June 7, 1960 F. McCALL, JR 2,939,705

BASKETBALL PRACTICE DEVICE

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Fig. 1.

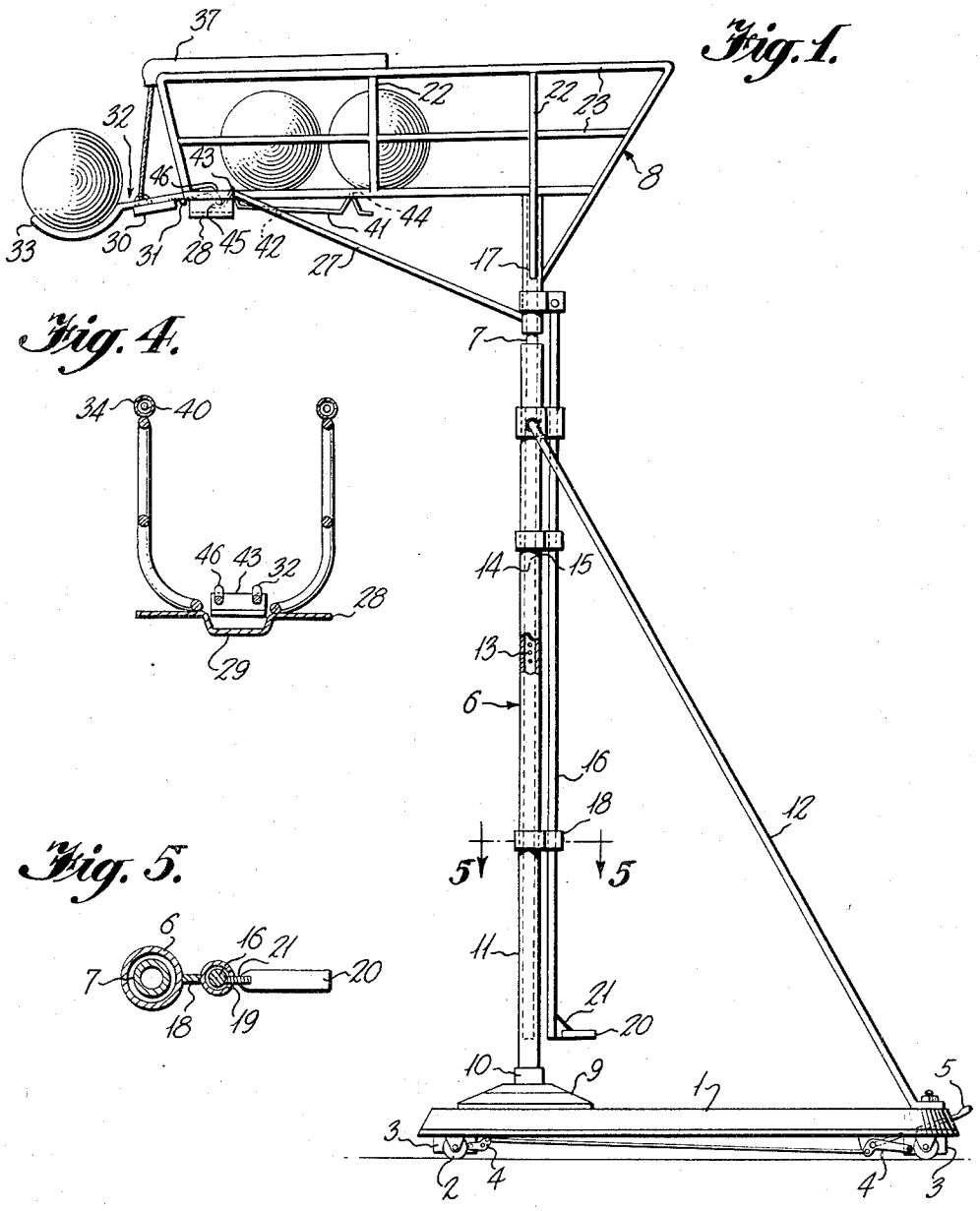


Fig. 4.

Fig. 5.

INVENTOR

Fred McCall Jr.

BY Mason, Fenwick & Lawrence

ATTORNEYS

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Fig. 2.

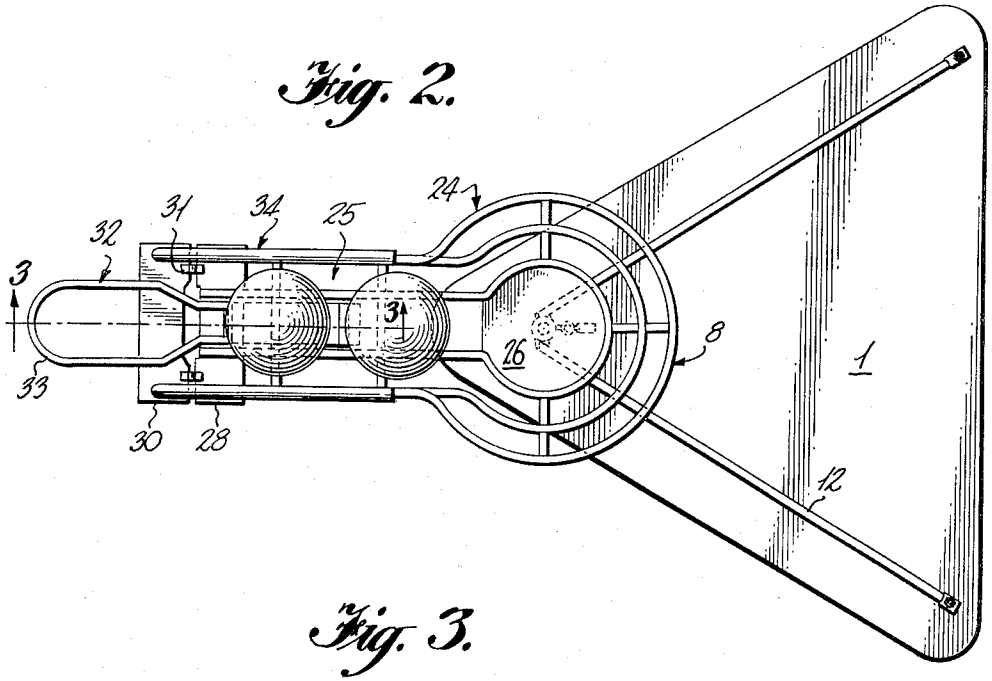
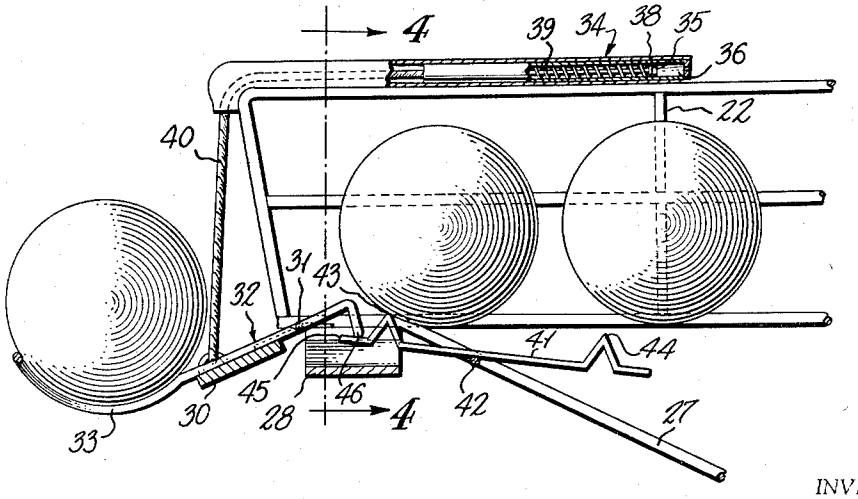


Fig. 3.



INVENTOR
Fred McCall Jr.

BY *Mason, Fenwick & Lawrence*
ATTORNEYS

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BASKETBALL PRACTICE DEVICE

Fred McCall, Jr., Buies Creek, N.C.

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5 Claims. (Cl. 273—1.5)

This invention relates to game apparatus, and particularly to such apparatus for use as a practice device to improve the skills of a basketball player.

In playing basketball, the quick recovery of balls which have missed the basket and bounce off of the backboard on which the basket is fastened or roll off the rim of the basket is essential to gain, or keep, control of the ball. A player to be successful in making this type of play must be able to take the ball high off the floor, or his opponents will be ahead of him. If he is playing beneath his own basket he should be able to take the ball and lay it up in the basket in a single leap and arm movement. This requires considerable practice if proficiency is to be gained, and it is relatively impossible to practice this alone on a regulation court.

The object of the present invention is to provide game apparatus which will enable one person, or a number of persons, to practice the art of retrieving basketballs from a position similar to that of a ball bouncing from the backboard behind a basket.

Another object is to provide apparatus of this nature which will hold a plurality of balls and present them in succession to a position where they can be taken by a player and having means simulating a basket into which the balls can be tossed after they are taken from the apparatus.

A further object is to provide such apparatus which can be adjusted as to height so that the ball-holding means may be raised as the players skill and jumping ability improve.

Other objects of the invention will become apparent from the following description of one practical embodiment thereof, when taken in conjunction with the drawings which accompany, and form part of, this specification.

In the drawings:

Figure 1 is a side elevation of a basketball practice apparatus which embodies the principle of the present invention;

Figure 2 is a top plan view of the structure shown in Figure 1.

Figure 3 is a vertical section through the ball holding and delivering portions of the apparatus, taken on the line 3—3 of Figure 2;

Figure 4 is a vertical transverse section taken on the line 4—4 of Figure 3; and,

Figure 5 is a horizontal section taken on the line 5—5 of Figure 1, illustrating part of adjusting structure.

In general, the invention consists of a portable structure, adjustable as to height, having a basket-like receptacle at the top with a passageway for balls from the basket to a ball-holding arm. Movement of the arm controls the feed of balls along the passageway.

Referring to the drawings in detail, the apparatus is shown as comprising a platform 1 having casters 2 upon which it can be rolled from place to place. Blocks 3 are mounted upon bell-cranks 4 beneath the platform and may be lowered by pedal 5 to contact the floor to make the platform rigid. This structure is conventional

on many types of portable equipment. Platform 1 carries a hollow pedestal 6 which telescopically receives a shaft 7 to adjustably support a basket structure 8.

The pedestal has a circular base 9 which seats upon the platform and is provided with a socket 10 into which the lower end of a tubular column 11 is threaded. Braces 12, fixed to the platform and the column 11, securely hold the column in upright position on the patform.

Shaft 7 slides within column 11 and is provided with a plurality of holes 13 spaced along its length to receive a pin 14 which passes through the openings 15 in the column. This permits the shaft to be held in selected position of adjustment relative to the column. Any convenient means may be utilized to raise and lower the shaft after pin 14 has been withdrawn. A control rod 16 is shown, clamped at its top and to a socket 17 depending from the basket structure 8 and in turn fixed to the top of shaft 7. Rod 16 slides through guides 18 fixed on the column 11. The guides 18 are slotted, as at 19, and the rod has an operating handle 20 having a plate 21 attachment to the rod. The plate 21 is thin enough to pass through the slot 19 in the guides as the rod is raised and lowered. When the basket has been adjusted to desired height, pin 14 will be reinserted in holes 15 and registering hole 13 in the shaft to lock the apparatus in adjusted position.

The basket is formed of bent metal rods serving as shaping ribs 22 and basket and passageway defining rods 23 welded to the ribs 22. The entire cage-like structure forms a circular basket area 24 at one end and a rectilinear passageway 25 leading from the basket area. A circular horizontal plate 26 is fixed to the bottom rod 23 to which the supporting socket 17 is secured. Braces 27 connect to the socket at points below the plate and to the skeletal framework of the basket structure to rigidify the socket and to hold the basket structure slightly declining from the basket area to the end of the passageway.

The outer ends of the bottom rod 23 are bridged by a plate 28, recessed at its center between the rod ends as at 29 for a purpose to be described. To the plate 28, a second plate 30 is connected by hinges 31. Plate 31 carries a projecting arm 32, formed from a rod bent to provide a ball-receiving loop 33. Balls drop in the basket area 24 roll along the passageway 25 and seat in the loop 33 to be taken by the players during practice. Arm 32 is held against free downward swinging about its hinges by means of check mechanism 34. The check may be of any suitable type and is shown as comprising pistons 35 mounted in cylinders 36 in tubular supports 37 fixed to the top of the cage structure adjacent the ball-receiving loop 33. Pistons 35 will carry pump leathers 38 which will permit the pistons to move quickly in one direction and retard movement in the opposite direction. Springs 39 in the cylinders 36 force the pistons back after movement. The pistons are connected to the ball-receiving loop by cables 40 so that pivotal movement of the loop will cause action of checks. By this means, the loop may be swung downwardly easily as a ball is taken, but the return movement will be slowed to prevent shock.

Movement of the arm 32 controls movement of the balls from the passageway to the loop 33. To this end, a trip lever 41 is hingedly connected, as at 42, beneath the passageway. The hinge point is off-center with respect to the trip lever so that the lever will hang to the rear and its front end will lift if unrestrained. The lever is provided with projections 43 and 44 at its front and rear to move into the path of balls rolling along the passageway to hold them as the level is tilted. The front end of the lever has a projecting lip 45 to be contacted by the downturned rear ends 46 of the loop 33 as the loop rises. This will depress the forward end of lever 41 lowering the projecting stop 43 so that a ball can move onto loop 33. At the same time the rear projection

44 is raised into the path of the next succeeding ball to hold it against movement onto the trip. When a ball moves into loop 33, the loop will swing slightly downwardly relieving pressure of the ends 46 upon the lip 45 and permitting the lever to swing by gravity lowering the rear stop 44 to permit a ball to roll over the trip and raising the front stop to prevent the ball from moving to the loop 33.

In using the device, it is rolled to any desired spot where practice is to be held. Pedal 5 is actuated to lower blocks 3 to slightly lift the platform and raise the casters from the floor. The height of the basket can be adjusted and the basket filled with balls. Practice can then begin. A player will move forward, jump and take the ball from the loop 33 and toss it into the basket area. As he pulls the ball downwardly, the arm 32 is free to swing downwardly, moving the piston 35 of the check mechanism. When the ball is removed, the arm will be drawn back to its upper position by the controlled action of the check. As the arm lifts, the downturned ends 46 contact lip 45 and tilt the trip lever moving the stop 43 from in front of the ball over the trip so that the ball may roll into the loop 33. At the same time, the rear stop 44 will be lifted to prevent the next ball from rolling over the trip. When a ball enters the loop its weight causes the arm to swing down slightly. This will be enough to allow the trip lever to tilt in the opposite direction lowering stop 44 to permit a ball to roll over the trip and raising stop 43 to prevent it from rolling into the loop 33. This operation can be continued as long as practice is desired. From time to time as a player becomes more proficient, the basket can be raised to increase the distance a player must jump to reach a ball in the loop.

While in the above one practical embodiment of the invention has been disclosed, it will be apparent that the details of construction shown and described are for purposes of illustration and the invention may take other forms within the scope of the appended claims.

What is claimed is:

1. A basketball practice device comprising, a cage, support means to mount the cage at an overhead position above a playing floor, the cage defining a basket area for receiving basketballs tossed from the playing floor and a rectilinear passageway open to and extending declinedly from the basket area and terminating in an open end, an arm having a ball seat thereon pivotally connected for vertical movement to the cage adjacent the open end of the passageway to receive balls which are tossed into the basket area and roll down the passageway, and means to yieldingly support the arm with the ball seat in the ball-supporting position whereby a basketball may be supported in unconfined overhead position adjacent the basket area to be retrieved by a player jumping from the playing floor.

2. A basketball practice device as claimed in claim 1 wherein there are means adjacent the open end of the passageway biased to hold balls against movement out of the passageway and movable by the arm to release the balls when the arm is in ball-receiving position.

3. A basketball practice device as claimed in claim 1 wherein the means to yieldingly support the arm includes shock absorbing means arranged to prevent rapid rebound of the arm to ball-supporting position after downward tilting movement.

4. A basketball practice device as claimed in claim 1 wherein the support means comprises a base and a two-piece pedestal mounted on the base and vertically adjustable to vary the height of the cage above the playing floor.

5. A basketball practice device as claimed in claim 4 wherein the base is mounted on rollers to permit movement of the practice device over the playing floor, and the base carries means to hold the base against movement over the floor.

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