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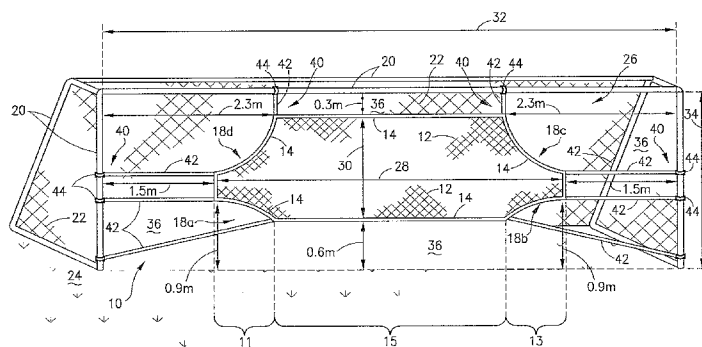


FIG. 2

(57) Abstract: A soccer training apparatus comprising a generally cross-shaped net and a stabilizing device that holds the net in a selected position relative to a soccer goal. The net is sized smaller than the goal and can be position to cover a central portion of the goal. The net can be held in place by cords and straps and/or a rigid frame attached to the soccer field. A stabilizing device can be used to hold the net in place so that the net can be readily moved in a position on the goal line to simulate the reach of a goalkeeper during a penalty kick or in a position in front of the goal line to simulate the reach of a goalkeeper during a place kick. The net can also be used as mini-goal or smaller sized goal during a short-sided soccer game.

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SOCCER TRAINING APPARATUS AND METHOD

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BACKGROUND OF THE INVENTION

Field of the Invention

This invention relates generally to sports training equipment and, more particularly, to an apparatus and method for a training soccer players to kick a ball past a goalkeeper.

10 Description of the State of the Art

In soccer, also referred to as football, a free kick at the goal is given to a team when a player on the opposite team commits certain types of fouls. A place kick is a type of free kick given at the location of the foul. During a place kick, a lined-up barrier of three to seven defenders can be positioned near the goal to help the goalkeeper in his defense and to
15 block as much of the kicker's view of the goal as possible. The goalkeeper need not remain on the goal line before the ball is kicked. A penalty kick or "PK" is another type of free kick. A penalty kick is given to a team when the player of the opposite commits the foul within the player's penalty area. The free kick at the goal is given from the penalty mark located 12 yards out (or less for youth players under certain ages) with only the goalkeeper to stop
20 the shot. During a penalty kick, the goalkeeper must stay on the goal line until the ball is kicked, but he or she can move laterally along the goal line.

Devices have been developed to train soccer players to direct shots into selected target areas within the a goal opening. During a place kick, the kicker should take into account the distance, if any, a goalkeeper is positioned in front of the goal line. A
25 deficiency of many conventional training devices is that they cannot be positioned to simulate a goalkeeper standing in front of the goal line. Another problem is that many

convention training devices do not simulate many limitations of a goalkeeper's reach, that the goalkeeper will sometimes fail to stop a shot within reach, and that the goalkeeper will sometimes stop a shot that is typically out of reach. For example, many conventional devices do not allow for the possibility of a shot just below the entire length of the horizontal crossbar of the goal, just inside the entire length of the vertical goalposts, and at the corners of the goal. A goalkeeper is less likely to stop a shot in these areas compared to the center of the goal.

Accordingly, there is a need for a soccer training apparatus and method that trains players to score a shot by simulating the reach of a goalkeeper standing on the goal line and/or a goalkeeper standing at a distance in front of the goal line. There is also a need for a soccer training apparatus and method that simulates the limitations of a goalkeeper's reach adjacent the horizontal crossbar of the goal and/or along the vertical goalposts. There is a further need for a soccer training apparatus and method that simulates real-world situations in which shots that are typically out of a goalkeeper's reach will sometimes fail to score and shots that are typically within the goalkeeper's reach will sometimes score. The present invention satisfies these and other needs.

SUMMARY OF THE INVENTION

Briefly and in general terms, the present invention is directed to a soccer training apparatus and method that involves simulation of a goalkeeper.

A soccer training apparatus, according to aspects of the present invention,
5 comprises a net capable of being placed in a deployed position adjacent a soccer goal frame and above a soccer playing surface so as to cover a portion of a target opening bounded by the soccer goal frame and soccer playing surface, the net including a peripheral edge sized and shaped to allow a gap to extend entirely around the net when the net is in the deployed position such that the gap separates the net from the soccer goal
10 frame and the soccer playing surface, the gap having a size sufficient to allow a soccer ball to pass through the gap and enter the soccer goal area, and a stabilizing device connected to the net and adapted to keep the net in the deployed position.

A soccer training method, according to other aspects of the present invention, comprises using a net to cover a portion of a goal opening bounded by a soccer goal
15 frame and a soccer playing surface, and positioning the net so that a gap extends entirely around the net, the gap separating the net from the soccer goal frame and the soccer playing surface, the gap having a size sufficient to allow a soccer ball to pass through the gap and enter the goal opening.

The features and advantages of the invention will be more readily understood from
20 the following detailed description which should be read in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front view of a soccer training apparatus according to an embodiment of the present invention, showing a net defining a cross-shaped blocking area.

FIG. 2 is a front perspective view of the soccer training apparatus of FIG. 1 showing
5 the net secured to a goal frame with cords and straps.

FIG. 3 is a front perspective view of a soccer training apparatus according to another embodiment of the present invention, showing a net attached to a goal frame with cords and straps and kept above the soccer field by a horizontal rod on leg members.

FIG. 4 is a front perspective view of a free-standing soccer training apparatus
10 according to yet another embodiment of the present invention, showing a stabilizing device that includes a net frame and braces extending backwards from the net frame, the net frame encompassing a net in a first deployed position in which the net is aligned with vertical goalposts.

FIG. 5 is a front perspective view of the free-standing soccer training apparatus of
15 FIG. 4 showing the net in a second deployed position at a forward distance in front of the goalposts.

FIG. 6 is a schematic, plan view of the free-standing soccer training apparatus of
FIG. 4 showing the net in the second deployed position in front of the goalposts and
showing how a soccer ball can be kicked in one of two directions relative to a blocking
20 plane of the apparatus.

FIG. 7 is a rear perspective view of the free-standing soccer training apparatus of
FIG. 4 showing the net stabilized by braces extending rearward from the blocking plane and supported by a bed of spikes for maintaining the net at any distance in front of a goal.

FIG. 8 is a side view of the free-standing soccer training apparatus of FIG. 4 showing the net at the second deployed position in front of the goalposts.

DETAILED DESCRIPTION OF THE INVENTION

5 Referring now in more detail to the exemplary drawings for purposes of illustrating embodiments of the invention, wherein like reference numerals designate corresponding or like elements among the several views, there is shown in FIG. 1 a soccer training apparatus 10 that includes a net 12 having a peripheral edge 14. Preferably, though not necessarily, the apparatus 10 is collapsible to facilitate storage when not in use. The apparatus 10 is
10 shown in an outstretched, deployed configuration in which the peripheral edge 14 defines a generally cross-shaped blocking surface area 16. The net 12 extends across the entire blocking surface area 16, although the net is only partially shown for ease and clarity of illustration.

The generally cross-shaped blocking surface area 16 simulates the reach of a person
15 acting as goalkeeper. The blocking surface area 16 has cutouts or recesses 18 at the top and bottom corners. The shape and location of the recesses 18 on the blocking surface area 16 correspond to areas where the goalkeeper is less likely to stop a soccer ball from entering a soccer goal area. In the illustrated embodiment, the recesses 18 have the shape of a
20 quadrant of an ellipse and have curved edges so that the blocking surface area 16 is eight sided. In other embodiments, the recesses 18 can be triangular, rectangular, or have another shape so that the blocking surface area 16 has additional corners and more sides.

Referring again to FIG. 1, the net 12 includes a first side portion 11, a second side portion 13, and a middle portion 15 disposed between the first and second side portions.

The middle portion 15 has an overall vertical dimension 17 that is greater than average vertical dimensions 19 of the first and second side portions 11, 13. The middle portion 15 also has an overall horizontal dimension 21 that is greater than overall horizontal dimensions 23 of the first and second side portions. Thus, it will be appreciated that the middle portion 5 15 covers an area greater than the first and second side portions individually.

In the illustrated embodiment of FIG. 1, the overall vertical and horizontal dimensions 17, 21 of the middle portion 16 are equivalent or substantially equivalent to 1.5 meters (5 feet) and 2.7 meters (9 feet), respectively. The overall horizontal dimension 23 of the first and second side portions 11, 13 is equivalent or substantially equivalent to 0.8 10 meters (2 feet, 6 inches). The vertical dimension 25 of the first and second side portions 11, 13 varies from the outer edge to the inner edge of the side portions 11, 13. For the first and second side portions 11, 13, the vertical dimension 25a at the inner edge is equivalent or substantially equivalent to 1.5 meters (5 feet), and the vertical dimension 25b at the outer edge is equivalent or substantially equivalent to 0.4 meters (1 foot, 4 inches).

15 In other embodiments, the net 12 can have other dimensional sizes. For example, a soccer training apparatus designed for small children can have dimensional sizes that are less than what is specified above. As a further example, a soccer training apparatus can have dimensional sizes greater than what is specified above to simulate a goalkeeper with a greater reach.

20 The net 12 can be made of any number of materials, including but not limited to bungee cords, shock cords, or other elastic cords arranged in a mesh; knotted rope or cords made of synthetic or natural fibers; and combinations thereof. The net 12 can have a high visibility color, such as red, so that the blocking surface area 16 and the gap surrounding it

are more easily discernable from a distance. Preferably, though not necessarily, the net 12 is elastic so that it stretches and absorbs impacts from a moving soccer ball or player. In the illustrated embodiment, the net 12 is taught and fully stretched when the apparatus is in the deployed configuration so that a soccer ball rebounds to the soccer field after hitting the net.

5 In other embodiments, the net 12 can be loose so that the soccer ball does not rebound to the soccer field after hitting the net.

The peripheral edge 14 can also be made of any number of materials, including but not limited to bungee cords or other elastic cords, metal rods or tubing, metal cabling, rigid or semi-rigid plastic strips, rope, webbing, and combinations thereof. Preferably, though
10 not necessarily, the material used at the peripheral edge 14 is made of a heavier gauge or thicker material or has a greater tensile strength than the material used for the net 12. In this way, the shape of the blocking surface area 16 can be maintained by securing only a few areas of the peripheral edge 14 to a goalpost, stakes in the soccer playing surface, and/or other support structure. In other embodiments, peripheral edge 14 is just the outer boundary
15 of the net 12 and does not include any material in addition to the net itself.

In the embodiment of FIG. 1, the peripheral edge 14 is made of a bungee material of sufficient thickness to maintain its elasticity with prolonged use outdoors. The bungee material includes one or more elastic strands forming a core that is covered by a woven sheath usually of nylon or cotton. Use of the bungee material gives the net a compliant
20 peripheral edge. The compliant peripheral edge 14 on the net 12 increases the probability that a moving soccer ball will continue into the target opening 26 when the ball contacts the peripheral edge with sufficient speed. Thus, it will be appreciated that the peripheral edge 14 simulates the real-world situation where, due to the flexibility of the goalkeepers

outstretched fingers, the goalkeeper is sometimes unable to block a shot within his or her reach.

Referring next to FIG. 2, a soccer goal frame 20 with goal netting 22 is shown on a grass field or soccer playing surface 24. The goal netting 22 covers the rear and sides of the goal frame 20. A planar target opening 26 is located at the front of the goal frame 20. The target opening 26 has a rectangular shape bounded by the soccer playing surface 24, the vertical goalposts, and the horizontal crossbar of the goal frame 20. For soccer games with adult players, the goal frame 20 is typically sized so that the target opening 26 is 2.4 meters (8 feet) high by 7.3 meters (24 feet wide).

In use, the net 12 can be placed in a deployed position so as to cover a central portion of the target opening 26. The net 12 has a maximum or overall width 28 and a maximum or overall height 30. The overall width 28 and height 30 of the net 12 are less than the width 32 and height 34, respectively, of the goal frame 20 and target opening 26. In the illustrated embodiment, the overall width 28 and height 30 are equivalent or substantially equivalent to 4.3 meters (14 feet) and 1.8 meters (5 feet, 10 inches), respectively. Applicant has found that these overall dimensions accurately represent the reach of the typical goalkeeper. In other embodiments, the overall width 28 and height 30 can have other dimensions.

Still referring to FIG. 2, a stabilizing device 40 is connected to the net 12. The stabilizing device 40 is adapted to keep the net in the deployed position and to maintain the gap 36 separating the net from the goal frame 20 and playing surface 24. In the illustrated embodiment, the net 12 is aligned with the plane defined by the vertical goalposts of the goal frame 20. In this manner, the apparatus 10 simulates a goalkeeper during a penalty kick. During a penalty kick, the goalkeeper is allowed to move laterally or side to side, but

must remain on his goal line, facing the kicker, between the goalposts until the ball has been kicked.

Instead of being used to block the goal, the apparatus 10 can also be used as a mini-goal during a short-sided game in which there are less than eleven players per team. In short-sided games, the size of the goal is typically smaller than the standard goal size of 7.3 meters (24 feet) wide by 2.4 meters (8 feet) high. Conventionally, cones or pylons are used to demarcate the reduced width of the mini-goal in short-sided games; however, cones and pylons fail to demarcate the reduced height of the mini-goal. The net of a soccer training apparatus of the present invention can be used to demarcate the reduced width and height of the mini-goal in a short-sided game. Thus, it will be appreciated that the soccer training apparatus of the present invention is useful in a variety of situations.

With continued reference to FIG. 2, alignment of the net 12 with the vertical goalposts is maintained by the stabilizing device 40, which includes a plurality of cords 42 and straps 44 adapted to be attached to the goal frame 20. The peripheral edge 14 of the net 12 includes a plurality of corners and each one of the cords 42 is attached to a different one of the corners. In this manner, the net 12 can be placed in tension and the peripheral edge 14 maintains its shape during use. The cords 42 and straps 44 can be made of elastic materials, metal cabling, nylon or polypropylene rope or webbing, combinations thereof, and other materials. To facilitate rapid attachment to and detachment from the goal frame 20, the straps 44 can include Velcro closures, other hook-and-loop devices, cam type or slide release buckles, double D-rings, ratchet devices, hooks, and clips.

The cords 42 can be extended across selected segments of the gap 36 to reduce the probability that a soccer ball moving toward the gap will enter the goal. In this manner, the

5 cords 42 can be used to simulate real-world situations where the goalkeeper is sometimes able to stop a ball at distant regions of the target opening 26 next to the goalposts and crossbar.

The peripheral edge 14 is sized and shaped to allow a gap 36 to extend entirely
5 around the net 12 such that the gap separates the net from the goal frame 20 and the playing surface 24. The gap 36 has a size sufficient to allow a soccer ball to pass through every segment of the gap and enter the target area 26. When the apparatus 10 is used with a standard soccer ball, which typically has a diameter of about 23 centimeters (9 inches) or less, the gap 36 preferably extends more than 23 centimeters (9 inches) above, below, and to
10 both sides of the peripheral edge 14.

In the deployed position shown in FIG. 2, the gap 36 extends 0.6 meter (2 feet) below and 0.3 meter (1 foot) above the middle portion 15, and at least 1.5 meters (5 feet) laterally to the side of the first and second side portions 11, 13. The gap 36 is larger at the recesses 18 of the blocking surface area 16. At the bottom recesses 18a, 18b, the gap
15 extends at least 0.9 meters (3 feet) downward to the playing surface 24 and at least 2.3 meters (7 feet, 6 inches) laterally to the goalpost. At the top cutouts 18c, 18d, the gap extends at least 1.1 meters (3 feet, 8 inches) upward toward the horizontal crossbar and at least 2.3 meters (7 feet, 6 inches) laterally to the goalpost. Applicant has found that a peripheral edge 14 surrounded by the above specified gap is optimal for training a kicker to
20 score during a penalty kick.

In FIG. 3, there is shown another embodiment of a soccer training apparatus 50 having a net 52 and peripheral edge 54 similar to the embodiments of FIGS. 1 and 2. The apparatus 50 is installed on the goal frame 20 so that the net 52 lies on the plane defined by

the vertical goalposts 53 of the goal frame. The net 52 has a middle portion 54 disposed between two side portions 58.

The apparatus 50 also includes a stabilizing device 60 that comprises a plurality of cords 62 with straps 64. The stabilizing device 60 also includes a horizontal rod 66 and two
5 leg members 68. The horizontal rod 66 and leg members 68 can be made of the same or different type of structure and material. Suitable structures and materials include without limitation solid rods, hollow tubing, extrusions, metal, plastic, wood, and fiber reinforced composites.

The rod 66 is attached to the bottom edge of the middle portion 54 of the net 52.
10 Each of the leg members 68 has an end attached to the rod 66 and an opposite end attached to a bed of spikes 70 insertable into grass or other type of soccer playing surface. The bed of spikes includes a platform that helps to keep the leg members 68 from sinking into the playing surface 24. In this way, the size of the gap below and above the net 52 is maintained. Preferable, though not necessarily, the rod 66 is made of a rigid material, such
15 as metal tubing, to better maintain the net 52 in its deployed position in relation to the goal frame 20. To facilitate storage of the apparatus 50 after use, the rod 66 can include a centrally located joint 72 to allow the rod 66 to be folded in half.

In other embodiments, the stabilizing device 60 includes additional cords that have one end attached to the ends of the rod 66 and/or the lowest corners of the net 52. The
20 opposite end of the cords can be attached to the goal frame 20 or stakes secured in the playing surface 24. The additional cords would help keep that apparatus 50 from lifting off the playing surface 24 due to impacts from a soccer ball or due to upward tension provided by other cords 62 that hold the net 52 upright.

Referring next to FIGS. 4-8, there is shown an embodiment of a soccer training apparatus 80 maintains its position relative to the goal frame 20 without necessarily being connected to the goal frame. The apparatus 80 has a net 82 and a stabilizing device 86.

In FIG. 4, the net 82 is shown in a first deployed position. The net 82 has a blocking plane 81 bounded by a peripheral edge 84 on its perimeter. The net 82 is centered between the vertical goalposts 85 of the goal frame 20 and lies on the plane defined by the vertical goalposts. In this manner, the net 82 can be used to simulate the reach of a goalkeeper during a penalty kick.

In FIGS. 5, 6, and 8, the net 82 is shown in a second deployed position. The net 82 is not necessarily centered between the vertical goalposts 85 and is positioned ahead or in front of the plane defined by the goalposts 85. In the second deployed position, a forward distance 87 separates net 82 and from the goalposts 85. In this manner, the net 82 is used to simulate the reach of a goalkeeper during a free kick or place kick.

During a place kick, the goalkeeper is not required to remain on the goal line before the ball is kicked. The goalkeeper can be in front of the goal line and/or closer to one of the goalposts 85, depending on where the ball is located in preparation for the place kick. The soccer training apparatus 80 can easily be moved to any position in front of the goal frame 20 to simulate the reach of a goalkeeper during a place kick.

As shown in FIG. 6, a ball that travels in a slanted or oblique direction 120 to the blocking plane 81 is more likely to enter the goal than a ball that travels in a direction 122 perpendicular to the blocking plane 81. Thus, the apparatus 80 can be positioned in front of the goal frame 20 to train a kicker to direct the ball in direction that is most likely to enter the goal. During training, the forward distance 87 can be selected to create any desired

separation between the net 82 and the goalposts 85 and target opening 26 it make it more or less difficult for a kicker to score. That is, the forward distance 87 can be selected so that a ball moving toward the gap will have a lesser probability of entering the goal area when moving in a direction perpendicular to a blocking plane 81 defined by a peripheral edge of the net than in an oblique direction relative to the blocking plane.

Referring again to FIG. 5, the net 82 includes a middle portion 88 disposed between two side portions 90. The middle portion 88 has horizontal top and bottom edges 85, and each of the side portions 90 has arctuate top and bottom edges 87 and a vertical side edge 89.

The stabilizing device 86 includes a net frame 92 attached to the peripheral edge 84 of the net 82. Preferably, though not necessarily, the net frame 92 extends around the entire perimeter of the net 82, as shown in FIGS. 4, 5, and 7. The stabilizing device 86 also includes two rear braces 94 attached to the net frame 92. The braces 94 extend in a rearward direction away from a blocking plane 81. To facilitate storage when not in use, the braces 94 can be attached to the net frame 92 with a hinge to allow the braces to fold flat with the net frame. In other embodiments, only one or more than two braces can be employed.

As shown in FIGS. 7 and 8, each of the rear braces 94 includes a lower rod 96 and an upper rod 98. The lower and upper rods 96, 98 are generally elongate in shape and can be made of the same or different type of structure and material. Suitable structures and materials include without limitation solid rods, hollow tubing, extrusions, metal, plastic, wood, and fiber reinforced composites. The lower rod 96 has a coupled end 91 connected to the net frame 92 and a free end 93 capable of engaging the soccer playing surface 24. The free end 93 can include a bed of spikes 95 to keep the apparatus 80 from slipping backwards

when the net 82 is hit from the front. The upper rod 98 has a first coupled end 97 attached to the net frame 92 and second coupled end 99 attached to the lower rod 96.

The stabilizing device 86 also includes a horizontal rod 100 and two leg members 102. The horizontal rod 100 forms a part of the net frame 92 and is attached to the entire
5 bottom edge of the middle portion 88. Each of the leg members 102 has an end attached to the rod 100 and an opposite end attached to a bed of spikes 104 insertable into grass or other type of soccer playing surface.

Referring again to FIGS. 4 and 5, a gap extends completely around the net 82 when the net is in the deployed position at the goal frame 20. The gap separates the net frame 92
10 from the goal frame 20 and playing surface 24 by sufficient distances to allow a soccer ball to enter the goal from above, below, and both side of the net 82. In the illustrated embodiment, the leg members 102 are sized such that the gap extends 0.3 meter (1 foot) below the middle portion 92, which is smaller than the 0.6-meter gap below the middle portion of the embodiment shown in FIG. 2. The smaller size of the bottom gap simulates
15 the decreased likelihood that the kicker can make a shot during a place kick (FIGS. 5, 6, and 8). During a place kick, the kicker is typically further away from the goal than during a penalty kick, so the goalkeeper has more time block a shot.

Referring once again to FIG. 4, the net frame 92 has an overall horizontal dimension 106 and an overall vertical dimension 108 that are equivalent or substantially equivalent to
20 4.3 meters (14 feet) and 1.8 meters (5 feet, 10 inches) respectively. In this manner, with a standard goal frame having an inside dimension of 7.3 meters (24 feet) wide by 2.4 meters (8 feet) high, the apparatus 50 can be centered such that the outer-most side edges 110 of the net frame 92 are 1.5 meters (5 feet) from the vertical goalposts of the goal frame 20. Also,

the 1.8-meter overall vertical dimension of the net is greater than the 1.5-meter overall vertical dimension of the embodiment shown in FIG. 2. The greater overall size of the net simulates the increased reach of the goalkeeper during a place kick (FIGS. 5, 6, and 8). As previously mentioned, the goalkeeper typically has more time to react during a place kick as compared to a penalty kick.

In other embodiments, the overall vertical dimension of the net can be greater than 1.8 meters so that the top edge of the net is taller and closer to the horizontal crossbar of the goal as compared to the top edge of the embodiment shown in FIG. 2. In FIG. 2 the top edge of the net is at 2.1 meters (7 feet) above the ground and 0.3 meters (1 foot) below the goal crossbar. During training, a taller top edge enables a kicker to visualize a narrow zone into which he or she should kick the ball during a place kick. During a place kick (FIGS. 5, 6, and 8), the goalkeeper can be six yards in front of the goal line, which provides an opportunity to score a shot even though the goalkeeper typically has more time to react as compared to a penalty kick. By aiming at the narrow zone located slightly below the goal crossbar, a kicker can learn to kick the ball along a trajectory that breaks or curves upward out of the goalkeeper's reach then downward into the goal. Applicant has found that aiming at the narrow zone provided by the top edge of the net is a better alternative to using only the goal crossbar as a visual aid because aiming at the crossbar often causes kicker to shoot the ball too high.

While several particular forms of the invention have been illustrated and described, it will also be apparent that various modifications can be made without departing from the scope of the invention. For example, a flat board, a continuous sheet material, or fabric can be used cover strategic portions of the goal instead of or in addition to a net. As a further

example, the goal blocking surface area can be scaled down to a smaller size for youth soccer play. In yet a further example, the leg members can be adjustable in length to allow the vertical gap between the net and the soccer field to be altered as desired. It is also contemplated that various combinations or subcombinations of the specific features and
5 aspects of the disclosed embodiments can be combined with or substituted for one another in order to form varying modes of the invention. Accordingly, it is not intended that the invention be limited, except as by the appended claims.

WHAT IS CLAIMED IS:

1. A soccer training apparatus comprising:
 - a net capable of being placed in a deployed position adjacent a soccer goal frame and above a soccer playing surface so as to cover a portion of a goal opening bounded by the soccer goal frame and soccer playing surface, the net including a peripheral edge sized and shaped to allow a gap to extend entirely around the net when the net is the deployed position such that the gap separates the net from the soccer goal frame and the soccer playing surface, the gap having a size sufficient to allow a soccer ball to pass through the gap and enter the goal opening; and
 - 10 a stabilizing device connected to the net and adapted to keep the net in the deployed position.
2. The apparatus of claim 1 wherein the net is generally cross-shaped and has a first side portion, a second side portion, and a middle portion disposed between the first and second side portions, the middle portion having an overall area greater than the individual overall areas of the first and second side portions.
- 15 3. The apparatus of claim 2 wherein when the net is in the deployed position, the middle portion has a horizontal top edge and a horizontal bottom edge and each of the first and second side portions has an arcuate top edge and an arcuate bottom edge.
- 20 4. The apparatus of claim 2, wherein the stabilizing device includes a rod and two leg members, the rod attached to a bottom edge of the middle portion, each leg member

having an end attached to the rod and an opposite end attached to a plurality of spikes insertable into the soccer playing surface.

5. The apparatus of claim 1, wherein the stabilizing device includes a net frame
5 attached to the peripheral edge of the net.

6. The apparatus of claim 5, wherein the stabilizing device includes a brace attached to the net frame, the brace extending in a rearward direction away from a blocking plane defined by the net frame.

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7. The apparatus of claim 6, wherein the brace includes a lower elongate member and an upper elongate member, the lower elongate member having a coupled end connected to the net frame and a free end capable of engaging the soccer playing surface, the upper elongate member having a first coupled end attached to the net frame and
15 second coupled end attached to the lower elongate member.

8. The apparatus of claim 1, wherein the peripheral edge of the net includes a plurality of corners when the net is in the deployed position and the stabilizing device includes a plurality of cords, each one of the cords cord attached to a different one of the
20 corners.

9. The apparatus of claim 1, wherein the net is not connected to the soccer goal frame.

10. The apparatus of claim 1, wherein the gap has a size sufficient to allow a soccer ball to pass through any segment of the gap.

5 11. A soccer training method comprising:
using a net to cover a portion of a goal opening bounded by a soccer goal frame and a soccer playing surface; and
positioning the net so that a gap extends entirely around the net, the gap separating the net from the soccer goal frame and the soccer playing surface, the gap
10 having a size sufficient to allow a soccer ball to pass through the gap and enter the goal opening.

12. The method of claim 11, further comprising providing a compliant peripheral edge on the net to simulate the flexibility of a goalkeepers outstretched fingers.

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13. The method of claim 11, further comprising:
providing a plurality of cords connected to the net;
attaching the plurality of cords to the soccer goal frame; and
extending one of the plurality of cords across a portion of the gap to reduce the
20 probability that a ball moving toward the gap will enter the goal opening.

14. The method of claim 11, further comprising positioning the net in front of the soccer goal frame so that a forward distance separates a peripheral edge of the net and the soccer goal frame.
- 5 15. The method of claim 14, further comprising selecting the forward distance so that a ball moving toward the gap will have a lesser probability of entering the goal opening when moving in a direction perpendicular to a blocking plane defined by the peripheral edge of the net than in an oblique direction relative to the blocking plane.
- 10 16. The method of claim 11, wherein the net is generally cross-shaped and has first side portion, a second side portion, and a middle portion disposed between the first and second side portions, the middle portion having an overall area greater than the individual overall areas of the first and second side portions.
- 15 17. The method of claim 11 further comprising stabilizing the net so that the middle portion has a horizontal top edge and a horizontal bottom edge and each of the first and second side portions has an arctuate top edge and an arctuate bottom edge.
18. The method of claim 16, wherein the gap includes a rectangular lower gap and a
20 rectangular upper gap, the lower gap separating the middle portion from the soccer playing surface by a distance from 0.3 meter (1 foot) to 0.6 meter (2 feet), the upper gap separating the middle portion from the soccer goal frame by a distance equivalent or substantially equivalent to 0.3 meter (1 foot).

19. The method of claim 16, wherein the gap includes a first side gap and a second side gap, the first side gap separating the first side portion from the soccer goal frame, the second side gap separating the second side portion from the soccer goal frame, each of
5 the first and second side gaps having a minimum width and a maximum width, the minimum width equivalent or substantially equivalent to 1.5 meters (5 feet), the maximum width equivalent or substantially equivalent to 2.3 meters (7.5 feet).

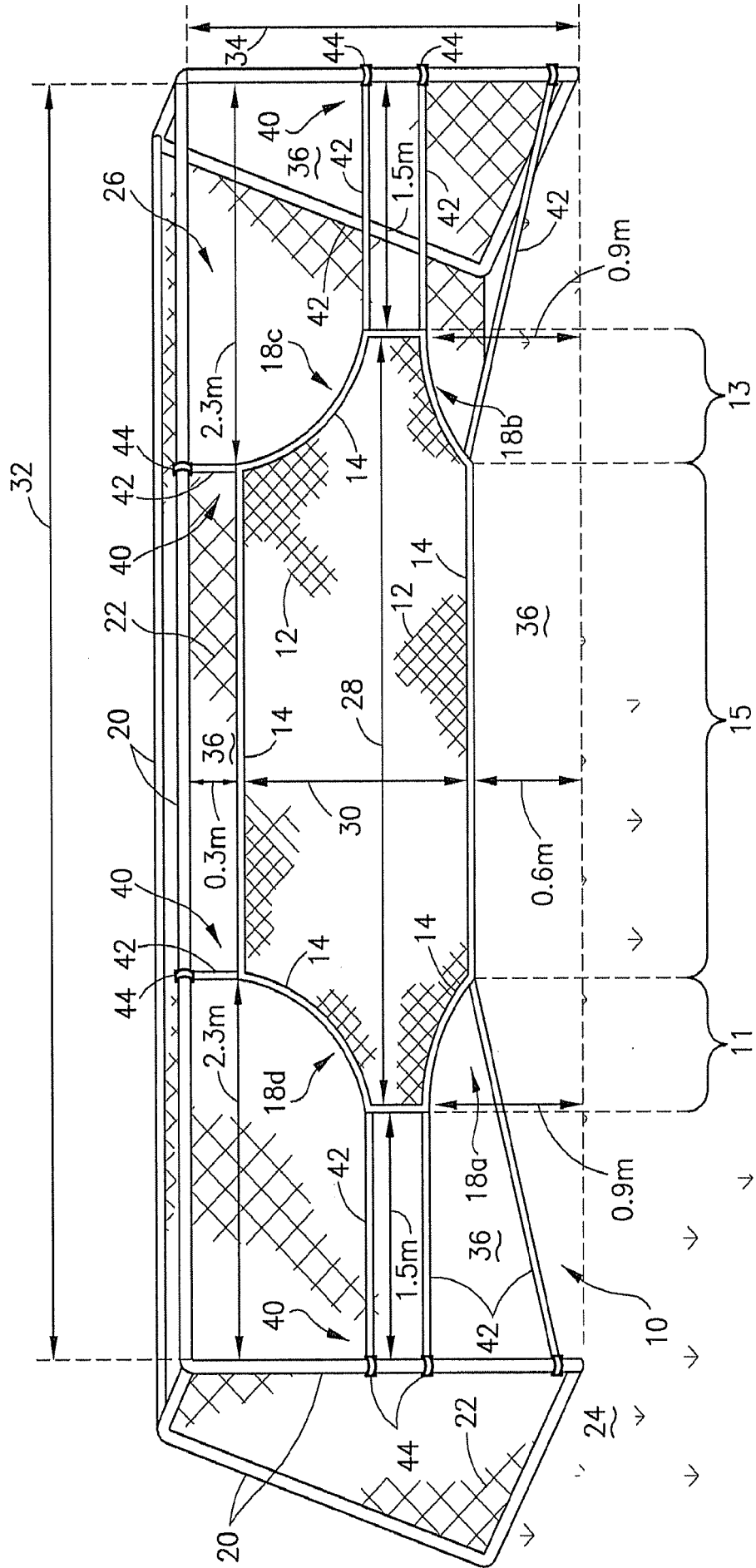


FIG. 2

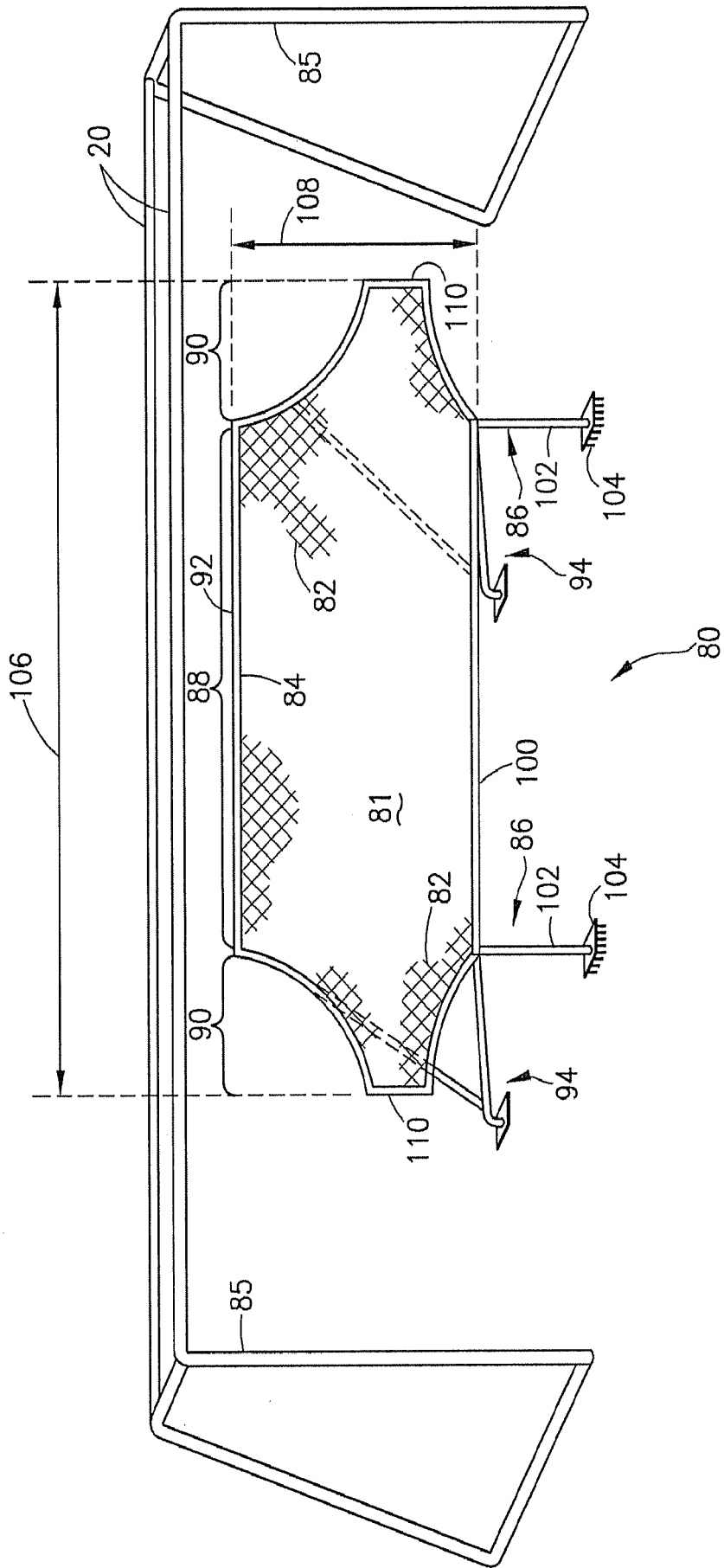


FIG. 4

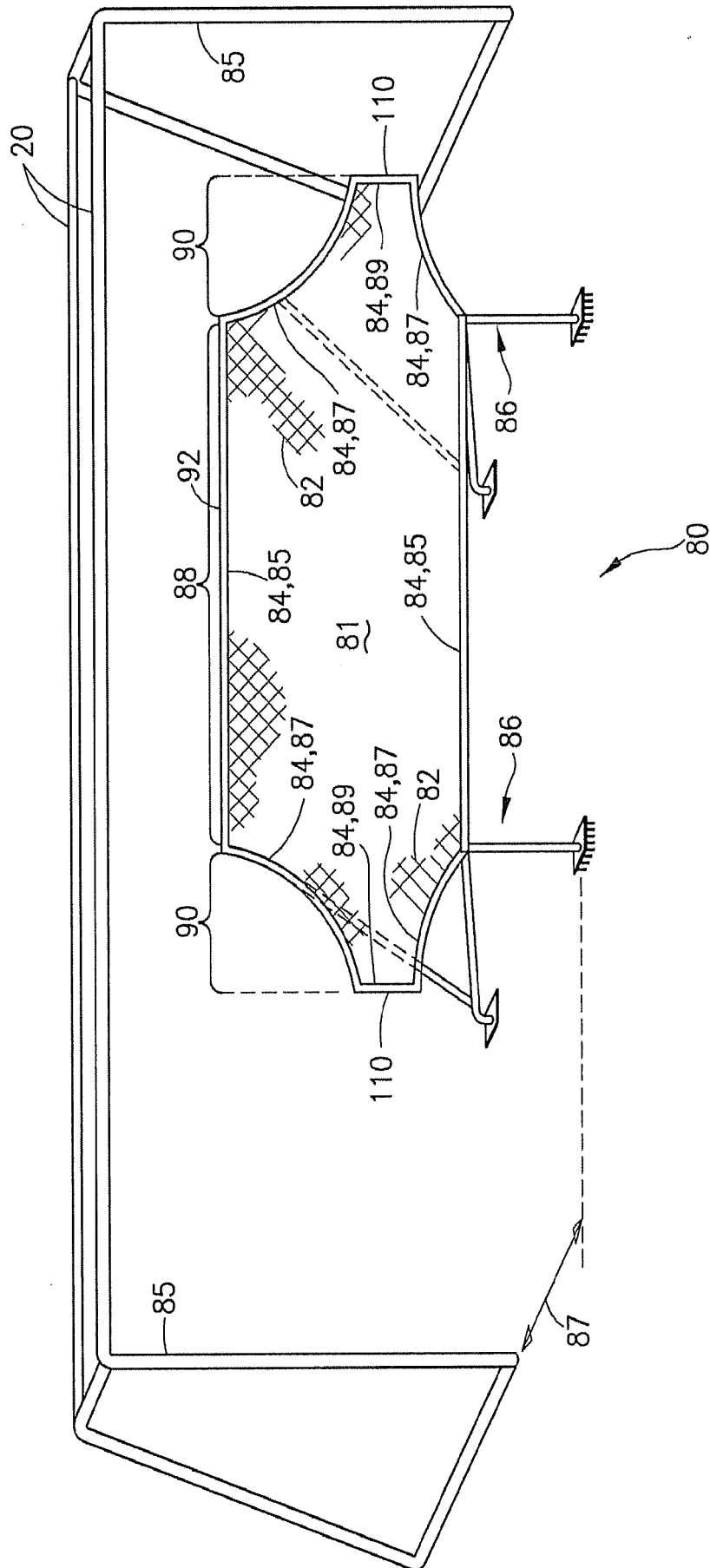


FIG. 5

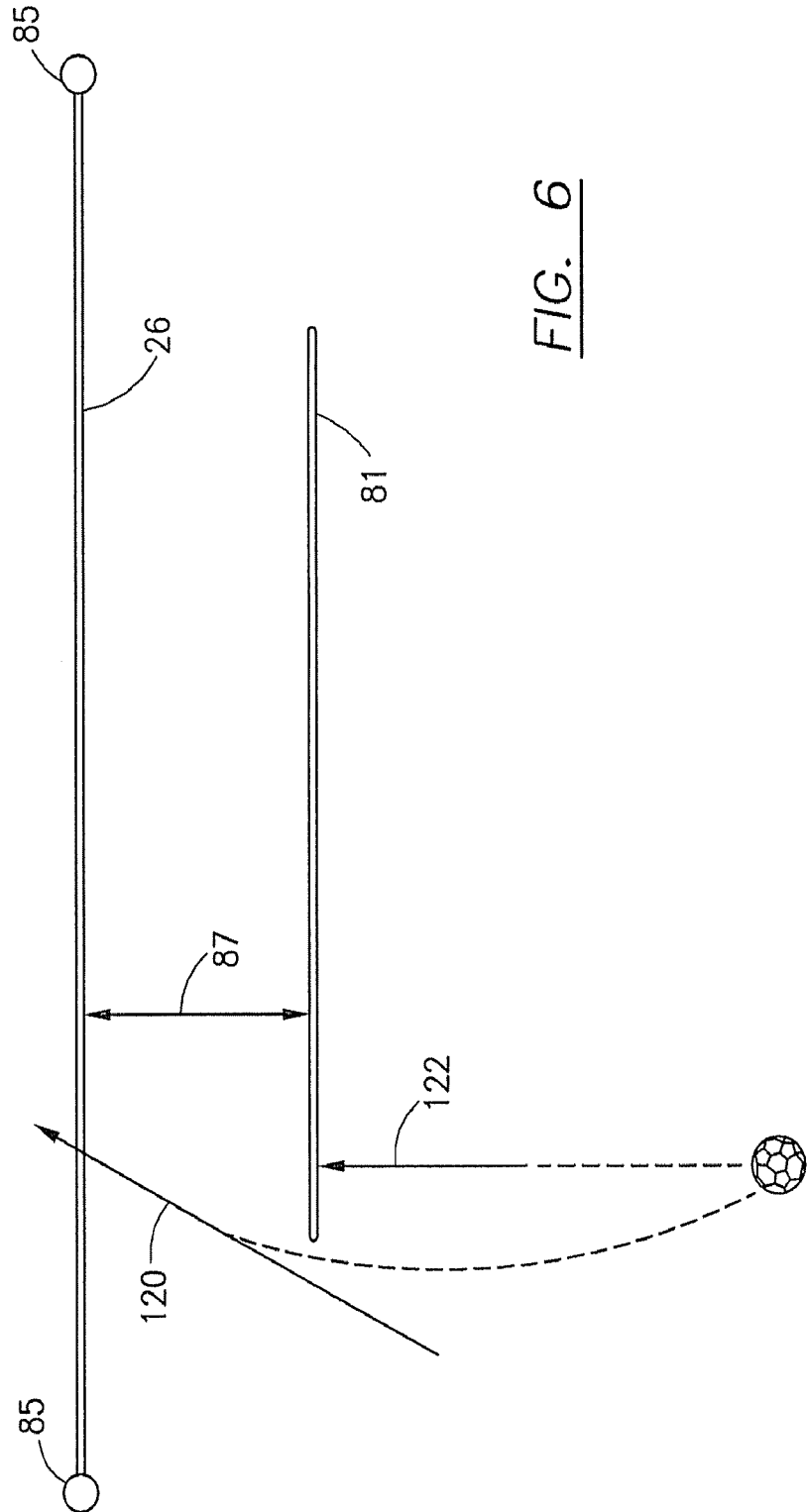


FIG. 6

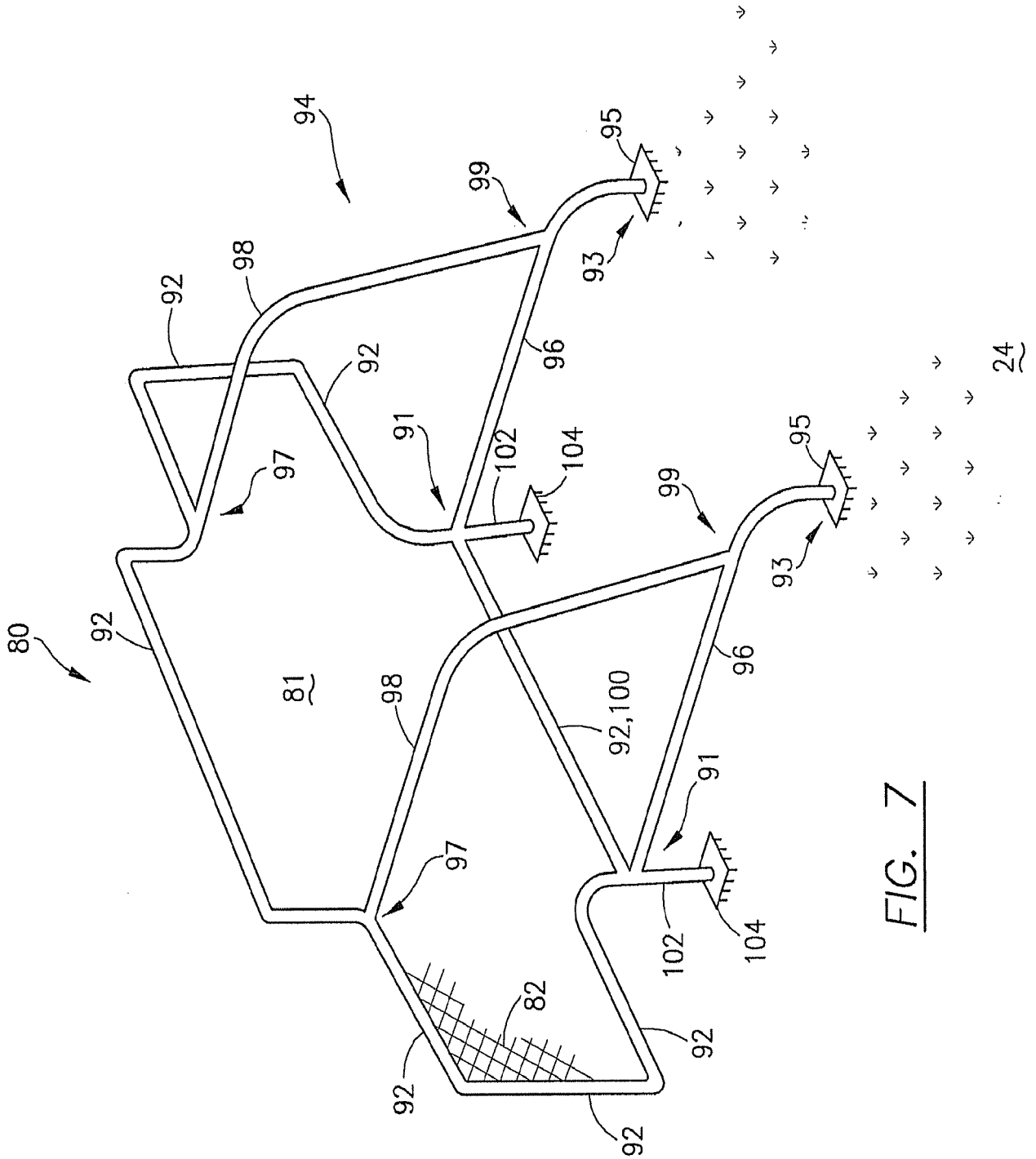


FIG. 7

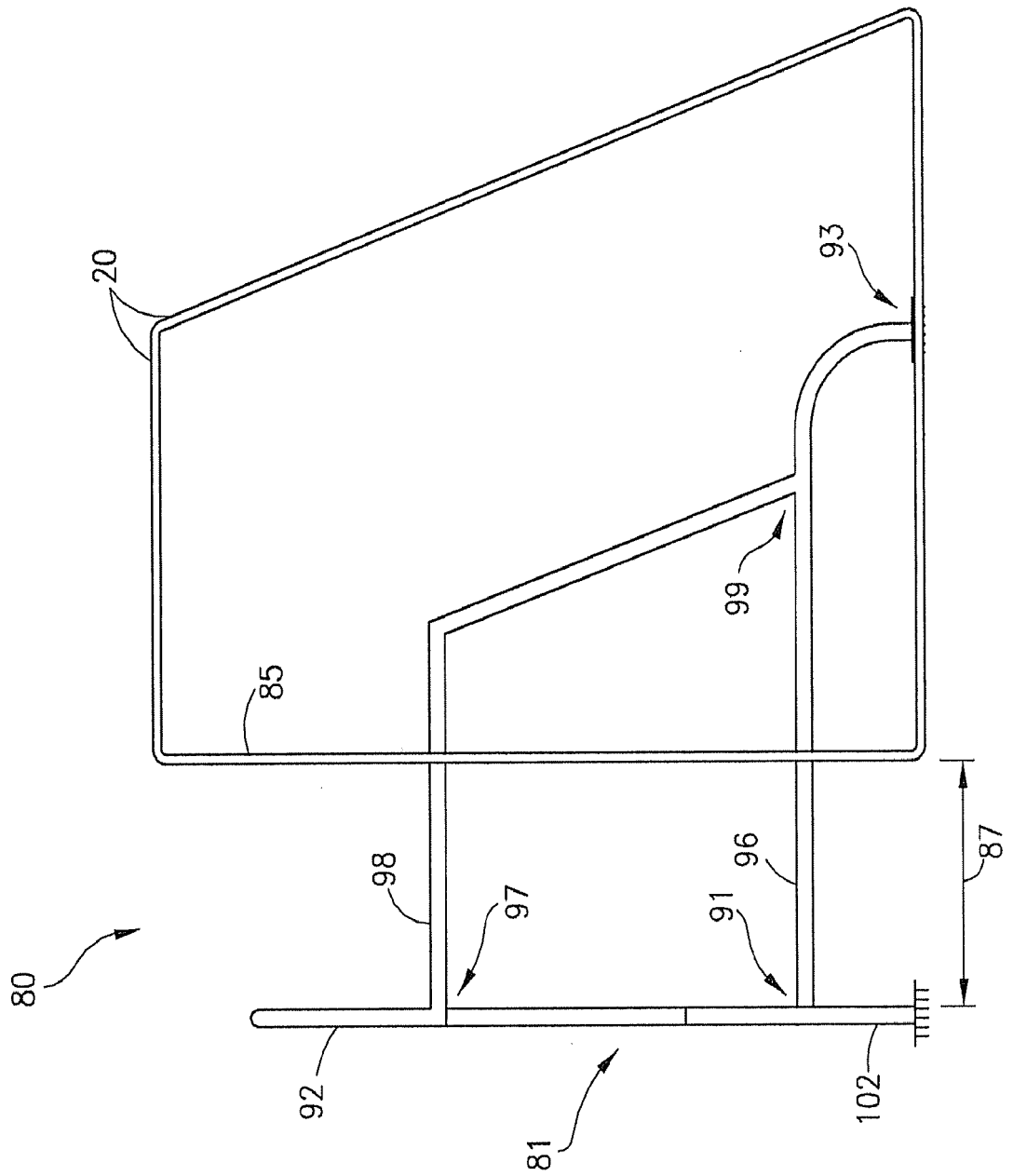


FIG. 8

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/030801

A. CLASSIFICATION OF SUBJECT MATTER INV. A63B63/00 A63B69/00				
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) A63B				
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 practical, search terms used) EPO-Internal				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
A	DE 18 37 018 U (JOSEF AUF DER BECK OHG [DE]) 31 August 1961 (1961-08-31) the whole document	1-3, 8, 10-13, 16-19		
A	EP 0 985 432 A (MATHESON ALISTAIR DOMINIC [GB]; MATHESON ANDREW MICHAEL [GB]) 15 March 2000 (2000-03-15) paragraph [0006] - paragraph [0016]; figures 1-6	1-3, 8, 10-13, 16-19		
A	FR 2 640 514 A (PROFIL INTERNATIONAL [FR]) 22 June 1990 (1990-06-22) page 1 - page 9; figures 1,2 ----- -/--	1-3, 8, 10-13, 16-19		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. </td> <td style="width: 50%; border: none;"> <input checked="" type="checkbox"/> See patent family annex. </td> </tr> </table>			<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> See patent family annex.
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> See patent family annex.			
* Special categories of cited documents :				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> <ul style="list-style-type: none"> *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed </td> <td style="width: 50%; border: none; vertical-align: top;"> <ul style="list-style-type: none"> *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *Z* document member of the same patent family </td> </tr> </table>			<ul style="list-style-type: none"> *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed 	<ul style="list-style-type: none"> *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *Z* document member of the same patent family
<ul style="list-style-type: none"> *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed 	<ul style="list-style-type: none"> *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *Z* document member of the same patent family 			
Date of the actual completion of the international search <p style="text-align: center; font-size: 1.2em;">16 April 2009</p>		Date of mailing of the international search report <p style="text-align: center; font-size: 1.2em;">24/04/2009</p>		
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer <p style="text-align: center; font-size: 1.2em;">Oelschläger, Holger</p>		

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/030801

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 4 921 257 A (HELLER STEPHEN J [US]) 1 May 1990 (1990-05-01)</p> <p>column 2, line 8 - column 6, line 14; figures 1-5</p> <p style="text-align: center;">-----</p>	<p>1-3,8, 10-13, 16-19</p>
A	<p>US 2005/049089 A1 (PAKIESER GREG [US]) 3 March 2005 (2005-03-03)</p> <p>paragraph [0003] - paragraph [0018]; figure 1</p> <p style="text-align: center;">-----</p>	<p>1-3,8, 10-13, 16-19</p>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2009/030801

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 1837018	U	31-08-1961	NONE
EP 0985432	A	15-03-2000	GB 2343631 A 17-05-2000 US 6264572 B1 24-07-2001
FR 2640514	A	22-06-1990	NONE
US 4921257	A	01-05-1990	NONE
US 2005049089	A1	03-03-2005	NONE