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(54) **BASKETBALL REBOUNDER NET**

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(57) **ABSTRACT**

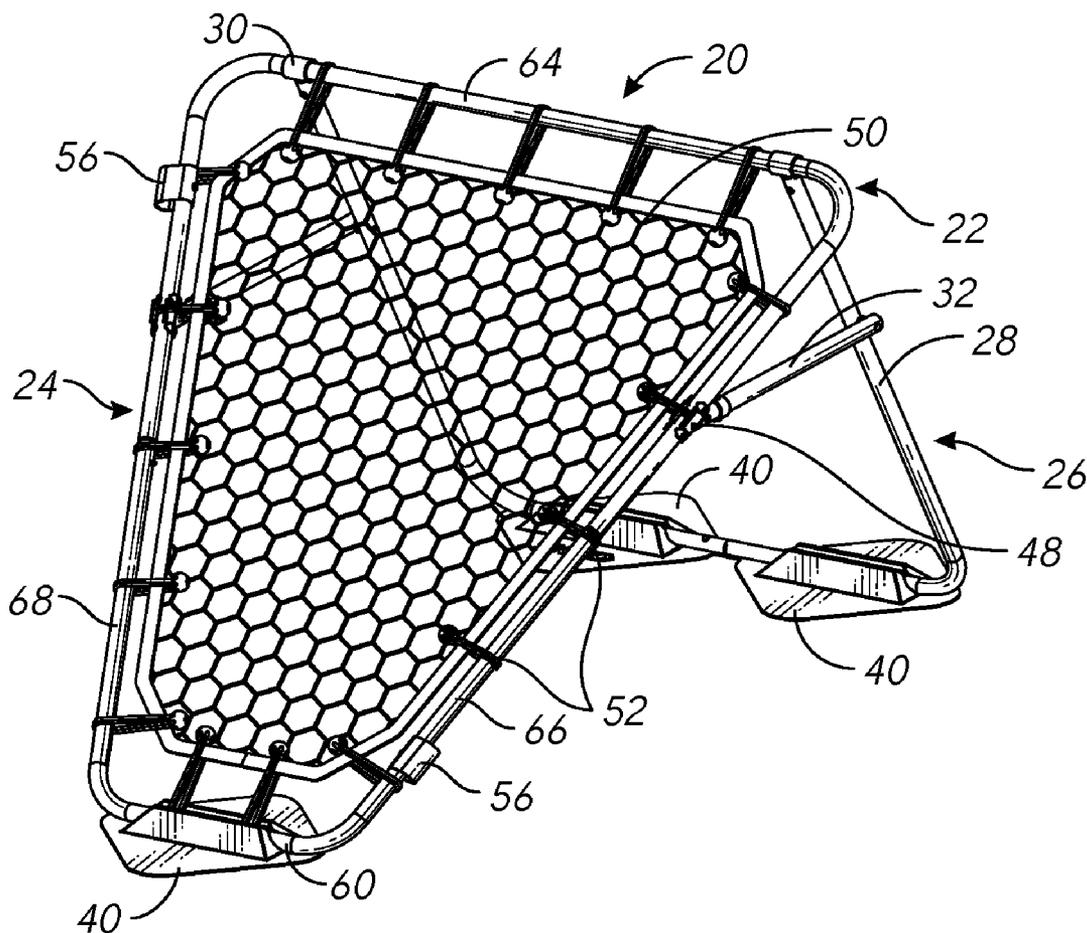
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A rebounder may include a frame having tubes in the shape of an isosoles trapezoid with rounded corners. A net is attached to the frame. A rear support may be pivotally attached to a top of the frame, and support bars attachable to sides of the frame and pivotally attached to the rear support. The rear support is movable from a folded position where the rear support is near parallel to, and/or with a floor tube of the rear support in contact with the frame. The rear support is also movable to an unfolded position where the rear support holds the frame and net at an acute angle to the floor or ground.

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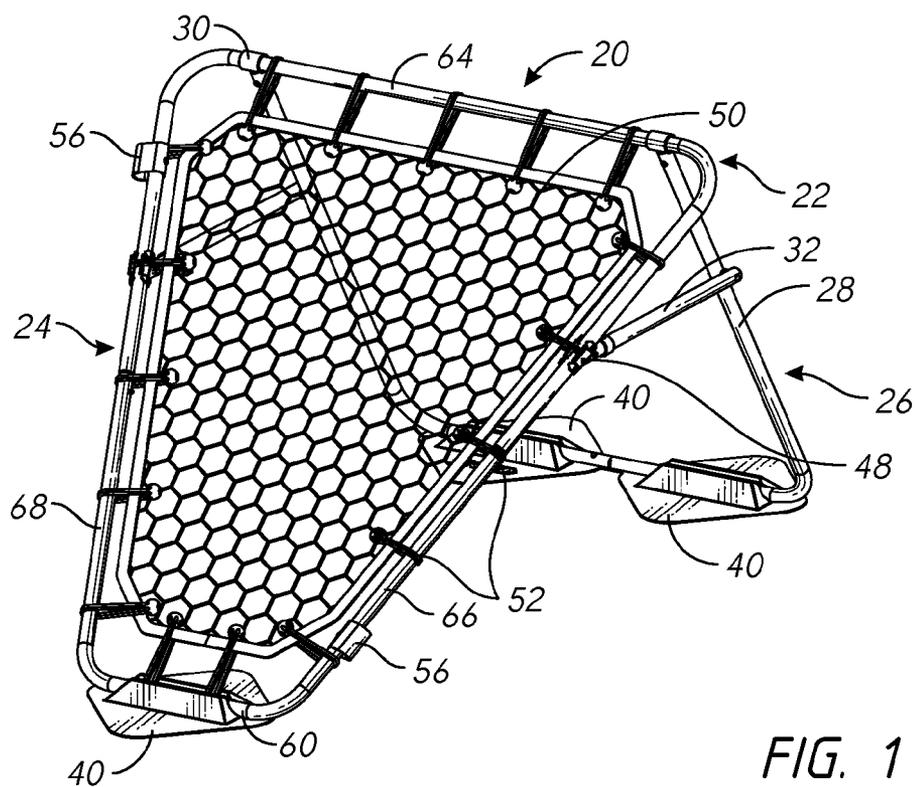


FIG. 1

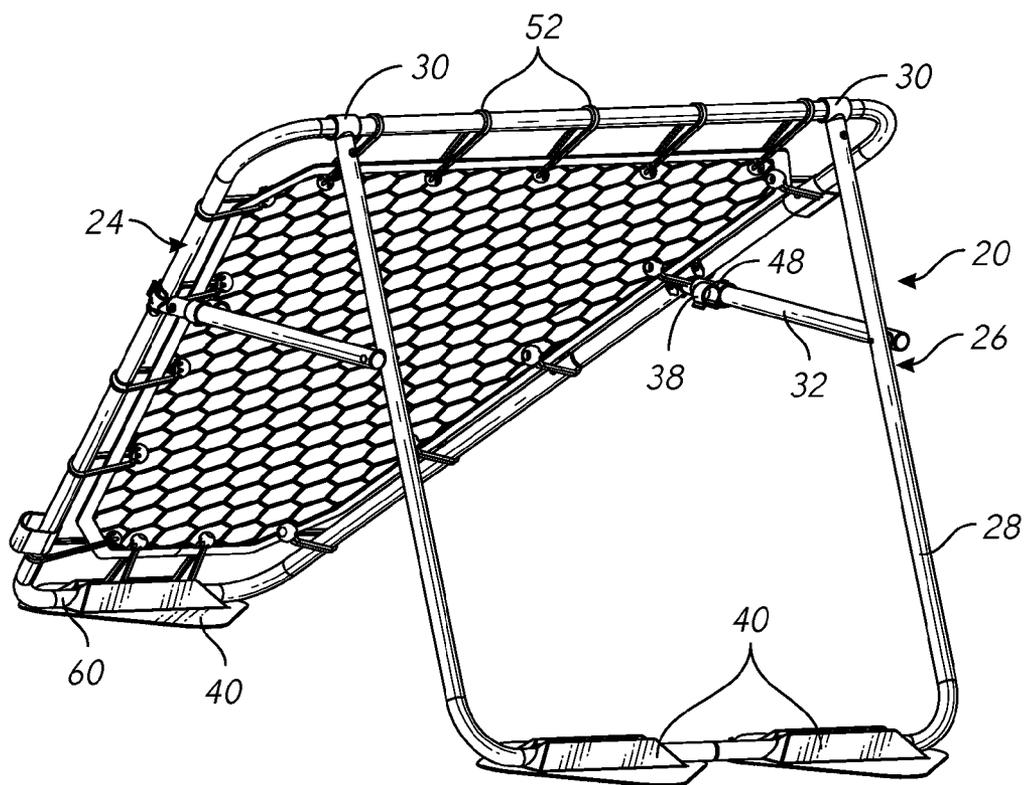


FIG. 2

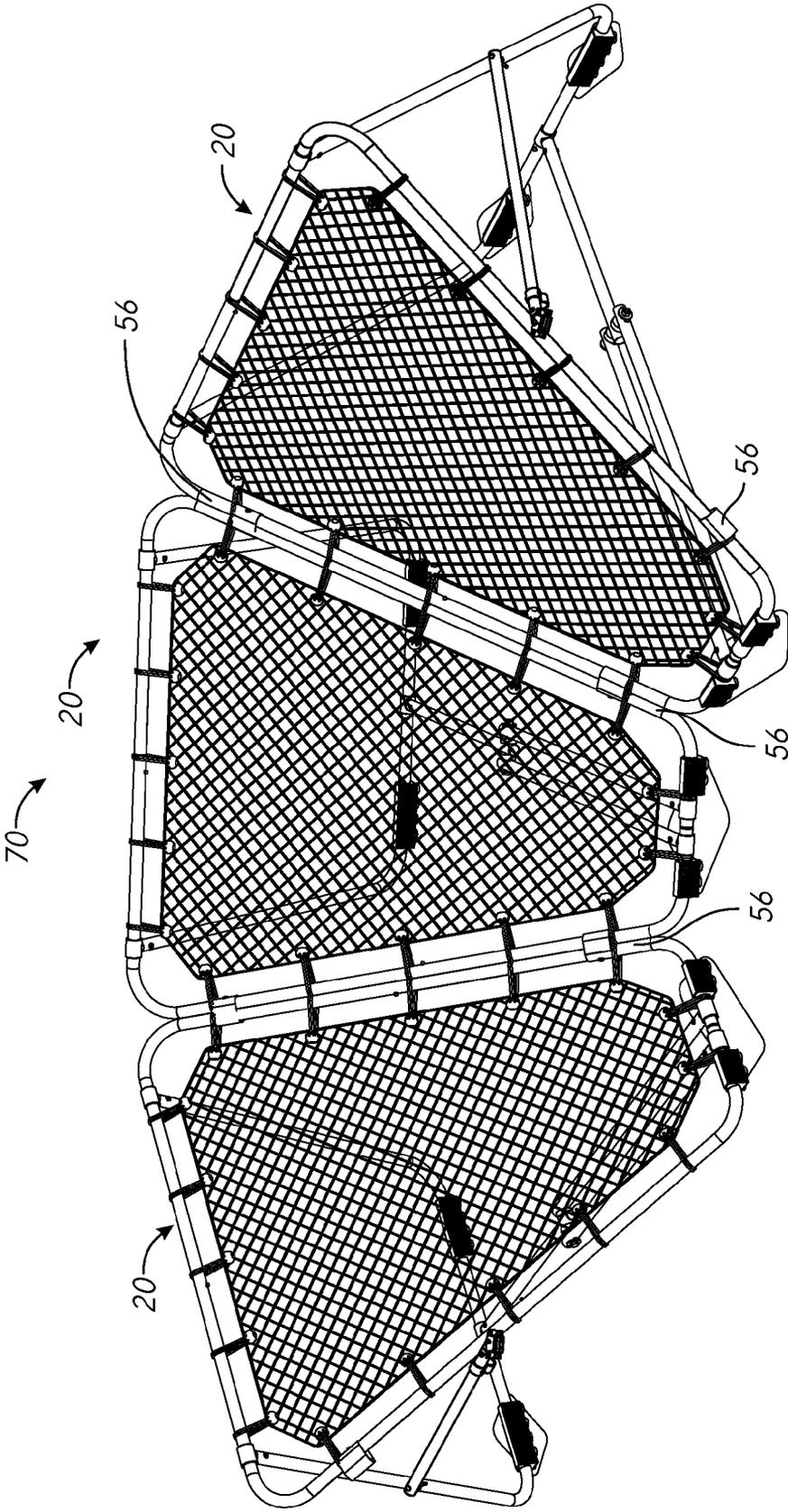


FIG. 3

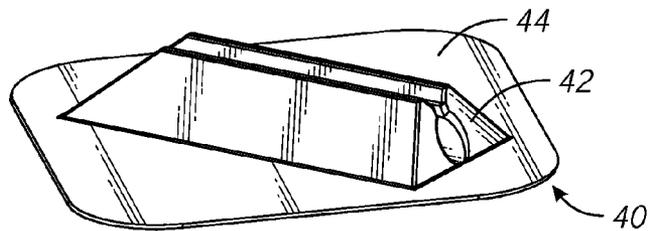


FIG. 4

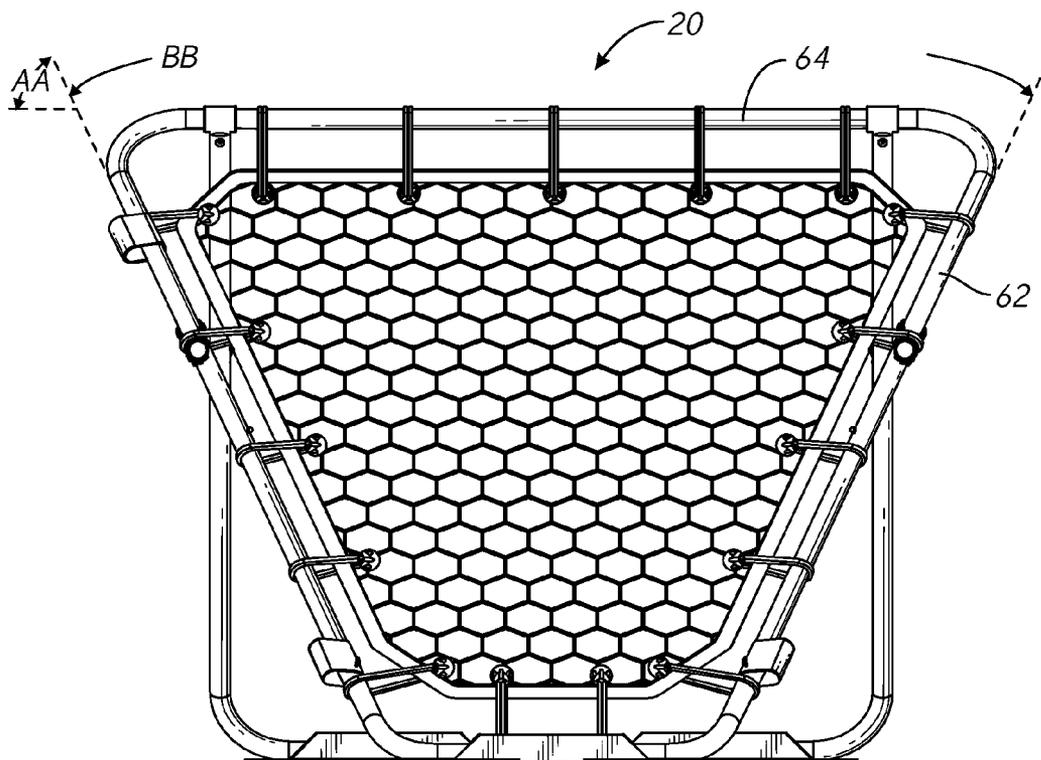


FIG. 5

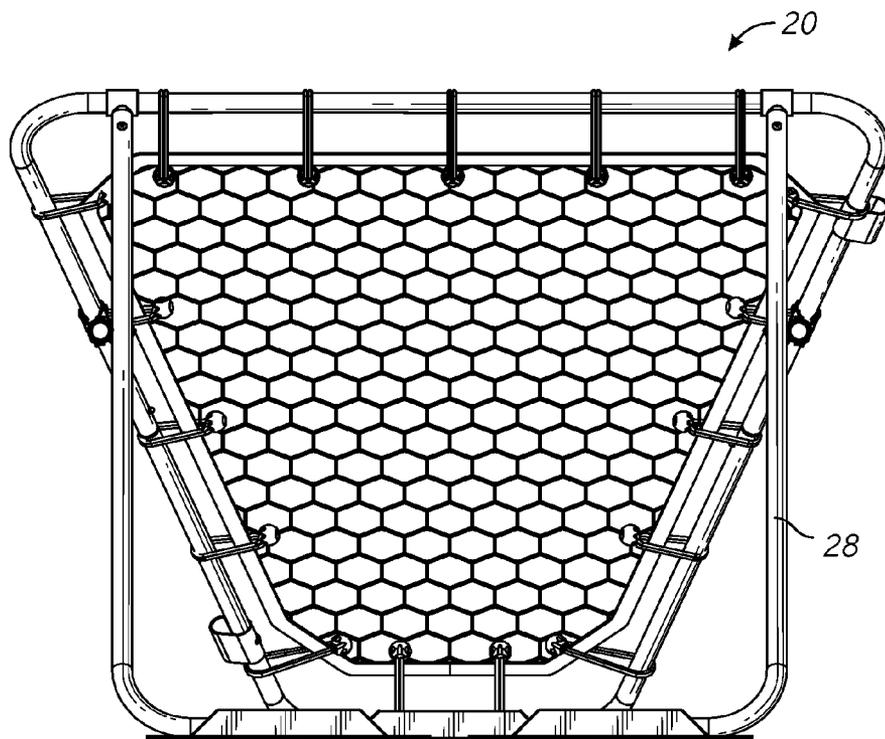


FIG. 6

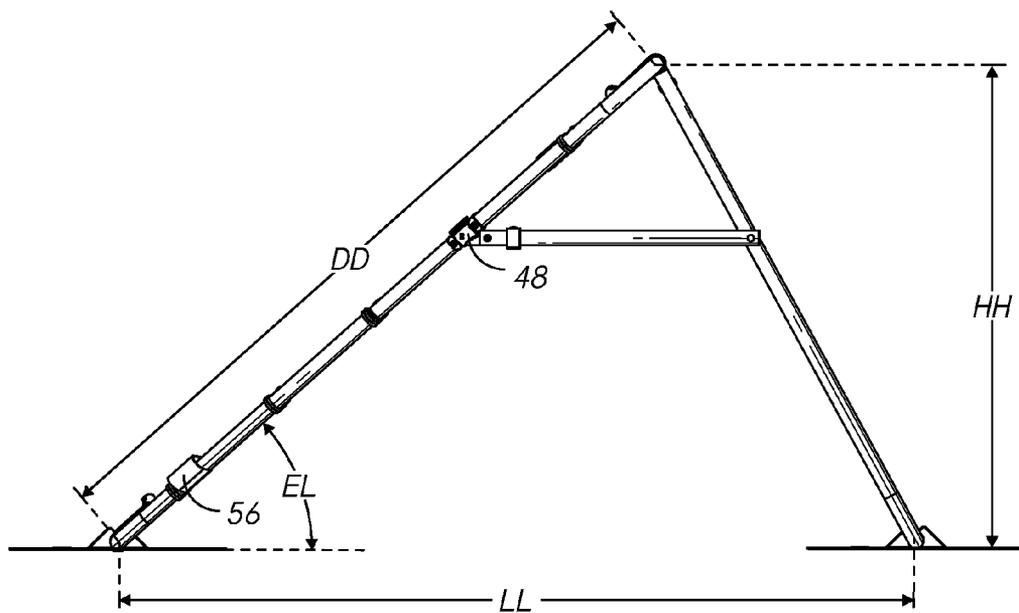


FIG. 7

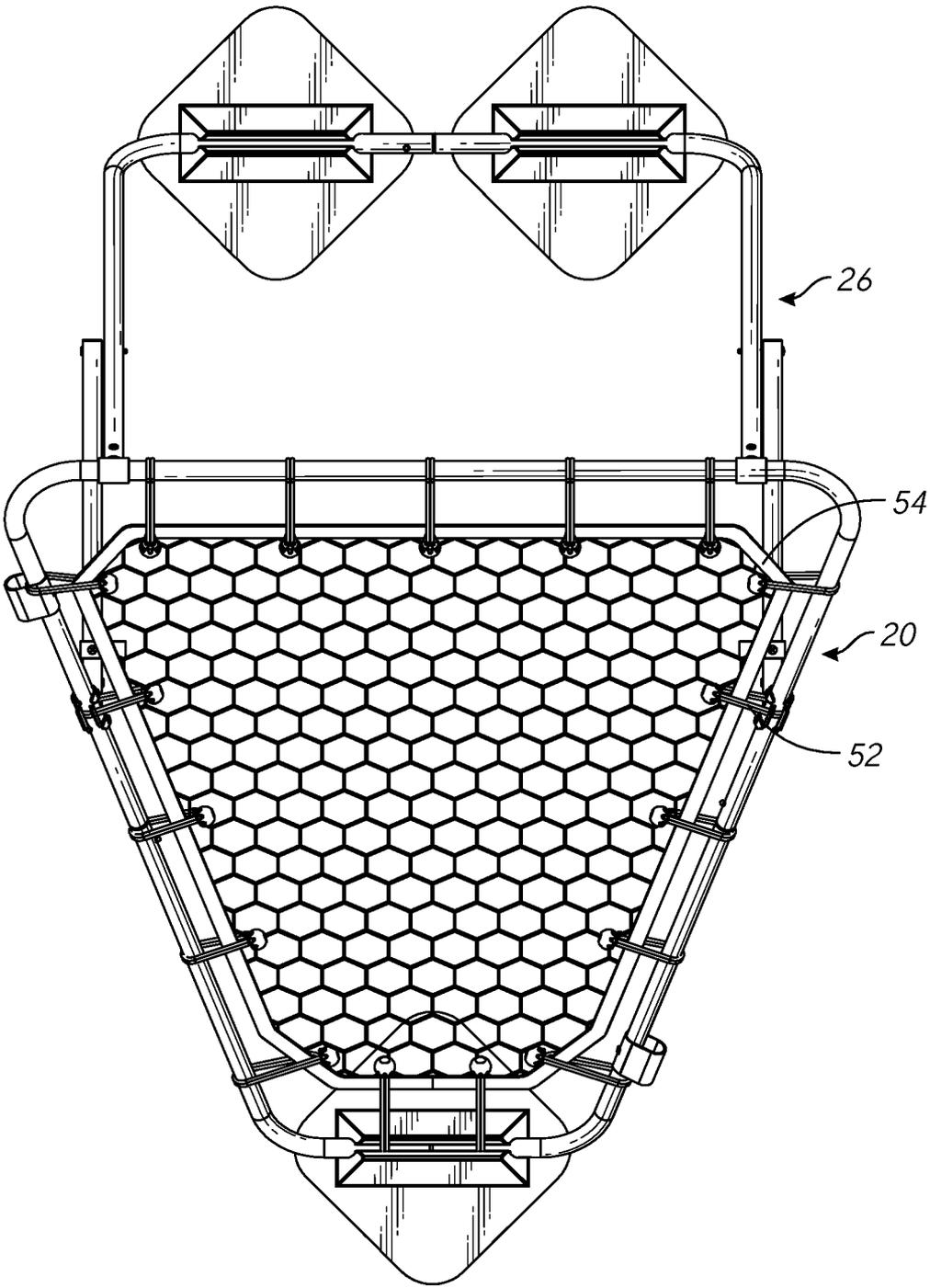


FIG. 8

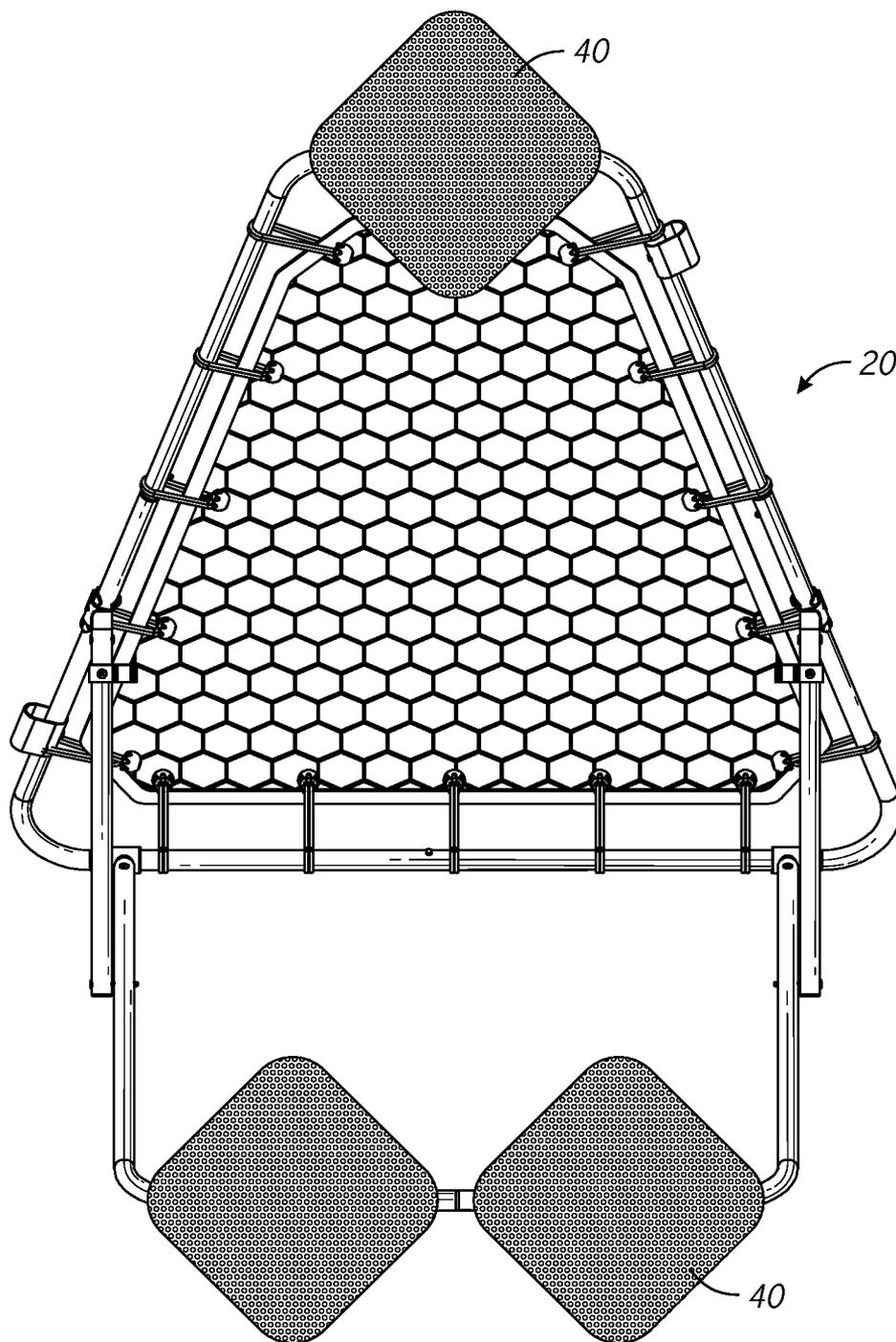


FIG. 9

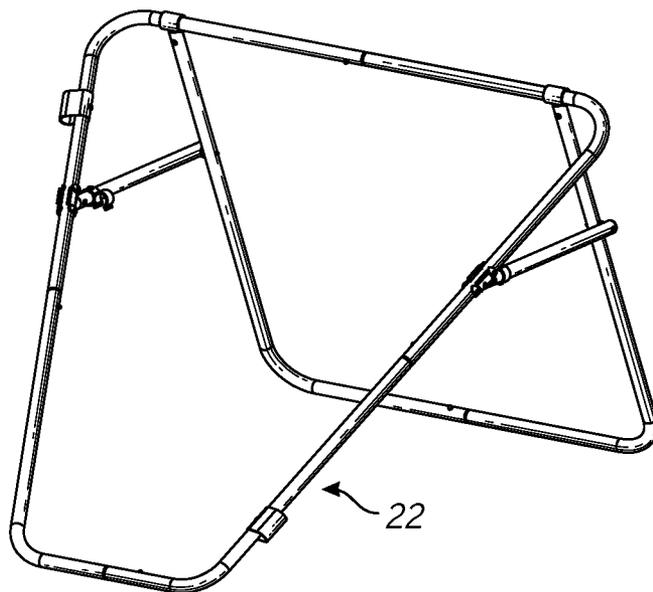


FIG. 10

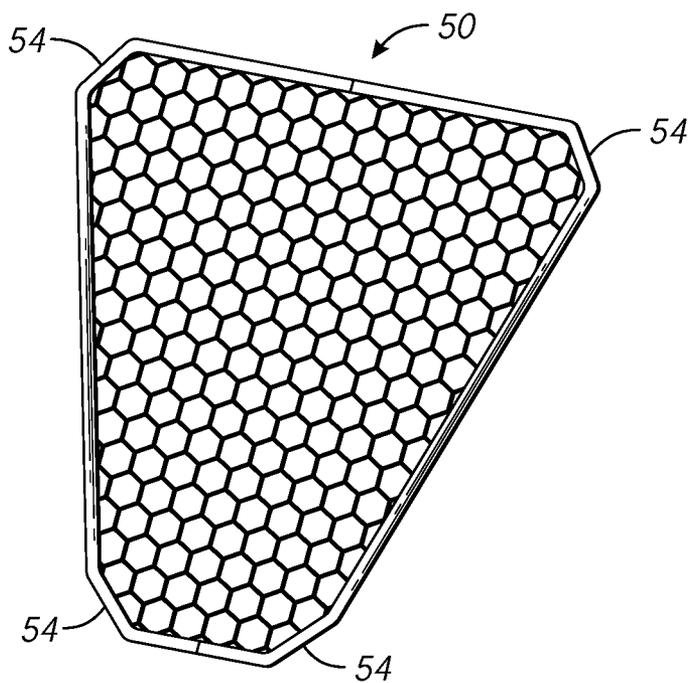


FIG. 11

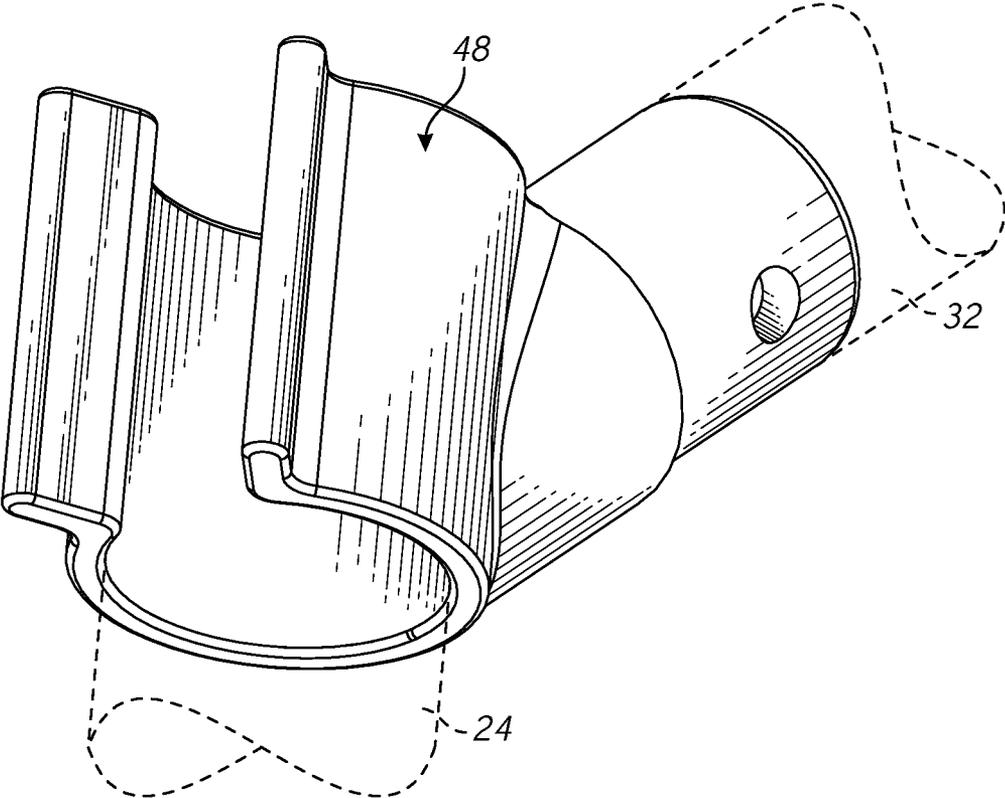


FIG. 12

BASKETBALL REBOUNDER NET

BACKGROUND OF THE INVENTION

[0001] Basketball rebound nets are used during basketball practice. A rebound net, also known as a rebounder, may be positioned directly under the basketball hoop, so that balls dropping through the hoop are rebounded out onto the basketball court. This allows players to quickly retrieve and shoot basketballs. Basketball rebound nets may also be placed at other positions on the basketball court to practice passing skills. A basketball rebound net may also allow a player to practice game skills alone. For example, to practice a so-called give-and-go play, the player may pass or throw the basketball at an angle to the rebound net. The rebound net rebounds the ball at a complimentary angle, while the player runs to catch the rebounded ball. While existing basketball rebound nets have met with varying degrees of success, engineering challenges remain in providing a basketball rebound having improved characteristics and performance.

SUMMARY OF THE INVENTION

[0002] A rebounder may include a frame having tubes in the shape of an isosoles trapezoid with rounded corners. A net is attached to the frame. A rear support may be pivotally attached to a top of the frame, and a support bar pivotally attached to a side of the frame and to the rear support. The rear support is movable to a folded position where the rear support is near parallel to, and/or in contact with the frame. The rear support is also movable to an unfolded position where the rear support holds the frame and net at an acute angle to the floor or ground.

BRIEF DESCRIPTION OF THE DRAWINGS

- [0003] FIG. 1 is a front, top and left side perspective view of a basketball rebounder.
- [0004] FIG. 2 is a rear, top and left side perspective view of the basketball rebounder shown in FIG. 1.
- [0005] FIG. 3 is a front and top and left side perspective view of three of the basketball rebounders of FIGS. 1 and 2 attached together to form a rebound wall.
- [0006] FIG. 4 is a perspective view of the floor block shown on the rebounder of FIGS. 1 and 2.
- [0007] FIG. 5 is a front view of the rebounder shown in FIGS. 1 and 2.
- [0008] FIG. 6 is a rear view of the rebounder shown in FIGS. 1 and 2.
- [0009] FIG. 7 is a left side front view of the rebounder shown in FIGS. 1 and 2.
- [0010] FIG. 8 is a top view of the rebounder shown in FIGS. 1 and 2.
- [0011] FIG. 9 is a bottom view of the rebounder shown in FIGS. 1 and 2.
- [0012] FIG. 10 is a front, top and left side view of the framework of the rebounder shown in FIGS. 1 and 2.
- [0013] FIG. 11 is a front, top and left side view of the net material of the rebounder shown in FIGS. 1 and 2.
- [0014] FIG. 12 is a perspective view of a snap clamp.

DETAILED DESCRIPTION

[0015] As shown in FIGS. 1 and 2, a rebounder 20 may be described as having a framework 22 including a frame 24 and a base 26 for supporting the frame 24. The frame 24 may be provided in the shape of an isosoles trapezoid with rounded

corners. The frame 24 has a top or first side 64 that is parallel to, and longer than, a bottom or third side 60 of the frame. The frame 24 also has a second or left side 66, and a fourth or right side 68 that is not parallel to the left side, and has the same length as the left side. As shown in FIGS. 1 and 5, the left and right sides of the frame diverge away from each other in the direction from the bottom to the top of the frame, with an angle BB between them typically in the range of 30 to 60 degrees. The frame 24 may be formed by one or more metal or plastic hollow tubes. The top of the frame may be 1.5 to 6 times longer than the bottom of the frame.

[0016] Referring to FIGS. 1, 2 and 11, a net 50 is attached to the frame 24, optionally using elastic ties 52 on all sides of the frame 24. The net 50 may be an elastic mesh material, with the net generally having 1-5 cm openings between opposing strands of the net. The net 50 may be shaped to generally match the shape of the frame. In the example shown, the net is also an isosoles trapezoid, with the corners cut off to provide a straight or flat edge 54, shown in FIG. 8, between adjacent sides of net. The flat edges 54 may have a length of 3-30 or 5-15 cm. As shown in FIG. 1 a tie 52 may be located at each end of each flat edge. As a result, substantially all areas of the net are held in tension, and the net is stretched flat in the plane of the frame.

[0017] The base 26 includes a rear support 28 and support bars 32, as shown in FIG. 2. The rear support 28 may be U-shaped with the ends of the rear support attached to the top of the frame via pivot attachments 30. A front end of each support bar 32 is attached to the side of the frame 24, also using a pivot attachment. A rear end of the support bar 32 is pivotally attached to the rear support 28. In the example shown in FIG. 2, the support bars are attached at positions one-half to three-quarters of the height of the frame 24 and the support 28.

[0018] The support bars 32 may attach to the frame via frame snap clamps 48. A support snap clamp 38 may be used to hold the support bars 32 onto the rear support 28 when the framework 22 is folded.

[0019] Turning to FIGS. 1, 2 and 4, floor pads 40 may be provided on the framework 22. The floor pad 40 may have a tube clamp 42 on a flat base 44. The floor pads 40 may be a resilient material, such as rubber. As shown in FIG. 4, the floor pad 40 has a through opening in the tube clamp 42 smaller than the diameter of the tubes of the framework 22, so that the floor pads 40 clamp onto the framework 22.

[0020] Referring to FIG. 7, the effective length of the support bars 32 determines the position of the rear support 28, which in turn determines the angle EL of the frame and net relative to the floor. Typically, the support bars 32 are selected so that the angle EL is 30 to 60 degrees. The support bars may optionally have an adjustable length. The frame 24 may have a length DD ranging from about 90 to 180 cm, with LL greater than DD. The height HH of the rebounder varies depending on the angle EL. The rear support may be movable from a folded position where the rear support forms an angle of less than 10 degrees with the frame, to an unfolded position where the rear support forms an angle of 45 to 120 degrees with the frame.

[0021] FIG. 7 is a left side view, with the right side view the same as the left side view, other than for the frame clips 56, which may be omitted from the straight round tubes of the left and right sides of the frame 24. The rebounder may then be symmetrical about its vertical centerline. FIG. 10 shows the framework 22 alone as a separate embodiment. The orthogo-

nal views of the framework **22** shown in FIG. **10** are the same as those views of it in FIGS. **1-3** and **5-9**. FIG. **11** shows the net **50** alone as a separate embodiment. As the net has substantially no meaningful thickness, the top, bottom, left and right sides of the net reduce to a straight line, and the back view is the same as the front view.

[0022] As shown in FIG. **1**, frame clips **56** may be provided on opposite sides of the frame **24**. As shown in FIG. **3**, two, three, or more rebounders **20** may be attached together to form a rebounder wall **70**, with the frame clips **56** securing the rebounders **20** to each other. The rebounder may also be used to rebound other types of spherical balls as well. Belts, ties or bands may be used in place of the frame clips **56**.

[0023] As used here, isosoles trapezoid includes shapes having flat or curved corners. Thus, a novel rebounder has been shown and described. Various changes and substitutions may of course be made without departing from the spirit and scope of the invention. The invention, therefore, should not be limited, except to the following claims, and their equivalents.

1. A rebounder comprising:

a framework including a frame and a base, with the frame having first, second, third and fourth sides, with the first side longer than and parallel to the third side, and with the second side not parallel to the fourth side, and with the second and fourth sides having the same length; the base including a rear support pivotally attached to the first side of the frame, and left and right support bars pivotally attached to the second and fourth sides of the frame, respectively, and to the rear support; and a net attached to and surrounded by the frame.

2. The rebounder of claim **1** wherein the first side of the frame has a length 1.5 to 6 times greater than the length of the third side of the frame.

3. The rebounder of claim **1** wherein the base is movable from a folded position where the support bar is substantially parallel to the frame, to an unfolded position where the support bar forms an angle of 30 to 60 degrees with the frame.

4. The rebounder of claim **3** wherein the rear support is substantially parallel to the frame when the base is in the folded position.

5. The rebounder of claim **1** wherein the net comprises an elastic mesh material, and with the net comprising an isosoles trapezoid having flat corners.

6. The rebounder of claim **5** with the net attached to the frame via a plurality of ties, and with a tie located at each end of each flat corner.

7. The rebounder of claim **1** with the net attached to first, second, third and fourth sides of the frame via elastic ties, and with the net flat and parallel to the frame.

8. The rebounder of claim **1** further including a front floor pad on the third side of the frame, and at least two rear floor pads on the rear support, and with each of the floor pads comprising a resilient material.

9. The rebounder of claim **8** with one or more of the floor pads having a tube clamp on a flat plate.

10. The rebounder of claim **1** with the frame and the base comprising hollow tubes.

11. The rebounder of claim **1** with the second side of the frame forming an angle with the third side of the frame of 30 to 60 degrees.

12. The rebounder of claim **1** further including a tube clamp on the second side of the frame adapted to attach to a frame of a second adjacent rebounder.

13. A net assembly, comprising:

a frame comprising one or more tubes in the shape of an isosoles trapezoid with rounded corners;

a rear support pivotally attached to a top of the frame, and a pair of support bars each having a first end pivotally attached to the rear support, and a second end attached to a tube clamp;

wherein the rear support is movable from a folded position where the rear support forms an angle of less than 10 degrees with the frame, to an unfolded position where the rear support forms an angle of 45 to 120 degrees with the frame; and

a net attached to and surrounded by the frame.

14. The net assembly of claim **13** further including two or more floor pads attached to the frame.

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