 disposed toward a lower edge portion thereof. In particular in the apparatus 200, for each of the legs 202, 204 the stabilizing material is disposed along a bottom portion of the base 220 of the legs 202, 204. The stabilizing material 108 (and, broadly, the bottom edge portion of the base 220 of each of the legs 202, 204) is configured to engage the ground surface, when the apparatus 200 is positioned thereon, to help inhibit sliding movement of the apparatus 200, for example, in response to a soccer ball engaging the apparatus 200 (regardless of the ground surface). As described above for the apparatus 100, any suitable material may be used in connection with the stabilizing material 208, and the stabilizing material 208 can be disposed along the lower edge portion of the base 220 of each of the legs 202, 204 in any suitable manner.

[0046] The rebounding member 206 of the apparatus 200 is similar in material to the rebounding member 106 of the apparatus 100. In addition in this embodiment, with additional reference now to FIG. 9, the rebounding member 206 is coupled to the upright 222 of each of the legs 202, 204. In particular, end portions of the rebounding member 206 define sleeves 226 (e.g., sheaths, channels, etc.), with each of the sleeves 226 configured to extend over (e.g., slide over, etc.) a respective upright 222 of the legs 202, 204 (with the

upright 222 then received within and through the corresponding sleeve (e.g., either entirely as shown in the illustrated embodiment, or partially in other embodiments; etc.) (e.g., without use of fasteners to couple the rebounding member 206 to the legs 202, 204; etc.). What's more, an end portion of the upright 222 for each of the legs 202, 204 is angled (e.g., bent, etc.), for example, to help retain the rebounding member 206 on the upright 222, etc. Further, for each of the legs 202, 204, the rebounding member 206 is positioned along the upright 222 (via the sleeves 226) so that a lower edge portion of the rebounding member 206 is spaced apart from (or above) the ground surface (e.g., by an amount generally equal to a height dimension of the base 220 of each of the legs 202, 204; etc.). As such, the rebounding member 206, and particularly the lower edge portion of the rebounding member 206, generally avoids engaging, or dragging on, the ground surface when deforming and/or when rebounding a soccer ball to a player. In the illustrated embodiment, the sleeves 226 are generally formed by the rebounding member 106 (e.g., a portion of the rebounding member is folded over to thereby form the sleeves 226, etc.). In other embodiments, rebounding members may include sleeves formed from materials separate from the rebounding member and coupled thereto.

[0047] Further in the apparatus 200, the rebounding member 206 defines a generally rectangular shape, and has a height dimension that is less than a width dimension. In addition, the height dimension of the rebounding member 206 is generally less than a height dimension of the upright 222 of either of the legs 202, 204. However, it should be appreciated that the rebounding member 206 can have any desired shapes and/or dimensions within the scope of the present disclosure. In various aspects of the present disclosure, the rebounding member 206 is also removable from the upright 222 of each of the legs 102, 104 (e.g., by sliding the sleeves 226 of the rebounding member 206 off the respective upright 222 of the legs 102, 104; etc.). As such, in some implementations of the apparatus 200, the rebounding member 206 can be removed and replaced with a new or different rebounding member, or for cleaning. In addition, in some implementations, the rebounding member 206 can also be adjusted along the upright 222 of each of the legs 202, 204, for example, to change a height of the rebounding member 206, etc.

[0048] With additional reference to FIG. 10, the apparatus 200 also includes a brace 216 configured to help stabilize, support, etc. the apparatus 200. In the illustrated embodiment, the brace 216 is coupled (e.g., welded, mechanically attached, etc.) to the base 220 of each of the legs 202, 204, generally between the legs 202, 204 (e.g., at a location spaced generally inwardly of end portions of the base 220 as shown in FIG. 10, etc.). The brace 216 is oriented generally parallel to the rebounding member 206 (i.e., to the planar surface defined by the rebounding member 206 when in a receiving position), and generally perpendicular to the base 220 of each of the legs 202, 204. In addition, the brace 216 is generally located below the lower edge portion of the rebounding member 206, such that the brace 216 does not interfere with the rebounding member 206 during use of the apparatus 200 to return a soccer ball to a user. With that said, it should be appreciated that in other exemplary embodiments, apparatus may include more than one brace, and/or a brace (or braces) sized and/or arranged other than illustrated herein (e.g., diagonally oriented braces, etc.). Moreover in

the illustrated embodiment, the legs 202, 204 define a generally "L" shape, such that the base 220 of each of the legs as well as the brace 216 are positioned generally below the lower edge portion of the rebounding member 206 (e.g., at an elevation generally below the rebounding member 206, etc.) to help provide a generally low center of gravity to the apparatus 200 when rebounding a soccer ball.

[0049] Use of the apparatus 200 to receive a soccer ball from a player, and to then rebound the soccer ball back to the player is substantially the same as described above for the apparatus 100. For example, the apparatus 200 is positioned at a desired location on a ground surface, with the stabilizing material 208 engaging the ground surface to help hold the apparatus 200 at the desired location. At this time, the rebounding member 206 is in a receiving position for receiving the soccer ball from the player. In the receiving position, the rebounding member 206 defines a planar surface (as shown in FIG. 7). As such, it should be appreciated that, in the receiving position, the rebounding member 206 can be viewed as oriented perpendicular to the upright 222 of each of the legs 202, 204.

[0050] When the apparatus 200 receives the soccer ball (when the soccer ball engages the rebounding member 206), the rebounding member 206 resiliently deforms from the receiving position to a rebounding position, in the manner described above for the apparatus 100. In so doing, the rebounding member 206 deforms or bends generally toward the brace 216 to accommodate the soccer ball. In this position, the rebounding member 206 defines a generally arcuate shape between the legs 202, 204 that, in some instances, generally matches a shape of the soccer ball. Upon receiving the soccer ball, the rebounding member 206 stores potential energy from the soccer ball as it deforms. Once the rebounding member 206 is fully deformed in the rebounding position, it recoils and returns to its receiving position thereby converting the stored potential energy to kinetic energy. In so doing, the rebounding member 206 projects the soccer ball back toward the player.

[0051] As generally described herein, the apparatus of the present disclosure (e.g., apparatus 100, apparatus 200, etc.), and their components, can be made from any suitable material, for example, that together allows the apparatus to provide a generally heavy and stable structure that can withstand the force of a soccer ball striking it on the ground surface. Example materials include, without limitation, wood, plastic, metal, hard rubber, elastomeric materials, composite materials, and/or combinations thereof. In one embodiment, an apparatus includes a first leg, a second leg, a first brace, and a second brace made of wood, and a resilient rebounding member made of elastic webbing. Further in this embodiment, the apparatus includes stabilizing material made of PVC or thermoplastic elastomer. With that said, it should again be appreciated that different components may be made from different materials, including for example, certain components (or parts thereof) may be formed or made from more elastic materials to provide a different rebounding profile, while other components (or parts thereof) may be formed or made from lighter or heavier materials to provide easier portability or provide more downward force to secure the apparatus to a surface, etc.

[0052] Exemplary embodiments are provided so that this disclosure will be thorough, and will fully convey the scope to those who are skilled in the art. Numerous specific details are set forth such as examples of specific components,

devices, and methods, to provide a thorough understanding of embodiments of the present disclosure. It will be apparent to those skilled in the art that specific details need not be employed, that exemplary embodiments may be embodied in many different forms, and that neither should be construed to limit the scope of the disclosure. In some exemplary embodiments, well-known processes, well-known device structures, and well-known technologies are not described in detail. In addition, advantages and improvements that may be achieved with one or more exemplary embodiments of the present disclosure are provided for purpose of illustration only and do not limit the scope of the present disclosure, as exemplary embodiments disclosed herein may provide all or none of the above mentioned advantages and improvements and still fall within the scope of the present disclosure.

[0053] Specific dimensions, specific materials, and/or specific shapes disclosed herein are example in nature and do not limit the scope of the present disclosure. The disclosure herein of particular values and particular ranges of values for given parameters are not exclusive of other values and ranges of values that may be useful in one or more of the examples disclosed herein. Moreover, it is envisioned that any two particular values for a specific parameter stated herein may define the endpoints of a range of values that may be suitable for the given parameter (i.e., the disclosure of a first value and a second value for a given parameter can be interpreted as disclosing that any value between the first and second values could also be employed for the given parameter). For example, if Parameter X is exemplified herein to have value A and also exemplified to have value Z, it is envisioned that parameter X may have a range of values from about A to about Z. Similarly, it is envisioned that disclosure of two or more ranges of values for a parameter (whether such ranges are nested, overlapping or distinct) subsume all possible combination of ranges for the value that might be claimed using endpoints of the disclosed ranges. For example, if parameter X is exemplified herein to have values in the range of 1-10, or 2-9, or 3-8, it is also envisioned that Parameter X may have other ranges of values including 1-9, 1-8, 1-3, 1-2, 2-10, 2-8, 2-3, 3-10, and 3-9.

[0054] The terminology used herein is for the purpose of describing particular exemplary embodiments only and is not intended to be limiting. As used herein, the singular forms “a,” “an,” and “the” may be intended to include the plural forms as well, unless the context clearly indicates otherwise. The terms “comprises,” “comprising,” “including,” and “having,” are inclusive and therefore specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof. The method steps, processes, and operations described herein are not to be construed as necessarily requiring their performance in the particular order discussed or illustrated, unless specifically identified as an order of performance. It is also to be understood that additional or alternative steps may be employed.

[0055] When an element or layer is referred to as being “on,” “engaged to,” “connected to,” or “coupled to” another element or layer, it may be directly on, engaged, connected or coupled to the other element or layer, or intervening elements or layers may be present. In contrast, when an element is referred to as being “directly on,” “directly

engaged to,” “directly connected to,” or “directly coupled to” another element or layer, there may be no intervening elements or layers present. Other words used to describe the relationship between elements should be interpreted in a like fashion (e.g., “between” versus “directly between,” “adjacent” versus “directly adjacent,” etc.). As used herein, the term “and/or” includes any and all combinations of one or more of the associated listed items.

[0056] The term “about” when applied to values indicates that the calculation or the measurement allows some slight imprecision in the value (with some approach to exactness in the value; approximately or reasonably close to the value; nearly). If, for some reason, the imprecision provided by “about” is not otherwise understood in the art with this ordinary meaning, then “about” as used herein indicates at least variations that may arise from ordinary methods of measuring or using such parameters. For example, the terms “generally,” “about,” and “substantially,” may be used herein to mean within manufacturing tolerances.

[0057] Although the terms first, second, third, etc. may be used herein to describe various elements, components, regions, layers and/or sections, these elements, components, regions, layers and/or sections should not be limited by these terms. These terms may be only used to distinguish one element, component, region, layer or section from another region, layer or section. Terms such as “first,” “second,” and other numerical terms when used herein do not imply a sequence or order unless clearly indicated by the context. Thus, a first element, component, region, layer or section discussed below could be termed a second element, component, region, layer or section without departing from the teachings of the exemplary embodiments.

[0058] Spatially relative terms, such as “inner,” “outer,” “beneath,” “below,” “lower,” “above,” “upper” and the like, may be used herein for ease of description to describe one element or feature’s relationship to another element(s) or feature(s) as illustrated in the figures. Spatially relative terms may be intended to encompass different orientations of the device in use or operation in addition to the orientation depicted in the figures. For example, if the device in the figures is turned over, elements described as “below” or “beneath” other elements or features would then be oriented “above” the other elements or features. Thus, the example term “below” can encompass both an orientation of above and below. The device may be otherwise oriented (rotated 90 degrees or at other orientations) and the spatially relative descriptors used herein interpreted accordingly.

[0059] With that said, the foregoing description of the embodiments has been provided for purposes of illustration and description. It is not intended to be exhaustive or to limit the disclosure. Individual elements, intended or stated uses, or features of a particular embodiment are generally not limited to that particular embodiment, but, where applicable, are interchangeable and can be used in a selected embodiment, even if not specifically shown or described. The same may also be varied in many ways. Such variations are not to be regarded as a departure from the disclosure, and all such modifications are intended to be included within the scope of the disclosure.

What is claimed is:

1. An apparatus for rebounding a soccer ball to a user, in response to the soccer ball engaging the apparatus, the apparatus comprising:

first and second legs for supporting the apparatus on a surface, each of the first and second legs defining a lower edge portion configured to engage the surface when supporting the apparatus on the surface; and a resilient rebounding member defining first and second sleeves, the first sleeve configured to receive at least a portion of the first leg therein and the second sleeve configured to receive at least a portion of the second leg therein to thereby couple the resilient rebounding member to the first and second legs at a location such that the resilient rebounding member is spaced apart from the surface when the first and second legs are supporting the apparatus on the surface;

whereby the resilient rebounding member is configured to resiliently deform, in response to the soccer ball engaging the apparatus, for use in rebounding the soccer ball to the user.

2. The apparatus of claim 1, wherein the first leg is oriented generally parallel to the second leg.

3. The apparatus of claim 1, wherein the first leg extends completely through the first sleeve of the resilient rebounding member, and wherein the second leg extends completely through the second sleeve of the resilient rebounding member.

4. The apparatus of claim 3, wherein the resilient rebounding member comprises elastic webbing.

5. The apparatus of claim 1, wherein the first leg includes an upright and a base, and wherein the upright of the first leg is releasably coupled to the base of the first leg; and

wherein the second leg includes an upright and a base, and wherein the upright of the second leg is releasably coupled to the base of the second leg.

6. The apparatus of claim 5, wherein the upright of the first leg extends completely through the first sleeve of the resilient rebounding member, and wherein the upright of the second leg extends completely through the second sleeve of the resilient rebounding member

7. The apparatus of claim 1, wherein the resilient rebounding member is resiliently deformable between a receiving position, in which the resilient rebounding member defines a generally planar surface for receiving the soccer ball, and a rebounding position, in which the resilient rebounding member defines a generally arcuate shape.

8. The apparatus of claim 7, wherein the first leg includes an upright and a base, and wherein the upright of the first leg is releasably coupled to the base of the first leg;

wherein the second leg includes an upright and a base, and wherein the upright of the second leg is releasably coupled to the base of the second leg; and

wherein the resilient rebounding member is oriented generally perpendicular to the upright of the first leg and the upright of the second leg when in the receiving position.

9. The apparatus of claim 8, wherein the resilient rebounding member defines the arcuate shape generally between the first and second legs when in the rebounding position.

10. The apparatus of claim 7, further comprising a brace disposed between the first and second legs.

11. The apparatus of claim 1, further comprising stabilizing material coupled to the first and second legs, the stabilizing material configured to inhibit sliding movement of the apparatus in response to the soccer ball engaging the apparatus at the resilient rebounding member when the first and second legs are supporting the apparatus on the surface.

12. An apparatus for rebounding a soccer ball, the apparatus comprising:

a first leg and a second leg positioned generally parallel to each other;

stabilizing material coupled to a bottom portion of each of the first and second legs;

a resiliently deformable rebounding member coupled to each of the first and second legs, the resiliently deformable rebounding member defining first and second sleeves configured to receive at least a portion of the respective first and second legs therein to thereby couple the resiliently deformable rebounding member to the first and second legs; and

a brace disposed generally between the first and second legs and coupled to each of the first and second legs.

13. The apparatus of claim 12, wherein the resiliently deformable rebounding member is moveable between a receiving position, in which the resiliently deformable rebounding member defines a generally planar surface for receiving the soccer ball, and a rebounding position, in which the resiliently deformable rebounding member defines a generally arcuate shape.

14. The apparatus of claim 13, wherein the resiliently deformable rebounding member is oriented generally parallel to the brace when in the receiving position.

15. The apparatus of claim 14, wherein the first and second legs each include an upright; and

wherein the resiliently deformable rebounding member is oriented generally perpendicular to the uprights of the first and second legs when in the receiving position.

16. An apparatus for rebounding a soccer ball to a user, in response to the soccer ball engaging the apparatus, the apparatus comprising:

first and second legs for supporting the apparatus on a surface, the first leg including a base and an upright releasably coupled to the base, and the second leg including a base and an upright releasably coupled to the base;

a brace disposed between the bases of the first and second legs; and

a rebounding member coupled to the first and second legs, the rebounding member defining first and second sleeves configured to receive at least a portion of the uprights of the respective first and second legs therein to thereby couple the rebounding member to the first and second legs.

17. The apparatus of claim 16, wherein the rebounding member is coupled to the first and second legs so that a lower edge portion of the rebounding member is spaced apart from the surface when the first and second legs support the apparatus on the surface, whereby the rebounding member avoids engaging, or dragging, on the surface when moving between the receiving position and the rebounding position.

18. The apparatus of claim 17, wherein the uprights of the first and second legs each define a height dimension; and

wherein the rebounding member defines a height dimension that is less than the height dimension of either of the uprights of the first and second legs.

19. The apparatus of claim 18, further comprising stabilizing material coupled to base of each of the first and second legs, the stabilizing material configured to inhibit sliding movement of the apparatus in response to the soccer ball

engaging the apparatus at the rebounding member when the first and second legs are supporting the apparatus on the surface.

20. The apparatus of claim **18**, wherein the brace is disposed at an elevation generally below the rebounding member.

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