Nov. 11, 1969 W. M. GARLINGTON 3,477,714

BASKETBALL BACKBOARD AND HORIZONTALLY MOVABLE BASKET

Filed Oct. 15, 1965 2 Sheets-Sheet 1

Fig. 1.

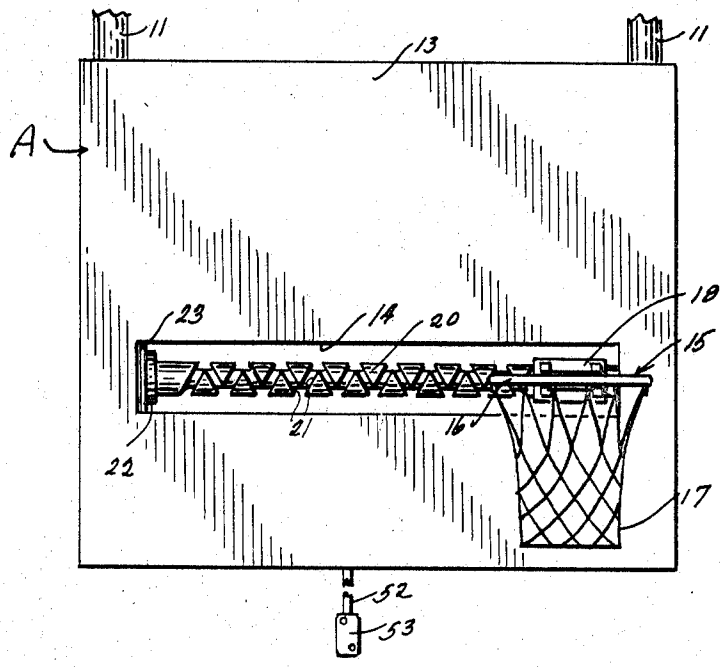


Fig. 2.

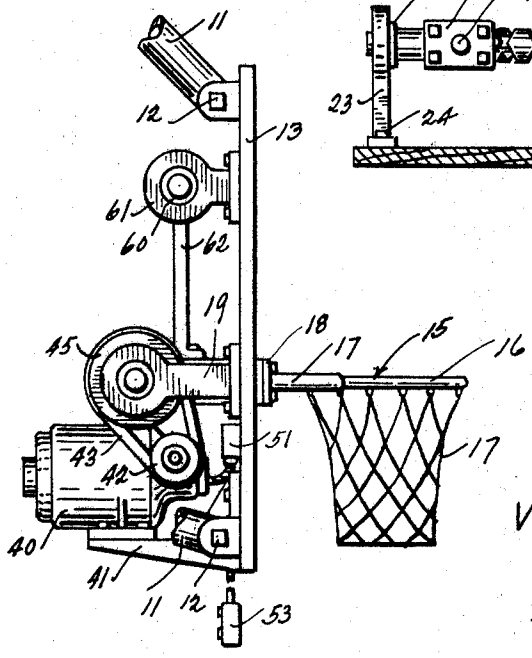
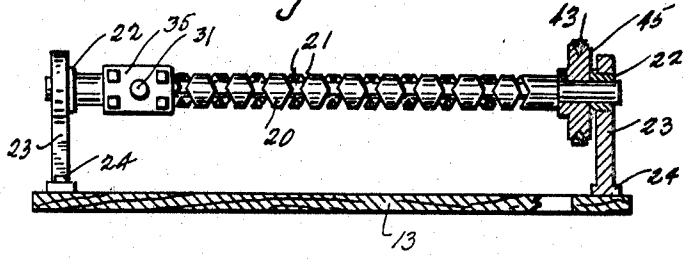


Fig. 4.



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Fig. 3.

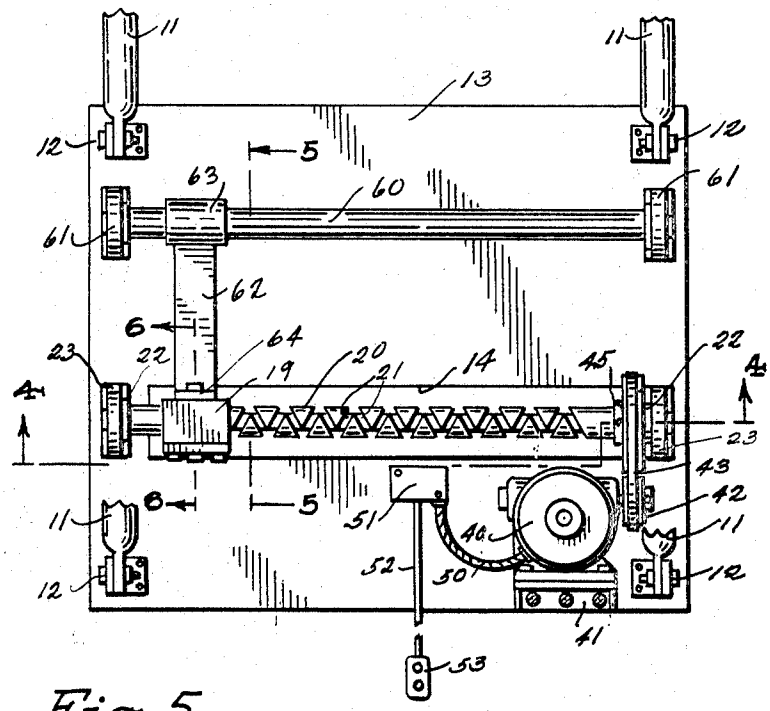


Fig. 5.

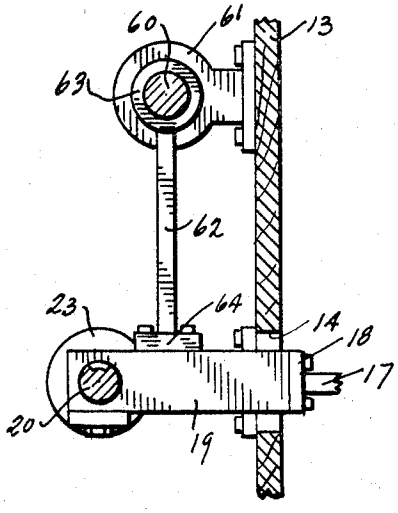


Fig. 6.

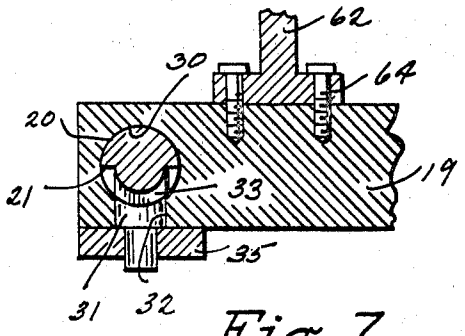
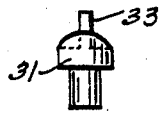


Fig. 7.



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BASKETBALL BACKBOARD AND HORIZONTALLY MOVABLE BASKET

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U.S. Cl. 273—1.5 6 Claims

ABSTRACT OF THE DISCLOSURE

A game in which a conventional basketball game basket including a rigid hoop or ring is located in horizontal position and travels in a lineal path back and forth for the same distance in each direction and without vertical rocking or tilting motion for the purpose of rendering it more difficult for players to loop a basketball through the basket ring.

This invention relates to improvements in games, such as basketball, but with improvements thereto whereby it is rendered more difficult to score than with conventional basketball equipment.

A further object of this invention is the provision of game equipment having many of the characteristics of conventional basketball game equipment but having means rendering it more difficult for a player to drop the ball into the basket due to the fact that the basket is movable across a backboard for the purpose of testing the skill and ability of a player in the matter of timing.

A further object of this invention is the provision of an improved basketball game partaking of the characteristics of conventional basketball equipment in that a conventional basketball is used with a conventional basket and backboard, but in which the basket is rectilinearly moved back and forth across the backboard, rendering it more difficult to hit the basket for scoring.

It is a well known fact that skilled basketball players have no difficulty in scoring. It is quite common for teams in competition to each secure high scores. It is therefore a purpose of this invention to activate the basket. In other words, considerable additional skill is required of the players which, in addition to solving the problems of speed and direction, requires precise timing for the player to hit the moving basket for scoring purposes. With this type of equipment greater interest will be created for spectators and the scoring of the sides will remain in much lower brackets than with conventional basketball equipment.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the accompanying drawings, forming a part of this specification, and wherein is shown a preferred embodiment of the invention:

FIG. 1 is a fragmentary front elevation of the frame structure and backboard of basketball equipment, illustrating the basket suspended thereby upon improved means which enable the basket to linearly move in a reciprocatory path.

FIG. 2 is a side elevation of the equipment shown in FIG. 1 showing also the basket operating means at the rear of the backboard.

FIG. 3 is an elevation of the mechanism at the rear of the backboard showing the means for moving the basket linearly.

FIG. 4 is a cross sectional view taken substantially on the line 4—4 of FIG. 3, showing the reverse thread type of driving shaft used for conveying the basket in a reciprocatory manner at the front of the backboard.

FIGS. 5 and 6 are enlarged cross sectional views taken substantially on the lines 5—5 of FIG. 3.

FIG. 7 is a side elevation of a key used with the means for moving the basket across the front of the backboard.

In the drawings, wherein similar reference characters designate corresponding parts throughout the several views, the letter A may generally designate the improved basketball equipment. It preferably includes supporting framework which may vary, and as shown, may include the supporting struts **11**, as shown in FIG. 3, adjustably connected at **12** to the rear of the backboard **13**. For purposes to be subsequently described, the backboard **13** is provided with an opening **14** of rectangular elongated horizontal shape extending therethrough from front to back.

The basket **15** is conventional, including a hoop or ring-shaped portion **16** and netting **17**, if desired. The same includes the rearwardly extending portion **17a** provided with means **18** to detachably connect it to a supporting arm **19**. The arm **19** is adapted to extend transversely through the backboard opening **14** and supports the basket at the front of the backboard as shown in FIGS. 1 and 2. This arm **19** and the basket are adapted to travel linearly across the backboard. To that end, the means for such accomplishment comprises a driven shaft **20** which is reversely threaded at **21**, much in the same manner as in a level-wind fishing reel. The shaft **20** is supported in bearings **22** mounted upon brackets **23** which are secured at **24** to the rear of the backboard, as shown in FIG. 4. The reverse threaded shaft **20** rotatably extends through an opening **30** in the basket supporting arm **19**, as shown in FIG. 6. The arm **19** supports a key or nut **31** in the opening **32** in the arm **19** and is provided with an arcuate key projection **33** which extends into the threads relatively reversely positioned **21**. The key **31**, of course, is permitted to oscillate according to the relative angle or degree of the opposite threading on the shaft **20** and it is so constructed that it is detachably held in place by a plate or latch **35**, as shown in FIG. 6.

Guide means to support the basket arm **19** is provided. It consists of a stationary frame including a horizontal guide rail **60** supported on the rear of the backboard **13** by brackets **61**; these brackets rigidly positioning the guide rail on a definite axis parallel to the plane of the backboard. The arm **19** is provided with a vertically positioned connecting member **62** having a top sleeve **63** which embraces the guide rail **60** and slides therealong. At its lower end the member **62** is detachably connected as at **64** to the arm **19** between the reversibly threaded screw member **20** and backboard **13**.

The shaft **20** is rotated at the desired speed by means of an electric motor **40** mounted on a shelf or bracket **41**, secured to the rear of the backboard **13**. A drive shaft **42** of the motor **40** is provided with a pulley and a belt **43** trained thereover which is also trained around a pulley **45** keyed on the shaft **20** as shown in FIG. 4. The electrical wiring for the motor **40** designated at **50**, is extended into a box **51** wherein a spring actuated roller (not shown) may be provided, if desired, for supporting an extension cord **52** having switch means **53** at the end thereof to permit current control flow to the motor **40**.

The operation of the improved basketball game equipment will be apparent from the foregoing. Means must be provided to insure that the shaft **20** rotates at the proper rotation for degree of movement of the basket across the backboard. With the switch "on" the motor rotates the shaft **20** and through the key or nut **31** the arm **19** is fed along the opening **14** and therewith the basket **15** is moved. The basket **15** moves horizontally and does not vary as to distance between the backboard and the opening of the hoop **16**.

It will be obvious from the foregoing that the improved basketball game presents hazards to easy scoring which are not present in conventional basketball equipment. Greater skill and ability in required upon the part of the players and precision in timing and coordination of speed and direction are important in order that players from varied distances upon the floor can throw a ball into the basket.

Various changes in the size, shape and arrangement of parts may be made to the form of invention herein shown and described, without departing from the spirit of the invention or scope of the claims.

I claim:

1. In basketball game equipment the combination of a backboard, means for supporting the backboard in vertical position, horizontal guide means mounted to the rear of the backboard, a traveling frame mounted on the guide means for reciprocatory horizontal travel therealong, a motor, a basketball basket mounted in position on the traveling frame and located at the front of the backboard, and means connecting the motor with the traveling frame to reciprocate the traveling frame in a definite horizontal nontilting path of the same predetermined length in each direction.

2. The basketball game of claim 1 in which the last mentioned means includes a horizontal shaft provided with reverse spiral threads rotatably supported by the backboard, key means operating in the reverse threads of the shaft for reciprocatory travel therealong as the shaft rotates, the key means being supported by said traveling frame for travel therewith.

3. In a basketball game equipment the combination of a backboard having a horizontal opening therethrough, a basketball basket located at the front of the backboard and having an arm rigidly connected therewith which extends through said opening to the rear of the backboard, a horizontal shaft provided with relatively reversed threads rotatably supported in horizontal position upon the rear of said backboard, key means mounted on said arm and slidably extended into said reverse threads for travel along said threads as the shaft rotates for linearly

reciprocating the basket in a horizontal nontilting position at the front of the backboard, motor means to rotate the shaft in one direction of rotation, and guide means mounted on the backboard for supporting said arm and the key against rotation about said shaft as they travel along the backboard.

4. In a basketball game equipment the combination of a vertical backboard, a basket including a ring through which a player can loop a basketball for goal scoring purposes, means mounting the ring at the front of the board in horizontal position including means for reciprocatory horizontal linearly nontilting movement of the ring relative to said backboard for the same length of travel in each direction, and motor means for operating said last mentioned means.

5. The basketball game equipment of claim 4 in which the means for reciprocatory movement of the ring includes a horizontal rotary shaft with reverse threads thereon mounted on the backboard, and a key operating in said threads and connected to the ring for lineal travel therewith in a nonrotatably relation about said shaft.

6. The basketball game equipment of claim 5 in which guide means is provided on the backboard for slidably supporting the key and ring for reciprocatory nonrotary travel.

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273—105.2