United States Patent

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[54] **GOAL FOR A BASKETBALL GAME**
8 Claims, 2 Drawing Figs.

[52] **U.S. Cl.** ..... **273/1.5(R)**, 273/105 (R)
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[50] **Field of Search** 273/1.5, 105

[56] **References Cited**

UNITED STATES PATENTS

532,132	1/1895	Zaremba	(273/1.5UX)
1,211,379	1/1917	Maisch	273/105
2,039,794	5/1936	Hayden	273/1.5
2,130,820	9/1938	Trumbull	273/1.5
3,365,196	1/1968	Miller	273/1.5

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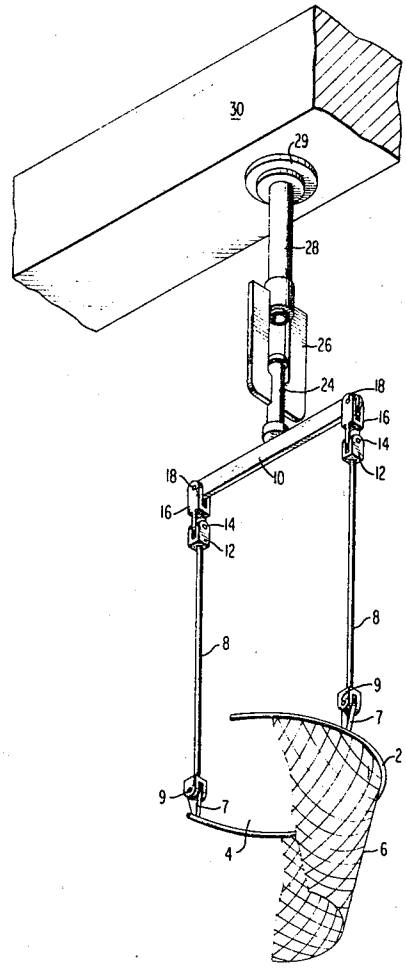
ABSTRACT: A goal for a basketball game is suspended from a pair of support rods which are connected to diametrically opposite points on the rim of the goal. The upper ends of the support rods are pivotally connected to an overhead support bar which is rotatable about a vertical axis extending through the center of the rim.



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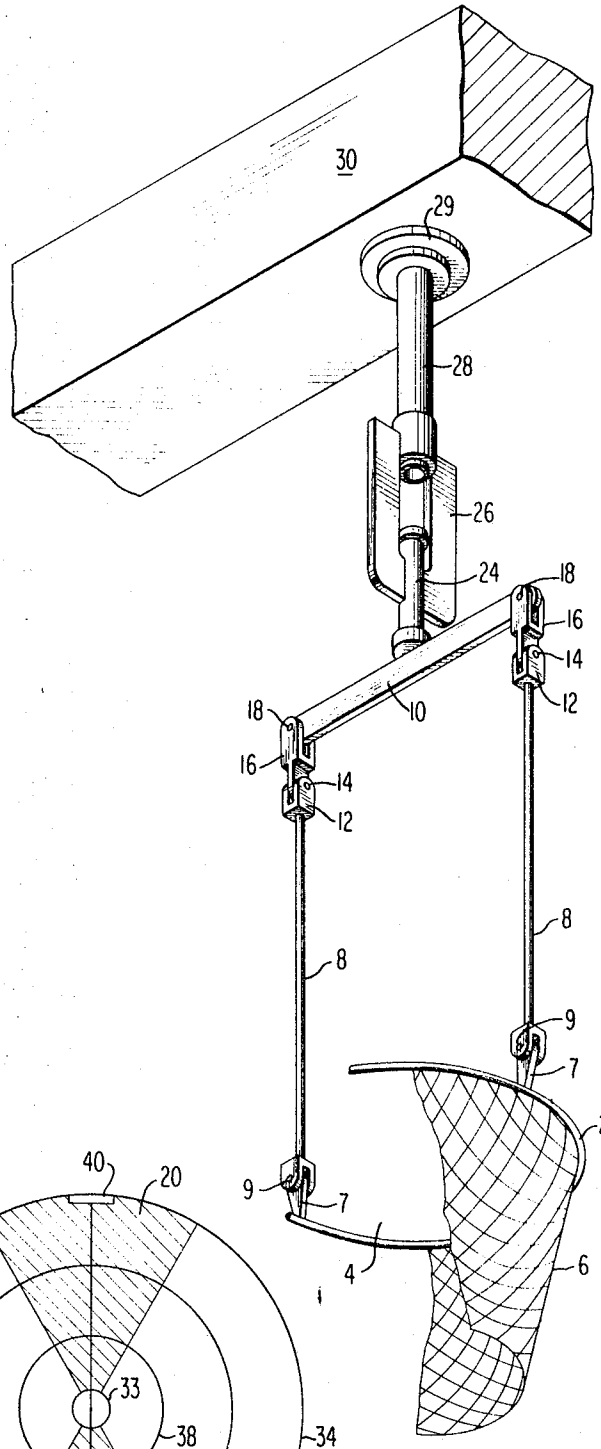
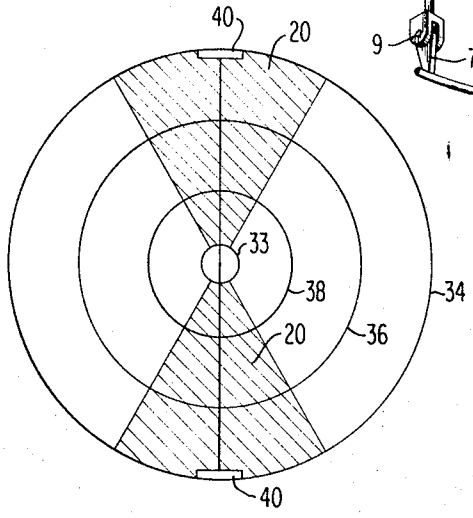


FIG. 1

FIG. 2



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GOAL FOR A BASKETBALL GAME

BACKGROUND

This invention involves a goal for a basketball game.

It is well known that conventional basketball goals are comprised of a horizontally oriented hoop or rim adjacent to a vertically oriented backboard. The presence of the backboard limits the shooting zone to the area lying radially through about 180° of the center of the rim. As used herein, the term "shooting zone" describes the area in the playing court from which a ball may be thrown at the goal without striking any intervening apparatus. In the conventional game of basketball, the orientation of the goal and the shooting zone does not change.

In one previous variant to the conventional basketball game, a rim without a backboard is supported on a pedestal which stands at the center of the playing court. When using such apparatus, the shooting zone extends horizontally throughout 360° from the center of the goal. The location of the rim and the location of the shooting zone remain unchanged during the course of play.

SUMMARY

According to one aspect of the present invention, a movable obstruction member extends above and proximate to the rim, thereby limiting the area of the shooting zone. Preferably, but not necessarily the obstruction is connected to the rim. The mobility of the obstruction causes it to change its position when struck by a ball during play, thus changing the location of the shooting zone. This variation introduces on an element of chance which requires different playing tactics than are used in ordinary basketball.

Another phase of the invention involves a pair of obstructions which extend upwardly from diametrically opposed points on the rim. This arrangement results in a unique pattern of the shooting zones in the playing field. Essentially, this pattern includes a pair of sectors which are symmetrically located on opposite sides of a vertical plane through the obstructions. Preferably the obstructions are rods which suspend from rim from an elevated support, so that the playing court directly below the rim will be unobstructed. Also, it is preferred to pivotally connect the rods to the elevated support so that the rim may swing after being struck by a ball to add another element of action to the game. As a further refinement, the elevated support may pivot about a vertical axis to provide the movable obstruction described in the preceding paragraph.

One object of the invention is to add an element of chance to a game of basketball by providing a movable obstruction near the rim in order to provide for variations in the shooting zone available to the players.

Another object is to provide a basketball goal which will present two opposed limited sectors from which a ball may successfully be shot at the goal.

Still another object is to avoid the presence of any obstacles in a playing court by suspending the goal from an elevated structure.

A further object is have a swingable rim, the center of which may shift horizontally when the goal is struck by a ball, thus adding a new element of excitement to the game. Additional advantages of this apparatus will occur to those skilled in the art and those persons playing the interesting and active game connected therewith.

DESCRIPTION OF THE DRAWINGS

The sole embodiment of the invention which is disclosed in the drawings incorporates all of the novel features of this invention, any of which may be utilized in diverse forms of apparatus.

FIG. 1 is a perspective view which illustrates a goal constructed according to the invention; and

FIG. 2 is a plan view of a playing court which may be associated with the goal of FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

As shown in FIG. 1, a goal constructed according to this invention includes a horizontally oriented circular rim 2 which has the elevation and diameter of a regulation basketball goal. This rim 2 defines an opening 4 through which a ball must pass in a usual fashion in order to score. A net 6 of conventional construction is attached to the rim.

The rim 2 is supported so that its central axis may deviate horizontally when it is struck by a ball. The supports which permit such movement include a pair of suspension rods 8 which at their lower ends are pivotally connected by bolts 9 to the diametrically opposed ears 7 on the rim 2. The upper ends of the rods are connected to an elevated support member such as support bar 10 in a manner which permits the rods to swing about two mutually perpendicular horizontal axes. The upper end of each rod 8 carries a bifurcated end piece 12 which pivots on a bolt 14 passing through the link 16. The link 16 is, in turn, pivotally connected to the bar 10 by the bolts 18. This particular arrangement permits the rim 2 to swing when it is hit by a ball. Any swinging movement about the bolts 14 will result in the slight inclination of the rim 2. Any horizontal movement of the rim in the plane defined by the two support rods 8 will not cause the rim 2 to incline due to the parallelogram linkage connected by the bolts 9 and 18 and formed by the rim 2, the bar 10 and the rods 8.

In order to permit the ball to pass downwardly through the rim, there is an unobstructed zone which extends vertically upwardly from the rim 2. Preferably, the vertical extent of this zone is at least 1½ times the horizontal dimension of the opening in the rim 2. As shown, the effective length of the suspension rods 8 is at least 1½ times the horizontal dimension of the opening of the goal.

The rods 8, in addition to supporting the rim 2, serve an important function by limiting the zones from which a ball may be successfully shot at the goal. The rods 8 form obstructions which limit the shooting zone to the shaded area 20 shown in FIG. 2.

The location of the shooting zones 20 changes during play due to the ability of the elevated support member 10 to rotate about a vertical axis which extends centrally through the opening of rim 2. This results in horizontal translation of the rods 8 in a circular path generated from the center of the rim opening. Such movement is provided by supporting the bar 10 from a vertically extending shaft which is rotatably mounted in a stationary bearing sleeve 24. The bearing sleeve 24 is supported by the bracket 26 and a column 28 which is held on an overhead beam 30 between a flange 29 and a screw cap on the upper surface of the beam 30.

One suitable arrangement for the playing court is illustrated in FIG. 2 where the circle 33 represents the location of the rim 2. A series of concentric circles 34, 36 and 38 are generated from a vertical axis through the rim 2. The outermost circle 34 preferably has a radius of about 25 feet and defines the boundary of the playing court. The circle 36 has a radius of about 12 feet and is also used when shooting free throws. The circle 38 encloses the 3-second zone.

The rules of play may provide for passing the ball into play from either of the side marks 40. Penalties are called as in regulation basketball games and free throws are made from any point outside the circle 36. Whenever possession of the ball changes during play, for example after a missed shot or an intercepted pass, the team taking possession must take the ball outside the circle 36 before shooting at the goal. Further detailed rules and the manner of scoring may be devised as necessary.

When playing a game using this apparatus, a misthrown ball which strikes an obstruction rod 8 or the bar 10 will, of course, cause the rotation of the entire assembly about the vertical axis of the bearing sleeve 24. This causes the shooting zones 20 to be relocated so that a player standing in what was a "dead" spot may then be in an ideal shooting position. This

aspect of the game, in addition to adding an element of chance, will call for a unique type of strategy in playing the game, making it important for players on each team to be distributed throughout the playing area. This features makes the game ideally suited to persons who either for physical reasons or by choice do not wish to engage in the extremely strenuous exercise which is required for conventional basketball.

This invention may, of course, be modified considerably while remaining within the bounds of the inventive concepts described in the following claims.

I claim:

1. Apparatus for a game of basketball comprising a goal centrally located above an unobstructed playing surface, said goal having a rim normally oriented in a horizontal plane to define an opening through which a ball may pass, and overhead support means for the rim including at least a pair of spaced apart suspension rods which extend upwardly from the goal to form obstructions to the passage of a ball toward the rim, said suspension rods forming the sole obstacles to movement of the ball from the playing surface to the rim.

2. Apparatus according to claim 1 wherein the effective length of the suspension rods is at least 1½ times the horizontal dimension of the opening, said rods being supported for horizontal translatory movement in a path generated from a vertical axis which extends centrally through the rim.

3. Apparatus according to claim 1 wherein the suspension rods are supported to permit their inclination and the consequent horizontal displacement of the rim upon being struck by a ball during a play.

4. Apparatus for a game of basketball comprising a goal having a rim normally oriented in the horizontal plane to define an opening through which a ball may pass, an obstruction member extending vertically above and adjacent to said rim to form an obstacle limiting the angular positions from which a ball may enter the opening, said obstruction member being movable in a circular path generated from a vertical axis which extends centrally of the opening, thereby to change the angular positions from which the ball may enter the opening, said rim also being mounted for swingable movement about an axis vertically displaced therefrom to permit horizontal displacement when struck by a ball.

5. The apparatus of claim 4 wherein the obstruction is attached to said goal, and the goal is bodily rotatable about said vertical axis to carry the obstacle in its said circular path.

6. The apparatus of claim 4 having a pair of said obstructions located at diametrically opposed portions of the rim.

7. Apparatus for a game of basketball comprising a goal having a rim normally oriented in a horizontal plane to define an opening through which a ball may pass, at least two obstruction members attached to and extending upwardly from the rim, an elevated support member, said obstruction members being pivotally connected both to the rim and to the elevated support member to form a parallelogram linkage for supporting the rim, said rim and the obstruction members being supported for free rotation during play about a generally vertical axis so that the obstruction members provide obstacles which are moved by the impact of a ball to change the angular positions from which a ball may enter the opening.

8. Apparatus for a game of basketball comprising a goal having a rim normally oriented in a horizontal plane to define an opening through which a ball may pass, an obstruction member attached to the rim and extending upwardly therefrom to support the rim, said rim and the obstruction member being supported for free rotation during play about a generally vertical axis, means pivotally supporting the obstruction member for swinging movement about a generally horizontal axis which is located above the rim a distance of at least 1½ times the horizontal dimension of the opening, said rim being nonrotatable with respect to the obstruction about an axis parallel to said horizontal axis; whereby the rim and the obstruction member will be rotated about the vertical axis by the impact of a ball against the rim, with the obstruction member providing a movable obstacle which changes the angular positions from which a ball may enter the opening, said rim also inclining and swinging about said horizontal axis when struck by a ball during play.