Jan. 22, 1963 R. CARVER ETAL 3,074,720

TOY SIMULATING PART OF A BASKETBALL GAME

Filed Oct. 14, 1959 3 Sheets-Sheet 1

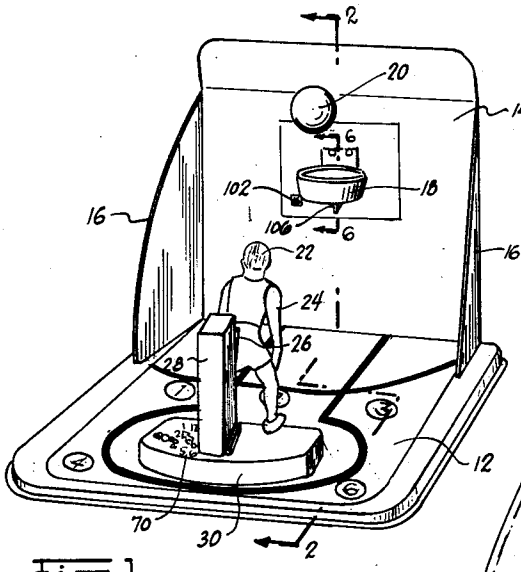


Fig. 1.

Fig. 2.

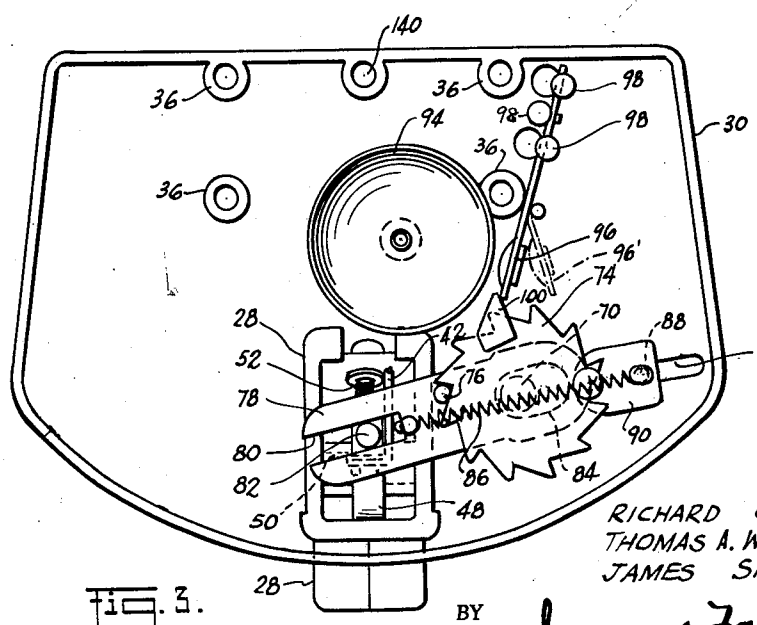


Fig. 3.

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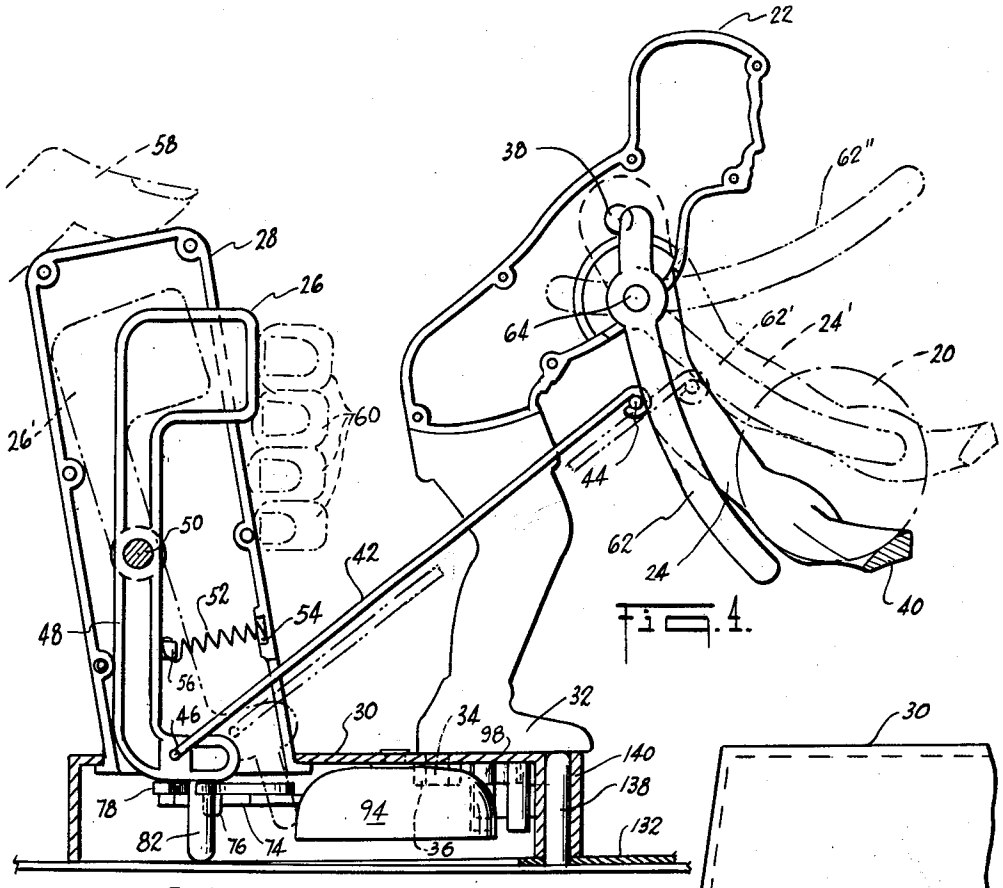


Fig. 4.

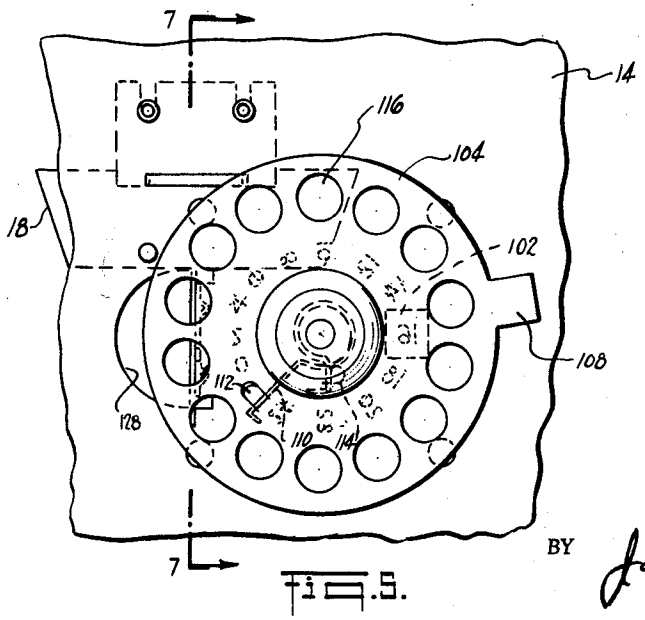


Fig. 5.

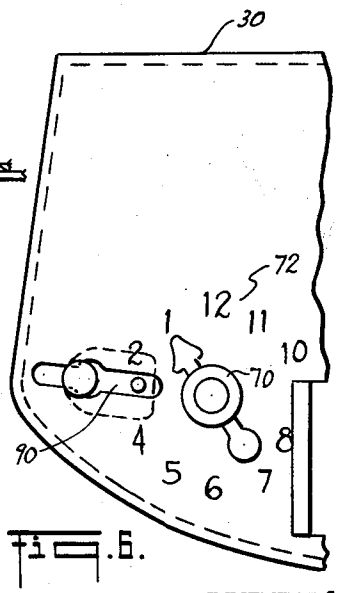


Fig. 6.

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Filed Oct. 14, 1959 3 Sheets-Sheet 3

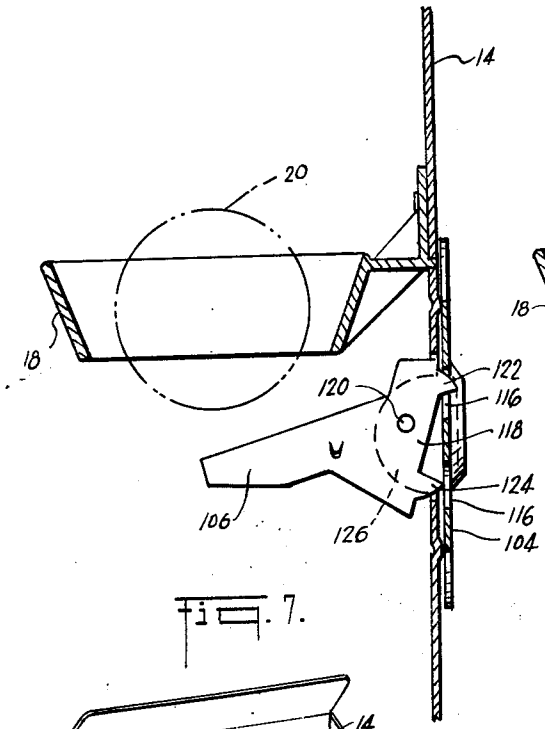


Fig. 7.

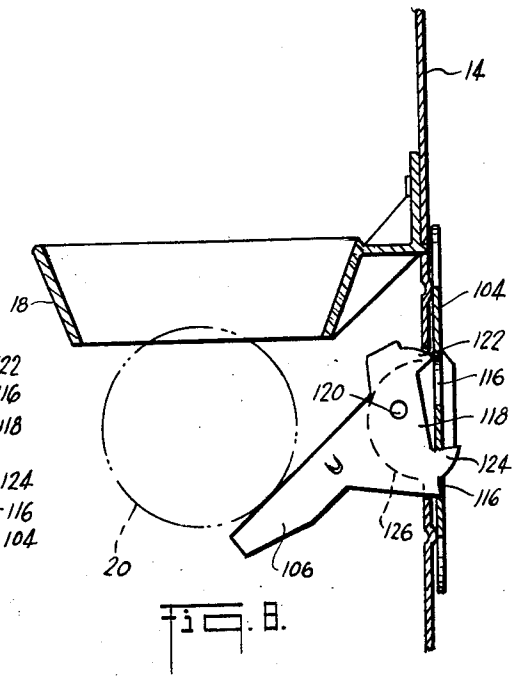


Fig. 8.

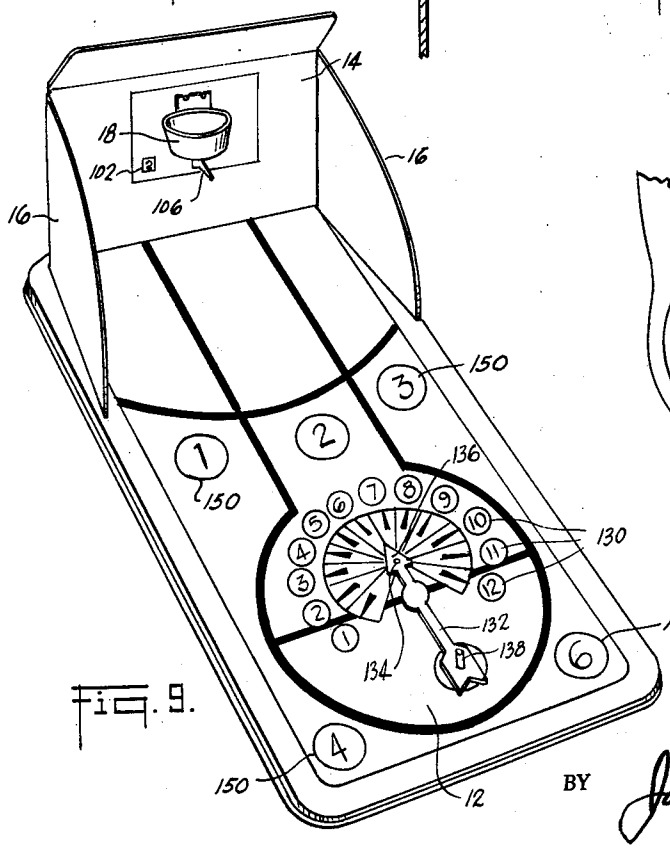


Fig. 9.

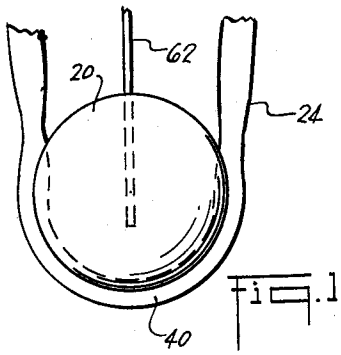


Fig. 10.

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TOY SIMULATING PART OF A BASKET-BALL GAME

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Filed Oct. 14, 1959, Ser. No. 846,293
9 Claims. (Cl. 273—35)

This invention relates to toys, and more particularly to a toy which simulates a part of a game of basketball.

The toy comprises a base representing one end of a basketball court, a figure representing a basketball player, a ball, an elevated basket, and means to cause the figure to throw the ball toward the basket. Those playing the game may compete in varying ways, generally by taking turns for a maximum score of successfully thrown baskets.

The primary object of the invention is to generally improve toys of the above described character. A more particular object is to provide the toy with means for automatically counting the number of throws or attempted baskets made by the player. Thus each player may be allowed a predetermined number of throws, which are easily kept note of on the throw indicator. An alarm then may sound.

A further object of the invention is to provide an automatic score counter. This preferably is mounted on a backboard supporting the basket, and makes use of a feeler or sensing device in the path of a ball falling through the basket. The score counter responds automatically to the sensing means and indicates the number of successfully thrown baskets.

Another object is to improve the ball throwing action of the figure, and for this purpose it is provided not only with pivoted arms adapted to support a simulated basketball, but also a flipper disposed between the arms, with linkage so arranged that the flipper turns upward through a greater angle than the arms.

In accordance with a further feature and object of the invention, the player is mounted on a platform which is movable on the base. The arms are actuated by manually operable means, including a handgrip fixedly mounted on the platform behind the player, and this may be used not only to actuate the arms, but also to preliminarily position or orient the platform and player in order to aim the throw toward the basket.

Still another object of the invention is to heighten interest and variety by providing different positions for the player, including a swivel position selector, so that competitors may shoot baskets from the same varied positions on the base. For this purpose the base is provided with position numbers and a movably mounted locating pin, while the platform has a socket dimensioned to receive the locating pin, thereby determining differently numbered swivel positions of the player on the base. In each of these positions the operator is free to aim the throw about the locating pin as a center.

To accomplish the foregoing general objects, and other more specific objects which will hereinafter appear, our invention resides in the basketball toy elements and their relation one to another, as are hereinafter more particularly described in the following specification. The specification is accompanied by drawings in which:

FIG. 1 is a perspective view showing a game embodying features of the invention;

FIG. 2 is a side elevation taken approximately in the plane of the line 2—2 of FIG. 1, with the figure omitted;

FIG. 3 is a bottom plan view of the platform which carries the figure;

FIG. 4 is a partially sectioned side elevation of the player;

FIG. 5 is a fragmentary rear view of the backstop and score counter;

FIG. 6 is a fragmentary plan view of the platform and the throw counter thereon;

FIG. 7 is a fragmentary vertical section taken in the plane of the line 7—7 of FIG. 5;

FIG. 8 is a similar section, showing the escapement rocker in depressed position;

FIG. 9 is a perspective view of the base showing the swivel position selector; and

FIG. 10 is a fragmentary front view of the simulated hands of the figure.

Referring to the drawing, and more particularly to FIG. 1, the toy comprises a base 12 which represents one end of a basketball court. This is provided with a backstop 14 and preferably with side walls 16. A simulated basket 18 is mounted on the backstop, and a ball 20 is thrown toward the basket by a figure or player 22. The player has pivoted arms 24, and these throw the ball upwardly when actuated by manually operable means, in this case a trigger 26 carried near the upper end of a hand grip 28 which is fixedly mounted on a platform 30 which carries the figure 22. The platform is movable over the surface of base 12, and may assume different positions, and may be aimed in different directions.

The action of the player may be described with reference to FIG. 4 of the drawing. The figure 22 is preferably in a crouching position, and its feet 32 are fixedly secured to platform 30, as by use of a cement or solvent. The player and platform both are made of a molded plastics material, while the base and backstop are made of sheet metal. To accurately locate the figure on the platform it may be provided with locating pins 34 received in mating sockets 36, two for each foot or four in all. FIG. 3 shows the four sockets 35.

The body of the figure remains stationary except for the arms 24 which are pivoted on the body at 38. The arms are joined at the simulated hands, as indicated at 40 (FIGS. 4 and 10), and the resulting U-shaped formation is made large enough to receive the simulated basketball 20 therebetween. The downward position of the arms is limited by a rigid wire link 42, the upper end of which is pivoted on a cross bar 44 which extends across and connects the arms. The lower end of link 42 is pivoted at 46 on the lower end of a generally upright lever or trigger 48. This is pivoted within the hand grip 28 at 50, and its upper end projects forward from the hand grip 28 to act as the previously mentioned trigger 26.

The hand grip 28 is made of two halves to provide a hollow post which is generally rectangular in cross section. In FIG. 4 only the far half of the post is shown, the near half being removed to expose the otherwise concealed lever 48. The latter is urged to the position shown by a return spring 52 which is a compression spring disposed between a socket 54 in the front wall of hand grip 28 and a locating pin 56 on lever 48.

The grip 28 may be preliminarily seized in one hand as shown by the thumb 58 and fingers 60, with one or two fingers bearing against trigger 26, and by pushing the trigger rearwardly the arms of the figure are swung upward from the solid line position 24 to the broken position 24', thereby tossing the ball toward the basket.

For improved ball tossing action the player is additionally provided with a flipper 62 which is disposed between the arms 24 and which is pivoted at 64. The cross bar 44 of link 42 bears against the flipper 62, and when the trigger is operated, the flipper and arms are both thrown upward with the ball. However, because the pivot 64 is much nearer the cross bar 44 than is the arm pivot 38, the flipper is turned upward through a greater

angle than the arms, so that the flipper changes from a position beneath the arms at the beginning of a throw, as shown in solid lines at 62, to a position between the arms as shown at 62', and then to a position a little above the arms (not shown) at the end of the throw. (The flipper is free to fly even further, as shown in broken lines at 62''.) The effect is that the flipper increases the toss or throw of the ball.

Reverting to FIG. 1, the platform 30 has a counter, generally designated 70, which automatically counts the number of throws made by the player. This counter is shown to larger scale in FIG. 6 of the drawing, referring to which the platform 30 has a ring of numbers 72, in this case from 1 to 12. There is a pointer 70 which turns step by step to the twelve different numbers of the scale.

Referring now to FIG. 3, the pointer is turned by a ratchet wheel 74. This, in turn, is actuated by a pin 76 acting as a ratchet pawl, said pin projecting downward from a flat pawl arm 78 which is bifurcated or slotted at 80 to receive a pin 82 (see FIG. 4 also) which projects downward from the lower end of the trigger lever 48. The pawl arm 78 turns about the pivot 70 of the pointer and ratchet wheel, but it is slotted at 84 to afford some longitudinal movement of the pawl arm, thereby permitting its pin 76 to slide around the tooth of the ratchet wheel during its return movement. The arm 78 is normally urged toward the right by a pull spring 86, which is connected at its left end to arm 78, and at its right end to a pin 88 which is part of a check dog 90 which prevents return movement of ratchet wheel 74. The check dog is movable toward the right to permit forward passage of the teeth of the ratchet wheel, by reason of a slot 92 in which pin 88 is received. The pull spring 86 thus serves to draw both the pawl 76 and the dog 90 into engagement with the ratchet teeth.

FIG. 4 also shows the pin 82 of trigger lever 48 received in slotted pawl arm 78, and the pin 76 which acts as a pawl engaging the teeth of ratchet wheel 74.

Each time the trigger is actuated, the throw counter is advanced one number. Ordinarily each player is allowed a predetermined number of throws, in this case twelve, and a suitable alarm, in this case a bell, may be sounded when the twelve throws have been used. Reverting to FIG. 3, a bell 94 is mounted inside the hollow platform 30, and this is struck by a resilient striker 96, the other end of which is fixedly mounted between holding pins 98. The ratchet wheel 74 has a projection or lug 100 fixed thereon, and this is so dimensioned that it moves the tip of striker 96 and deflects the same to the right, as shown in broken lines in FIG. 3, whereupon it releases it for a sharp return movement to the left to strike the bell. The lug 100 is located to correspond to passage from numeral 11 to numeral 12, indicating completion of the last of the twelve throws.

The toy is additionally provided with a score counter to indicate the number of baskets actually made. In FIG. 1 the score is indicated through an opening or window 102, that is, in this case it is indicated on the backboard 14 at a point near the basket 18. FIG. 2 shows a score wheel or disc 104 which is rotatable behind the backstop 14, and which is advanced step by step by a feeler or sensing means 106 interposed in the path of a ball falling through the basket.

This mechanism may be described in greater detail with reference to FIGS. 5, 7, and 8 of the drawing. The wheel or disc 104 has a handle or projection 108 which may be used to turn the wheel back to zero score value. This is opposed by a coiled wire spring 110, one end of which engages the wheel at 112, and the other end of which is anchored on the backboard 14 at 114. The window which exposes the score value is indicated at 102, and it will be understood that the ring of score values on the front face of the wheel is at proper radius to be exposed in window 102.

The wheel is held against rotation by an escapement mechanism which releases it for movement one step at a time. The teeth of the escapement rocker cooperate with a ring of holes 116. In the present case, there are 16 holes, and the wheel has a corresponding number of score values to be exposed through the window 102.

Referring now to FIGS. 7 and 8, the sensing arm 106 is formed integrally with a rocker 118 pivoted at 120 and having spaced teeth 122 and 124. The wheel 104 is held against rotation by the tooth 122, as shown in FIG. 7, said tooth being received in one of the holes 116 previously referred to. The spring pressure of the wheel on the tooth serves to raise the sensor 106 to the position shown in FIG. 7.

When the ball 20 passes through the basket 18 it engages the feeler 106 and shifts it to the position shown in FIG. 8, at which time the tooth 122 is retracted from the wheel, while the other tooth 124 is advanced into another one of the holes 116. The teeth are so spaced that this permits the wheel to move one-half the desired distance.

When the ball falls away from the part 106 the latter is free to rise, and does so because of the force exerted by wheel 104 on the lower tooth 124. This moves the upper tooth 122 back itno engagement with the wheel, but at this time it enters the next higher one of the holes 116, and the wheel moves a half step to the position shown in FIG. 7. The depression and return of the rocker arm 106 thereby advances the wheel one full step, in two increments of a half step each.

Pivot 120 is carried on a bearing 126 which is struck forward from backboard 14. The opening from which the bearing has been excised is shown at 128 in FIG. 5.

As so far described, the position of the player on the base may be random, and the game may be played that way. However, to make the competition even, it is preferred to provide specific locations for the player on the base. In the present case there are six main positions, and twelve swivel positions. For the latter the base is provided with a position selector including numbers on the base, these numbers being shown in FIG. 9 as "1" thru "12," disposed on the arc of a circle, and indicated at 130. A swivel lever 132 is pivoted on the base at 134, and preferably has a pointer 136 which may be used to point to one or another of the numbers. Lever 132 also has an upwardly projecting locating pin 138.

Referring now to FIG. 4, the locating pin 138 on swivel lever 132 is received in a mating socket 140. FIG. 3 shows the same socket 140 at the forward edge of the platform 30. The hand grip 28 (FIG. 4) is located at the rear of the platform, and thus may be used to orient or aim the player as desired about the locating pin 138.

In addition to the twelve swivel positions, we further provide six main positions, indicated at 150 in FIG. 9. These have no special locating pin, except that the number "5" position corresponds to the pin 138 when the pointer 136 is between "6" and "7" as shown in FIG. 9.

The toy may be used in a number of different ways. In one game each player may shoot from any position he desires, with the figure secured to the locating pin. The score indicator is set to 0, and each player is allowed twelve shots, ending with the warning bell on the shooting mechanism. The score is registered on the score indicator.

In another game, each player is required to shoot each shot from a different numbered swivel position. The player starts with the arrow pointing to swivel position 1 and throws one shot, whereupon he moves the player slightly until the arrow is on swivel position 2, and he then fires a second shot, and so on, until twelve shots have been fired from the twelve swivel positions.

In still another game, the baskets may be shot from the marked areas painted on the court and numbered 1 thru 6. For this purpose the platform is removed from the locating pin and arrow. Here again the game may

require shooting from each of the marked areas, say two shots from each of the six areas.

Other games may be made up, including one using long and short shots, the long shot being from position 5, and if made, the same player may next attempt a short shot from position 2, but if the long shot is missed, then the competitor takes over. Each player shoots as long as he is successful, and loses the ball when he misses a shot.

It will be noted that substantially all of these games may be played with more than two players.

It is believed that the construction and method of operation of our improved basketball toy, as well as the advantages thereof, will be apparent from the foregoing detailed description. It will also be apparent that while we have described our invention in a preferred form, changes may be made in the structures shown without departing from the scope of the invention as sought to be defined in the following claims.

We claim:

1. A toy simulating a part of a game of basketball, said toy comprising a player, a ball, a backstop, a basket carried by said backstop, means causing the player to throw the ball toward the basket, means interposed in the path of a ball falling through the basket, and a score counter mounted on said backboard and responsive to said interposed means to indicate the number of baskets successfully thrown by the player, said score counter comprising a scoring wheel, resilient means tending to rotate the same in one direction, and an escapement rocker cooperating with mating means on said wheel to release the same for a step-by-step movement, the aforesaid means which is interposed in the path of the ball being operatively connected to said escapement rocker.

2. A toy simulating a part of a game of basketball, said toy comprising a player, a ball, a backstop, a basket carried by said backstop, means causing the player to throw the ball toward the basket, and a score counter mounted on said backboard to indicate the number of baskets successfully thrown by the player, said score counter comprising a wheel pivoted behind the backboard and carrying a ring of score numbers exposed through a window in the backboard, resilient means tending to rotate said wheel in one direction, an escapement rocker cooperating with mating means on said wheel to release the same for a step-by-step movement, and means including a part interposed in the path of a ball falling through the basket and operatively connected to said escapement rocker to cause a step of movement of the wheel to a higher score value for each basket made.

3. A toy simulating a part of a game of basketball, said toy comprising a player, a ball, a backstop, a basket carried by said backstop, means causing the player to throw the ball toward the basket, and a score counter mounted on said backboard to indicate the number of baskets successfully thrown by the player, said score counter comprising a wheel pivoted behind the backboard and carrying a ring of score numbers exposed through a window in the backboard, a spring biasing said wheel in one direction, an escapement rocker with spaced teeth cooperating with said wheel for permitting step by step rotation of the wheel, and means connected to said rocker and interposed in the path of a ball falling through the basket to afford one step of movement to a higher score value for each basket made.

4. A toy simulating a part of a game of basketball, said toy comprising a simulated basket, a simulated player in a crouching position, a small movable platform on which the player is fixedly mounted, a hand grip fixedly mounted on said platform behind said player, a trigger projecting from said hand grip, said player having arms pivoted thereon and adapted to hold the simulated basketball, and linkage between said trigger and said arms for causing the arms to swing upward and to toss the ball toward said basket, a flipper pivoted between said arms beneath the ball, said linkage causing said flipper to turn upward thru a greater angle than the arms.

5. A toy simulating a part of a game of basketball, said toy comprising a simulated basket, a simulated player in a crouching position, a small movable platform on which the player is fixedly mounted, a hand grip fixedly mounted on said platform behind said player, a trigger projecting from said hand grip, said player having arms pivoted thereon and adapted to hold the simulated basketball, and linkage between said trigger and said arms for causing the arms to swing upward and to toss the ball toward said basket, a flipper disposed between said arms beneath the ball, a pivot for said flipper disposed in front of the body, said linkage bearing upward on said flipper as well as said arms and causing said flipper to turn upward to a greater angle than the arms because of the shorter radius of the flipper from its pivot to the linkage, compared to the arms, whereby the flipper changes from a position beneath the arms at the beginning of a throw to a position above the arms at the end of a throw.

6. A toy simulating a part of a game of basketball, said toy comprising a base, a basket at one end of said base, a simulated player mounted on a platform provided with throw means causing said player to throw a ball toward the basket, said platform with its player being movable over said base, and a position selector for said player, said position selector comprising position numbers on the base, and a movably mounted locating pin projecting upward from said base, said platform having a socket dimensioned to receive said locating pin, whereby different numbered positions of the player on the base may be determined, and said platform and player being oscillatable about said locating pin to afford aiming of the direction of throw independently of the location of the locating pin.

7. A toy simulating a part of a game of basketball, said toy comprising a base, a basket at one end of said base, a simulated player mounted on a platform provided with throw means causing said player to throw a ball toward the basket, said platform with its player being movable over said base, and a position selector for said player, said position selector comprising position numbers on the base, a movably mounted locating pin projecting upward from said base, said platform having a socket dimensioned to receive said locating pin, whereby different numbered positions of the player on the base may be determined said socket being at the front of the platform, and said throw means being manually operable and being located at the rear of the platform, to facilitate turning the platform about the locating pin to aim the throw.

8. A toy simulating a part of a game of basketball, said toy comprising a base, a basket at one end of said base, a simulated player mounted on a platform provided with throw means causing said player to throw a ball toward the basket, said platform with its player being movable over said base, and a position selector for said player, said position selector comprising a lever pivoted on the base and cooperating with a ring of position numbers on the base, and a locating pin projecting upward from said lever, said platform having a socket dimensioned to receive said locating pin, whereby different numbered positions of the player on the base may be determined by the aforesaid lever, and said platform and player being oscillatable about said locating pin to afford aiming of the direction of throw independently of the location of the locating pin.

9. A toy simulating a part of a game of basketball, said toy comprising a base, a basket at one end of said base, a simualted player mounted on a platform provided with throw means causing said player to throw a ball toward the basket, and a position selector for said

player, said position selector comprising a lever pivoted on the base and cooperating with a ring of position numbers on the base, a locating pin projecting upward from said lever, said platform having a socket dimensioned to receive said locating pin, whereby different numbered positions of the player on the base may be determined by the aforesaid lever, said socket being at the front of the platform, and said throw means being manually operable and being located at the rear of the platform, to facilitate turning the platform about the locating pin to aim the throw.

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