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METHOD AND SYSTEM FOR TEACHING BASKETBALL SHOOTING

Cross Reference to Related Applications

Priority is claimed of U.S. Provisional Patent Application by
Thomas Owen Montie for "A Method for Teaching Basketball Shooting,"
5 filed April 4, 2005, U.S. Serial Number 60/668,009.

Background Art

This invention relates generally to the field of basketball and more
specifically to a method for teaching and practicing basketball shooting.

10 The nexus of basketball is to get the basketball through the
basketball hoop. Basketball players are divided into two competing teams
and the team with the highest score, i.e. most baskets made, is the
winner. Accordingly, it is desired to improve the frequency of successful
shots made relative to attempts made by each shooter on a team in order
to increase the overall team score and win the game.

15 Thus, it is common to instruct shooters to improve their shots-made
frequency. This is commonly accomplished by educating a player's eye
and memory through multiple shooting repetitions in practice sessions,
wherein a shooter positions him or herself at a given distance of interest
from the hoop and practices multiple repetitions at that distance.

20 However, such a system or method does not fully develop shooting ability
at other distances or positions on the floor. Moreover, by focusing on a
problem or otherwise important fixed location or distance, a low shots-
made frequency may result in unproductive practice time, or even the
development of bad habits that translate to lower shots-made frequencies
25 at other locations on the basketball court.

Other methods and systems may incorporate shooting aid
equipment that attach to the basketball hoop, to the arm or leg of the
shooter, or that must be positioned on the basketball playing surface.
Such aids must be positioned anew at every practice session.
30 Disadvantages include the requirement of additional equipment to be

installed before and removed after every practice session. Typically, the equipment requires modification dependent on the user's size.

5 Prior methods of teaching basketball shooting are also deficient in that they do not consistently position the shooter on the basketball court at specified distances relative to the hoop. The prior methods also do not use a systematic sequence of steps from one predetermined position to the next.

10 What is needed is an improved system and method for improving basketball shooting that systematically improves shots-made frequency at specified, readily identifiable and repeatable locations on the basketball court.

Disclosure of Invention

15 A method and system are provided for improving the frequency of successful shots made relative to attempts made. In one aspect, the shots-made frequency is increased by educating a player's eye and memory through repetitions at one or more specified close distance locations from the basketball hoop, and then building on that information by progressively increasing the distance from the hoop through sequential steps to additional sets of repetitions taken at greater distances from the

20 hoop.

In one aspect, an object of the invention is to provide a better basketball shooting practice method that results in improved free throw, bank shot and jump shot shooting accuracy.

25 Another object of the invention is to provide a better basketball shooting practice method that results in the basketball shooter having much improved confidence in his shooting ability from any point on the basketball court during the game.

Another object of the invention is to provide a practice apparatus that requires only a one-time installation.

A further object of the invention is to provide a practice method that, once the apparatus has been installed on the playing surface, requires only a basketball player, a basketball hoop and a basketball.

5 Yet another object of the invention is to provide a practice method that is usable by all ages.

Still yet another object of the invention is to provide a better basketball shooting practice method that is the standard for all basketball players and all basketball teams.

10 Other objects and advantages of the present invention will become apparent from the following descriptions, taken in connection with the accompanying drawings, wherein, by way of illustration and example, an embodiment of the present invention is disclosed.

15 In one aspect, there is disclosed a method for teaching basketball shooting comprising the sequential steps of: positioning of the player at the first marking, attempting to shoot the basketball into the basketball hoop, recording the number of attempts that did not go through the hoop, recording the number of attempts that did go through the hoop, positioning of the player at the second marking, and repeating the sequence through the remainder of the markings.

20 In another aspect, there is disclosed an apparatus and system for improving basketball shooting success frequency comprising a plurality of markings applied to a basketball playing surface, the plurality of markings spaced from each other in at least one radial line, the radial line defined from a first center point through a second point, the center point defined
25 on the basketball playing surface directly beneath a center of a basketball hoop, and at least one scoring device to record at least one of missed shot attempt data and successful shot attempt data for each of the plurality of markings.

30 In one aspect, a system includes at least one advancement rule, the advancement rule comprising a requirement that a shooter positioning at a first location on a basketball floor make a first plurality of attempts to

shoot the ball into the basket at a threshold success frequency, the rule further comprising a requirement to stop shooting if the shooter fails to meet the threshold success frequency, or the shooter repositions at a second location on a basketball floor if the shooter meets the threshold success frequency.

In one aspect, a means for selecting the threshold success frequency selects in response from a data input. In another aspect, the means for selecting the threshold success frequency is configured to increase an initial level threshold for the first location to a higher secondary threshold for subsequent shot attempt sets at the first location in response to a previous shot attempt set at the first location having a shots-made frequency greater than or equal to the initial level threshold. In one aspect, divergent shot-made thresholds or shot set total numbers for each of the first and second marking shot locations are provided.

In one aspect, the plurality of markings are arrayed in a plurality of radial lines, each of the radial lines defined from a first center point defined on the basketball playing surface directly beneath a center of a basketball hoop. In another aspect, the plurality of radial lines comprises a center foul line; left and right 30° angle lines each oriented 30° from the foul line; left and right 60° angle lines each oriented 60° from the foul line; and left and right 90° angle lines each oriented 90° from the foul line. In another aspect, each of the markings is spaced from an adjacent marking in a common radial line a common spacing of about one foot/0.3 meters.

In one aspect, a method for improving basketball shooting success frequency is provided comprising the steps of positioning a shooter at a first location on a basketball floor; the shooter making a first plurality of attempts to shoot the ball into the basket; determining a success frequency of the plurality of attempts; either ending the method if the success frequency is lower than a threshold, or the shooter repositioning at a second location on a basketball floor if the success frequency is not lower than the threshold; and the shooter making a second plurality of

attempts to shoot the ball into the basket at the second position; and determining a success frequency of the second plurality of attempts. In one aspect, the second location is farther from the basket than the first location.

5 In another aspect, a method further comprises the steps of recording a number of attempts of the first plurality that did not go through the basket; and recording a number of attempts of the first plurality that did go through the basket.

10 In another aspect, a method comprises the steps of providing a plurality of markings applied to a basketball playing surface, wherein the plurality of markings are arrayed in a plurality of radial lines, each of the radial lines defined from a first center point defined on the basketball playing surface directly beneath a center of a basketball hoop, wherein the first location is common with a plurality of markings first near marking and
15 the second location is common with a plurality of markings second far marking, the second far marking located distal to the center point relative to the first near marking; and a shooter progressively making sets of shot attempts at each of a plurality of markings within a first one of the radial lines, starting with an initial marking and progressing outward from the
20 basket to a last marking farther from the basket relative to the initial marking dependent upon meeting a shots-made frequency threshold for each of the preceding marking.

 In one aspect, a method further comprises selecting at least one threshold from a data input. In another aspect, divergent shot-made
25 thresholds or shot set total numbers are provided for each of the first and second locations. In one aspect, a method comprises increasing an initial level threshold for a first location to a higher secondary threshold for subsequent shot attempt sets at the first location in response to a previous shot attempt set at the first location having a shots-made frequency
30 greater than or equal to the initial level threshold. And, in one aspect, a

method comprises a step of a second party verifying that a shooter meets at least one threshold.

Brief Description of Drawings

5 The drawings constitute a part of this specification and include exemplary embodiments to the invention, which may be embodied in various forms. It is to be understood that in some instances various aspects of the invention may be shown exaggerated or enlarged to facilitate an understanding of the invention.

10 Figure 1 is a plan view of a basketball court surface incorporating a system and method according to the present invention.

Figure 2 is another plan view of a basketball court surface incorporating a system and method according to the present invention.

Figure 3 is a plan view of a form according to the present invention.

15 Figure 4 is a plan view of another form according to the present invention.

Figure 5 is a plan view of another form according to the present invention.

Figure 6 is a plan view of another form according to the present invention.

20 Figure 7 is a plan view of another form according to the present invention.

Modes for Carrying Out of the Invention

25 Turning first to Figure 1, there is shown a plan view of a portion of a basketball court floor 10 with the markings 5 according to the present invention applied to it. A basketball hoop 1 is located above and parallel to the basketball court floor 10.

30 The top of the rim of the hoop 1 is generally located 10 feet/ 3.05 meters above the basketball court floor 10 for adult players, although this height may vary for alternative game dimensions. For example, it is common to use lower heights for younger players. Moreover, specific dimensions provided herein are for illustrative purposes only, and the

practice of the systems and methods of the present invention are not limited to practice with any specific dimension.

5 In one aspect, the center 2 of the basketball hoop 1 is projected vertically downward directly normal to and onto the surface of the basketball court 10 and is used as a point of reference for other components, as will be described presently. A standard free-throw line 3 is also provided. This is typically located 13 feet/ 3.96 meters from the front of the hoop 1 as projected vertically downward directly normal to the basketball court floor 10. A free throw line arc 4 may be projected along a
10 radius dimension defined from the projected center 2 of the basketball hoop 1 to the center 33 of the free throw line 3.

In one aspect, a plurality of shot location markers 5 is provided for indicating locations for practice shots by a shooter. In one aspect, the plurality of shot location markers 5 are distributed over the basketball court
15 10 to provide a comprehensive coverage of a portion of the basketball court 10, wherein a practicing shooter may systematically educate his or her eye and memory through multiple shooting repetitions at each shot location marker 5 in practice sessions, and thereby achieving improved shots-made accuracy from multiple locations within the portion of the
20 basketball court 10 comprehended.

For example, in one embodiment illustrated in Figure 1, seventy-seven shot location markers 5 are provided in a free throw area 18 between the free throw line arc 4 and the hoop projection 1, of which there are eleven shot location markers 5 on each of seven marker lines 12. A
25 first marker line 12a (hereinafter the "zero-angle line" 12a) is oriented with respect to the foul line center 33, with a farthest shot location marker 5k located on the foul line center and the remainder ten shot location markers 5 arrayed a common spacing distance 8 toward the hoop center point 2, the common spacing distance 8 in the present embodiment equal to about
30 one foot/0.3 meters, the closest zero-angle marker line 12a marker 5a

located a distance 21 of about 3 feet/0.9 meters from the hoop center projection 2.

Left marker line 12b and right marker line 12c of eleven markers 5 spaced the common spacing distance 8 each are oriented on either side of the zero angle line 12a, the lines 12b and 12c oriented to include the hoop center projection 2 and each separated from the zero-angle line 12a line by a common angle 6 of 30° (the " 30° angle lines" 12b and 12c). Additional left marker line 12d and right marker line 12e of eleven markers 5 each spaced the common spacing distance 8 are also oriented on either side of the zero angle line 12a and to include the hoop center projection 2, wherein left line 12d is separated from adjacent left 30° angle line 12b by the common angle 6 of 30° and, therefore, separated from the zero-angle line 12a line by a total angle of 60° ; and right line 12e is separated from adjacent right 30° angle line 12c by the common angle 6 of 30° and, therefore, separated from the zero-angle line 12a line by a total angle of 60° (the " 60° angle lines" 12d and 12e).

And lastly, additional left marker line 12f and right marker line 12g of eleven markers 5 each spaced the common spacing distance 8 are also oriented on either side of the zero angle line 12a generally parallel to the base line 14 of the basketball court surface 10 and including the hoop center projection 2, wherein left line 12f is separated from adjacent left 60° angle line 12d by the common angle 6 of 30° and, therefore, separated from the zero-angle line 12a line by a total angle of 90° ; and right line 12g is separated from adjacent right 60° angle line 12e by the common angle 6 of 30° and, therefore, separated from the zero-angle line 12a line by a total angle of 90° (the " 90° angle lines" 12f and 12g).

Each marking 5 has an identifier 9 number or other character for identification. In one example, the closest markers 5a are labeled "1", and each with adjacent markers in each line 12 labeled with increasing number labels as the distance from the hoop center 2 increases. Thus, the seventh marker 5g in each line 12 will be labeled "7" as illustrated in the

detail view provided in Figure 1, and the farthest markers 5k labeled "11". It is thus apparent that any specific marker 5 will be identifiable by referring to its line 12 and marker 5 label 9; for example, "left 60° marker 7."

5 Turning next to Figure 2, there is shown a plan view of the basketball court 10 with additional markings 5l through 5q according to the present invention spaced the common spacing distance 8 from each other as described above along the marker lines 12, more particularly relative to a three-point area 20 which lies outside the free-throw line arc 4 and is defined relative to a three-point arc 25. As is well known in the art, the three-point arc 25 is optionally incorporated onto a standard basketball court surface 10, wherein shots made by a player whose feet are located on the basketball court surface 10 beyond the three-point arc 25 relative to the hoop 10 are awarded three points, in contrast to two points awarded for shots made on the basketball court surface 10 within the three-point arc 25.

15 In one aspect, the markings 5l-5q within the three-point area 20 may optionally bear different marking labels 29 to distinguish them from markings 5 within the free-throw line arc 4. For example, "3-4" may designate a fourth marking 5 beyond the free throw line arc 4 on any one of the marker lines 12. In another aspect, markings 5r beyond the three-point area 20 may also bear a further distinguishing label (not illustrated).

20 In the present embodiment, the distance 28 from the free-throw line arc 4 to the three-point arc 25 is about six feet/1.8 meters, although other distances 28 or dimensions may be practiced according to applicable agreement, rules or standards. For example, in the United States, college and high school regulations generally specify that the three-point arc 25 is determined by selecting a point 5.25 feet/1.60 meters on a straight line normal to the base line 14 and then tracing the three-point arc 25 of about 19.75 feet/ 6 meters. However, the specific distance 28 or dimensions of

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the three-point arc 25 are not critical to the invention, and other configurations may be practiced.

Accordingly, in one embodiment seventy-seven shot location markers 5 are provided within the free-throw line arc 4, forty-two shot location markers 5l-5q are provided within the three-point arc 25, and seven more shot location markers 5r are provided beyond the three-point arc 25, each providing discrete and readily identifiable locations to practice repetitive shooting and build eye-hand coordination, muscle memory and confidence, thereby increasing the frequency of shots made.

In another aspect, a system and method are provided for performing sets of shots at designated markings 5. In one aspect, a marking 5 may be chosen on a progressively increasing distance from the hoop 10 basis relative to a previously chosen marking 5. For example, a basketball shooter positions him or herself at a first marking 5 of one of the marker lines 12 and attempts a specific number of shots. The number of attempts may be specified or may vary. In one aspect, the number of attempts may be dependent upon a demonstrated shots-made frequency proficiency level. Upon conclusion of the set of shots, the shooter moves outward to a second marking 5 further from the hoop 1 as compared to the first marking 5 and then performs another set of shots. The progression may be further conditioned upon a demonstrated shots-made frequency proficiency level at the first marking 5.

For example, in one system and method example, a basketball shooter positions himself at a "no. 1" marking 5a closest to the hoop 1 of the zero-angle line marker line 12a and attempts a specific number of shots in one set. In one aspect, it is preferred that the number of attempts in the set will vary between five and ten at marking 5a, and at each subsequent marking 5. Set sizes of from five to ten have been found to produce increases in shots-made frequencies for shooters within an efficient total practice timeframe; however, it will be apparent that other set sizes may be practiced. In one aspect, the proficiency level of the shooter

may determine the number of attempts. Generally, it is preferred that as a shooter becomes more proficient, a set size selected increases.

When the shot set is complete at marking 5a, the shooter moves in a sequential progression from marking "no. 1" 5a to marking "no. 11" 5k at the center 33 of the foul line 3. In one aspect, a shooter then moves to another line 12 and repeats the process of shooting a predetermined number of attempts beginning with the closest marking "no. 1" 5a and progressing to marking "no. 11" 5k. In another aspect, a shooter may instead continue to progress outward through the markings 5l-5q within the three-point area 20 to the marking 5r beyond the three-point area 20.

The zero-angle line marker line 12a is generally chosen as the initial marker line 12, in order to enable progress in a timely and efficient manner to practice shots at the marker 5k at the center 33 of the foul line 3. As a high shots-made frequency for foul shots may be critical to winning a basketball game, wherein foul shots may be awarded on an increasing basis at the end of a game to a player's team, in one aspect improvement to foul line shots-made frequency is an important objective to the system and method taught herein. However, other goals may be served by the present invention, and divergent progressions and shot sets may be readily practiced according to the present invention in order to develop improved shots-made frequencies at one or more other markings 5.

In one aspect, a system and method for progression through the markings 5 dependent upon proficiency is provided. Referring now to Figure 3, a shooter demonstrates a first proficiency level in an initial "5for5" evolution as described by the 5for5 worksheet 300. In a first proficiency level evolution, a shooter is instructed at upper left box 302a to attempt a set of five shots at the closest marking "no. 1" 5a of zero-angle line marker line 12a. The shooter progressively moves down this first chart column 310 to attempt sets of five shots at each of the next zero-

angle line marker line 12a markers 5 as instructed by the chart boxes 302a through 302j.

5 In one aspect, a first level of proficiency is demonstrated by achieving one of one or more specified shots-made frequency requirements. Accordingly, a goal of the shooter is to make every one of the five shot attempts at each of the first six markers, and the shooter is otherwise required to miss no more than twelve shots total of the 55 shots attempted at the eleven markers 5, thereby evidencing a 78% shots-made frequency, including 100% from the first 6 markers 5.

10 In one aspect, the 5for5 worksheet 300 provides entry blocks for the shooter to record his or her results. More particularly, where indicated, the shooter fills in name 314, date 316 and day 318 of attempts, and the number of shots actually made at each of the farthest markers 5 from the hoop 1 on zero-angle line 12a, numbers 7 through 11 as shown on the
15 form boxes 302g through 302j. Each column also has a number of miss tally boxes 320 equaling the number of permissible misses. For example, on the 5for5 worksheet 300, there are twelve miss tally boxes 320 at the bottom of each column. As is apparent, the boxes help a shooter keep track of performance for each day attempted. Alternative embodiments
20 may also provide for entry of actual shots made for the first six markers 5.

In one aspect, once twelve misses are exceeded, then the shooting practice session ends; it is preferred that the shooter records his or her performance as indicated on the form, thereby showing shots made prior to the thirteenth miss. In a preferred embodiment, a shooter should have
25 no misses from the first six markers 5, thus "5/5" entries are pre-printed in these first six blocks 302. This may be suggested or a mandatory requirement for proficiency.

30 In one aspect, by recording results on the form, shooter data is accumulated for study. The practice data may be used by the shooter, or a coach working with the player, or even a centralized remote coaching service, to make practice recommendations to the shooter for performance

improvement. Historical performance data may also be tracked for other data analysis purposes. In one aspect, a coaching program or algorithm may output practice tips or evolution-based from shooter performance data input.

5 For the shooter's next attempts at proving proficiency, each of the next columns 310 are progressively used for each evolution attempt to prove proficiency, with the results again recorded and session identity recorded, such as day or other session identifier if more than one evolution is attempted per day. Although it is generally preferred that no
10 more than one evolution be attempted per day, in some methods and systems more than one evolution may be attempted on a given day. In one aspect, when a shooter makes less than twelve misses over the 55 shot evolution, the shooter has demonstrated proficiency and may move on to a next level.

15 In one aspect, additional forms may be used to evidence proficiency and/or otherwise provide a means for capture of data. In one example, a Player's Qualification form 400 is illustrated in Figure 4, which provides for date data entries 402, shooter name data entries 404, one or more witness data entries 406, and actual observed performance data
20 entries 408. Forms and worksheets according to the present invention may provide proficiency charts (not shown) or other overview information for every level contemplated, such as expected shots-made frequencies for different levels, in order to provide an overall orientation to the program for a shooter. This may inform the shooter of the proficiencies required for
25 this first level, and for each of more subsequent levels.

 In another aspect, a Coach's Validation form 500 is illustrated in Figure 5. As is apparent, this may be used by a coach or other person to verify proficiency by having the player demonstrate in the coach's presence. Thus, the form 500 provides for date data entries 502, shooter
30 name data entries 504, coach or other witness data entries 506, and actual performance data entries 508. In one aspect, validation

performance may be scaled back in number of attempts while maintaining a required proficient shots-made frequency threshold. Thus, in one example, only three attempts need be made at each of the eleven markings 5 in the presence of the coach or other verifier, but the same proficient frequency is required. Therefore, as shown by a threshold notice 510, the shooter must make a total of 14 of 18 shots to demonstrate the 78% achieved in accomplishing this first level (fifty-five attempts with no more than twelve misses). It will be apparent that this increases time efficiencies for coach's validation evolutions, enabling quicker validations, and more validation per day for each coach.

In one example, achievement of the proscribed proficiency level qualifies the shooter to move to a next level described by a "6for6" worksheet 600 of Figure 6. In a similar fashion to the "5for5" worksheet 300, the shooter fills in name 614, date 616 and day 618 of attempts, and shots made at boxes 602 for each of the farthest markers 5 from the hoop 1 on zero-angle line 12a, numbers 7 through 11 as shown on the form boxes 602g through 602j. Each column also has a number of miss tally boxes 620 equaling the number of permissible misses. For example, on this 6for6 worksheet 600, there are thirteen miss tally boxes 620 at the bottom of each column, for a proficiency requirement of 80% for the "free throw" zero-angle line marker line 12a. Accordingly, in one aspect, the number of attempts made per marker 5 in each set is increased, as is the required shots-made frequency percentage.

In another aspect, at second and/or subsequent levels the shooter must now also demonstrate proficiency through sets of shots at additional markers 5. In the present embodiment, the shooter must now perform shot sets at the first eleven markers of each of the 60° angle lines 12d and 12e within indicated thresholds. In one aspect, the number of shots and/or proficiency threshold may vary from those specified for the free throw zero-angle line marker line 12a. In the present embodiment shown, a second worksheet 700 in Figure 7 for the 60° angle lines 12d and 12e is

provided, with entry blanks for entry as generally described above with respect to sheets 300 and 600, and that specifies a divergent (in this case lower) shot set of four for each of the first eleven markers 5 and requires a divergent proficiency percentage (again, in this case lower, 70%, no more than thirteen misses).

Thus, in one aspect, differentiation in shot set number and/or shots-made frequency percentages are provided between and/or within a given proficiency level. The amount of differentiation and/or specific shot set number and/or shots-made frequency percentages may be predetermined for all shooters, in a standard method and system designed to be used consistently by all shooters. Differentiation may be determined in response to one or more factors, such as a generally expected increase in difficulty level, or a choice to focus on some selected shots as generally more important than others. In another aspect, shot set number and/or shots-made frequency percentage differentiation may be customized and set in response to one or more factors, such as an individual shooter or team shooter demographic (such as, for example, age, sex, height, etc.); a need to reduce practice times or shot repetitions (such as due to injury recovery); through feedback from shooter performance in previous sessions (which may indicate extra shots at some positions); or through other factors.

In one aspect, player and/or coaches' validations sheets may also be provided for the second and any subsequent level. Alternative embodiments may utilize other or additional markers for any level. Other marker lines 12 may be selected or more distant markers 5l-5r may be added or substituted in any line 12.

In another aspect, the nature of the specific shot technique may also be specified by the present system and method. For example, referring again to Figure 7, as the worksheet 700 illustrates, the shooter is instructed to attempt only "bank shots" from the 60° angle lines 12d and 12e markers 5. In one aspect, it is believed that bank shots have the

highest probability of success in a game situation from these locations and, thus, the system and method instruct that the practice sets comprise bank shots. Alternative embodiments may otherwise instruct a shooter to make "jump shots", or a combination of bank shots and jump shots, from these or from any other of the markers 5. In this fashion, the present system and method also provide for a systematic method for improving shots-made frequencies for a specific type of shooting, optionally from one or more specific locations on the basketball floor.

In one aspect, the use of the present teaching method and system promotes and improves the ability of the basketball player to shoot the basketball through the basketball hoop successfully from any spot on the basketball court. It is believed that comprehensive shots-made frequency improvement is accomplished throughout the entire free-throw area 18 and/or three-point area 20 and regions adjacent and between the three-point markers 5r due to the quantity and locations of the markings 5 on the basketball court surface 10. For example, by repetitive practicing from the 7th markers 5g located on the 60° angle line 12d and the 30° angle line 12b, that a shooter will also improve his or her shots-made frequency from shot locations along and adjacent to the radius 30 illustrated in Figure 1 connecting these two markers 5g, at shots taken from such locations will seem to the shooter to be from the about same distance from the hoop and from a similar and familiar visual angle. The more that a shot feels like one that has been made successfully in the past, the more that a shooter will relax and let his or her well-practiced muscle memory takeover, thereby improving actual shots - made frequency.

This is also further reinforced and accomplished by another aspect of the present invention, wherein it is preferred that the shooter practice initially at the closest markings 5, and progressively shoot further from the basket hoop for subsequent sets of shots. It is believed that the shooter's confidence is improved by beginning with the easiest shots first, and that by slowly increasing shooting distance for each set of shots, that the next

set of shots will not seem to the shooter to be very much farther (or more difficult) than the previous set of shots. Therefore, once the shooter arrives at the farther markings 5 in any given line 12, said farther markings will seem to present an easier shot than if the farthest markings 5 are selected instead for the commencement of practice, as is common with prior art systems and methods. The shooter is also incrementally building upon the hand-eye coordination and muscle memory achieved at each of the closer markings 5 and, therefore, is much more prepared to make successful shots when shots are finally attempted from the farther markings 5 (such as, for example, markers at the foul shot distance marker 5k and those beyond 5l-5r).

It is believed that improvement in shooter's shots-made frequencies is further enabled by a consistent practice at the same shot locations for each practice session, or level attempted. Accordingly, in another aspect, it is preferred that the specific locations of the markings 5 relative to the hoop 1 remain fixed and unchanging from day to day, practice session to practice session. This may be accomplished in a number of ways. In one example, adhesive or permanently affixed marking 5 and/or associated label 9 and/or 29 decals may be applied to the basketball court surface 10. Although this may be appropriate both in indoor and outdoor settings, superior durability will be apparent if the decals are fixed to indoor basketball court flooring and protective transparent coatings are applied thereto, such as, for example, polyurethane protective floor finishes covering details affixed to wooden basketball flooring. The markings 5 and/or associated labels 9 and/or 29 may also be painted directly to the basketball court surface.

Alternative embodiments of the markings 5 and/or associated labels 9 and/or 29 may also comprise light components. For example, the markings 5 and/or associated labels 9 and/or 29 may comprise light components visible to the shooter's eye, such as self-illuminating incandescent, LED, LCD, fluorescent or any other type of light element.

Such light elements may be further configured to be selectively lighted; thereby only those markings to be used in a specific set of shots or practice evolution need be lighted for a specific shooter.

5 In another aspect, projected light systems and methods may be used to provide the markings 5 and/or associated labels 9 and/or 29. For example, one or more light projecting apparatus(es) (not shown) may be positioned to project the markings 5 and/or associated labels 9 and/or 29 upon the basketball floor. In another hybrid decal and projection system, the markings 5 and/or associated labels 9 and/or 29 may be configured to
10 be visible only when a specific input is provided; for example, only when illuminated with a specific light wavelength, such as infrared, ultraviolet, or any specific visible color(s) wavelength. Thus, the present system and method may be configured to be visible or apparent upon the basketball surface only when desired, in order to prevent unwanted floor markings
15 from visually interfering with other uses of the basketball court surface outside of practice sessions, or otherwise requiring unwanted visibility of the markings 5 and/or associated labels 9 and/or 29.

In another aspect, worksheets according to the present invention may be produced in typical paper form. They may be tangibly configured
20 for attachment or permanently affixed to or laminated upon clipboards, thus providing advantages in use at practice facilities that lack writing surfaces, such as gymnasiums. They may be printed onto to erasable media, such as dry-erase marker boards, enabling more than one user to use the form, enter their data, and then copy to another more permanent
25 source if needed. The forms may also be incorporated into software and used with PC's, tablet PC's, PDA's, cellular phone screens, or any other type of image screen or electronic display device, preferably one configured to receive input data.

30 As referred to generally above, shooter's performance data may be accumulated and processed through computer processing systems and methods, including local and network processor resources. The

processed data may be used to provide individualized training regimens and otherwise revise the level(s) being practiced by the shooter. It may also be used as feedback to revise general programs and systems.

5 Detailed descriptions of the preferred embodiment are provided herein. It is to be understood, however, that the present invention may be embodied in various forms. Therefore, specific details disclosed herein are not to be interpreted as limiting, but rather as a basis for the claims and as a representative basis for teaching one skilled in the art to employ the present invention in virtually any appropriately detailed system,
10 structure or manner.

Other objects and advantages of the present invention will become apparent from the following descriptions, taken in connection with the accompanying drawings, wherein, by way of illustration and example, an embodiment of the present invention is disclosed.

Having described the invention, the following is claimed:

1. A system for improving basketball shooting success frequency, comprising:

5 a plurality of markings (5) applied to a basketball playing surface (10), the plurality of markings spaced from each other in at least one radial line (12), the radial line (12) defined from a first center point (2) through a second point (5), the center point (2) defined on the basketball playing surface (10) directly beneath a center of a basketball hoop (1); and
10 at least one scoring device (300, 400, 500, 600, 700) to record at least one of missed shot attempt data and successful shot attempt data for each of the plurality of markings (5).

2. A system for claim 1 including at least one advancement rule, the advancement rule comprising a requirement that a shooter
15 positioning at a first location (5) on a basketball floor (10) make a first plurality of attempts to shoot the ball into the basket (1) at a threshold success frequency;

the rule further comprising a requirement to stop shooting if the shooter fails to meet the threshold success frequency, or the shooter
20 reposition at a second location (5) on a basketball floor (10) if the shooter meets the threshold success frequency.

3. The system of claim 2, further comprising a means for selecting the threshold success frequency in response from a data input.
25

4 The system of claim 3 wherein the means for selecting the threshold success frequency is configured to increase an initial level threshold for the first location to a higher secondary threshold for subsequent shot attempt sets at the first location in response to a previous
30 shot attempt set at the first location having a shots-made frequency greater than or equal to the initial level threshold.

5. The system of claim 2 further comprising divergent shot-made thresholds or shot set total numbers for each of the first and second marking shot locations (5).

5

6. The system of claim 1, wherein the plurality of markings (5) are arrayed in a plurality of radial lines (12), each of the radial lines (12) defined from a first center point defined on the basketball playing surface directly beneath a center of a basketball hoop (2).

10

7. The system of claim 6, wherein:

the plurality of radial lines comprises a center foul line (12a), the center foul line defined from the first center point (2) to a second point located at about the center of a basketball court foul line (33);

15

the plurality of radial lines further comprising a left 30° angle line (12b) oriented at a 30° angle left of the center foul line;

the plurality of radial lines further comprising a right 30° angle line (12c) oriented at a 30° angle right of the center foul line;

20

the plurality of radial lines further comprising a left 60° angle line (12d) oriented at a 60° angle left of the center foul line;

the plurality of radial lines further comprising a right 60° angle line (12e) oriented at a 60° angle right of the center foul line;

25

the plurality of radial lines further comprising a left 90° angle line (12f) oriented at a 90° angle left of the center foul line; and

the plurality of radial lines further comprising a right 90° angle line (12g) oriented at a 90° angle right of the center foul line.

30

8. The system of claim 7 wherein each of the markings (5) is spaced from an adjacent marking in a common radial line a common spacing (8) of about 1 foot/0.3 meters.

9. A method for improving basketball shooting success frequency comprising the steps of:

a shooter positioning at a first location on a basketball floor;

5 the shooter making a first plurality of attempts to shoot the ball into the basket;

determining a success frequency of the plurality of attempts;

either ending the method if the success frequency is lower than a threshold, or the shooter repositioning at a second location on a basketball floor if the success frequency is not lower than the threshold; and

10 the shooter making a second plurality of attempts to shoot the ball into the basket at the second position;

and determining a success frequency of the second plurality of attempts.

15 10. The method of claim 9, wherein the second location is farther from the basket than the first location.

11. The method of claim 10, further comprising the steps of:

20 recording a number of attempts of the first plurality that did not go through the basket; and

recording a number of attempts of the first plurality that did go through the basket.

12. The method of claim 9, further comprising the steps of:

25 providing a plurality of markings applied to a basketball playing surface, wherein the plurality of markings are arrayed in a plurality of radial lines, each of the radial lines defined from a first center point defined on the basketball playing surface directly beneath a center of a basketball hoop;

30 wherein the first location is common with a plurality of markings first near marking and the second location is common with a plurality of

markings second far marking, the second far marking located distal to the center point relative to the first near marking; and

5 a shooter progressively making sets of shot attempts at each of a plurality of markings within a first one of the radial lines, starting with an initial marking and progressing outward from the basket to a last marking farther from the basket relative to the initial marking dependent upon meeting a shots-made frequency threshold for each of preceding marking.

10 13. The method of claim 12, wherein:
plurality of radial lines comprises a center foul line, the center foul line defined from the first center point to a second point located at about the center of a basketball court foul line;

the plurality of radial lines further comprising a left 30° angle line oriented at a 30° angle left of the center foul line;

15 the plurality of radial lines further comprising a right 30° angle line oriented at a 30° angle right of the center foul line;

the plurality of radial lines further comprising a left 60° angle line oriented at a 60° angle left of the center foul line;

20 the plurality of radial lines further comprising a right 60° angle line oriented at a 60° angle right of the center foul line;

the plurality of radial lines further comprising a left 90° angle line oriented at a 90° angle left of the center foul line; and

25 the plurality of radial lines further comprising a right 90° angle line oriented at a 90° angle right of the center foul line.

30 14. The method of claim 13 wherein each of the markings is spaced from an adjacent marking in a common radial line a common spacing of about 1 foot/0.3 meters.

15. The method of claim 12, further comprising the steps of:
the shooter moving to an initial marking of a second of the radial
lines dependent upon meeting the shots-made frequency threshold at the
last marking of the first line; and
5 progressively making sets of shot attempts at each of a plurality of
markings within the second radial lines, starting with the second line initial
marking and progressing outward from the basket to a second line last
marking farther from the basket relative to the second line initial marking
dependent upon meeting a shots-made frequency threshold for each
10 preceding marking.

16. The method of claim 15 further comprising the step of
selecting at least one of the thresholds from a data input.

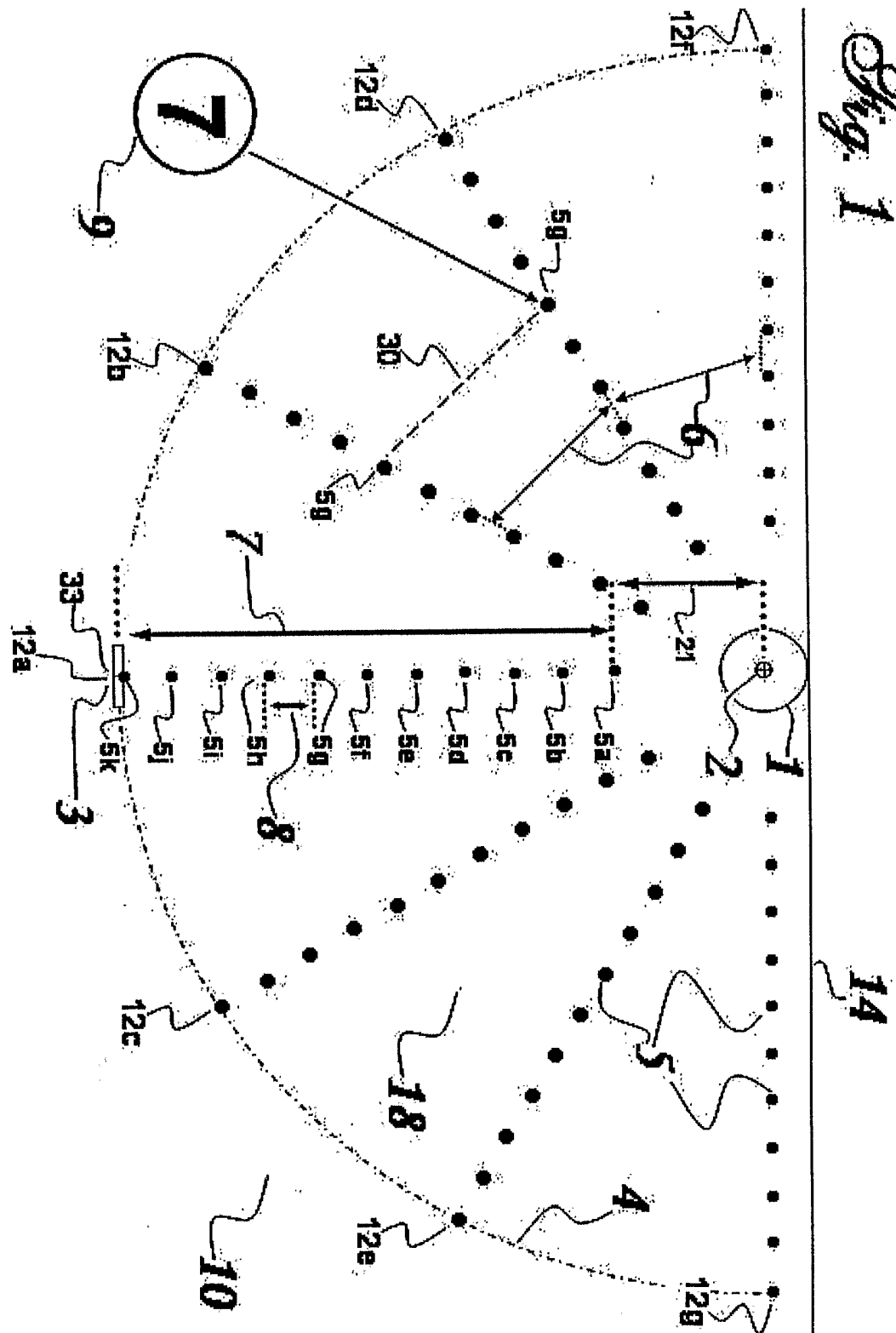
17. The method of claim 15 further comprising the step of
providing divergent shot-made thresholds or shot set total numbers for
each of the first and second locations.

18. The method of claim 15 further comprising the step of
20 increasing an initial level threshold for the first location to a higher
secondary threshold for subsequent shot attempt sets at the first location
in response to a previous shot attempt set at the first location having a
shots-made frequency greater than or equal to the initial level threshold.

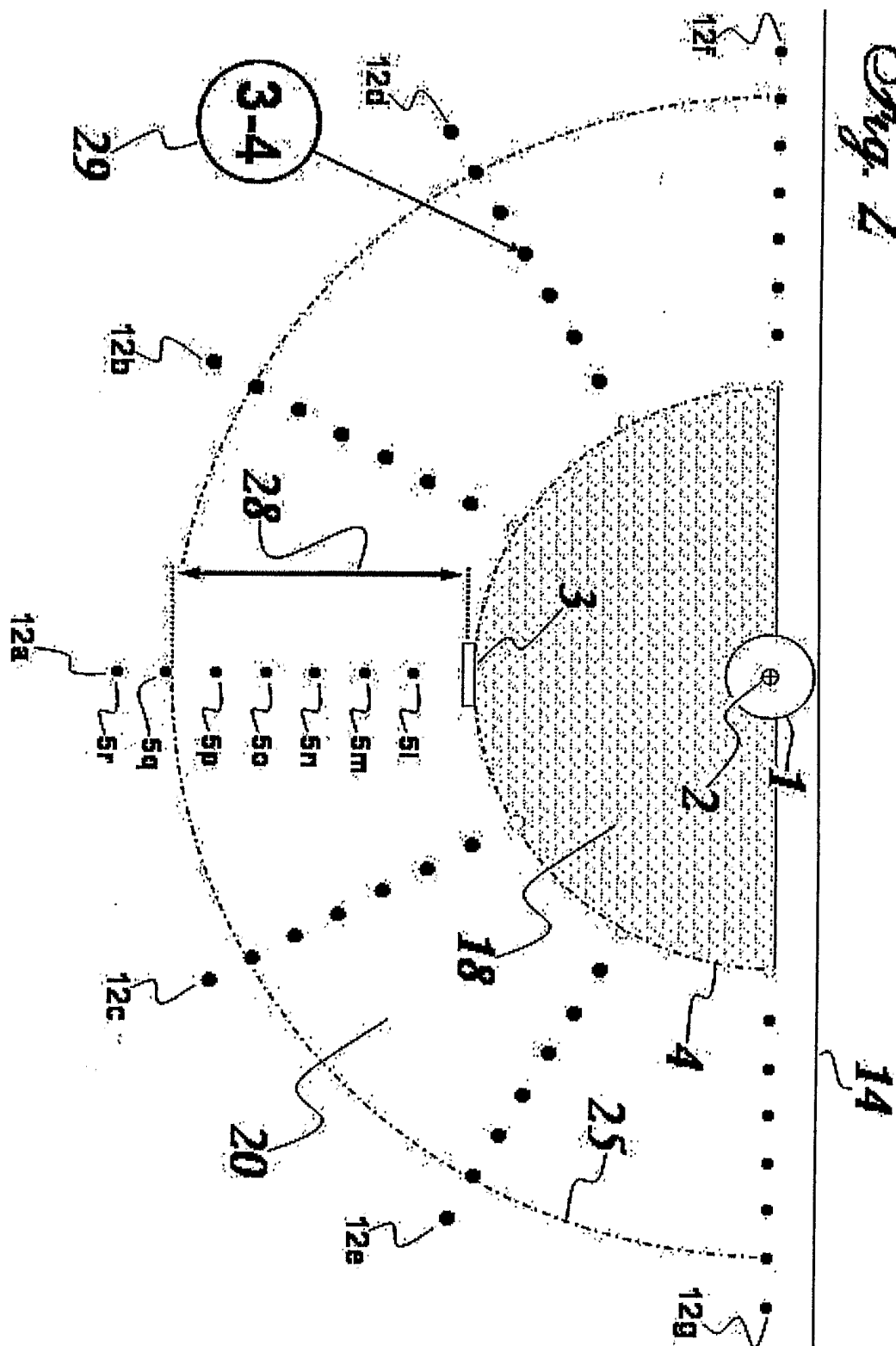
19. The method of claim 15 further comprising the step of a
25 second party verifying that the shooter meets at least one threshold.

SHEET 1/7
MON-10-6094

Fig. 1



2 Aug.



303

CHORON

9

**This is the 1st of 6 levels
FREE THROWS only.**

3108

PLAYER'S DRA SCORECARD

318 310b

[illegible]

320

SHEET 4/7
MON-10-6094

Fig. 4

400

5 FOR 5

2 OF 3

PLAYER'S QUALIFICATION

ROCKEM 10-EX-10 P855 ©

MONTH _____ DAY _____ YEAR 2005

DAY → ☐ M ☐ T ☐ W ☐ T ☐ F ☐ S

404

PLAYER'S NAME

PRINT NAME OF WITNESS

SIGNATURE ☐ TEAM MATE ☐ PARENT ☐ COACH

PRINT NAME OF WITNESS

SIGNATURE ☐ TEAM MATE ☐ PARENT ☐ COACH

PLAYER'S QUALIFICATION

SHOT	PERCENTAGE
1	15
2	15
3	15
4	15
5	15
6	15
7	15
8	15
9	15
10	15
11	15

5 FOR 5

FREE THROWS

406

406

406

SHEET 5/7
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Aug. 5

THIS IS THE 1ST OF 6 LEVELS
FREE THROWS ONLY.

5FOR5

3 OF 3

502

COACH'S SCORECARD

500

ROCKEM 10-0019 PB55 ©

MONTH: _____ DAY: _____ YEAR: 2005

DAY → I M T W T F S

PLAYER'S NAME _____

504

SIGNATURE OF COACH

506

VALIDATED? ☐ YES ☐ NO

508

COACH'S VALIDATION

510

5FOR5
FREE THROWS
M OF N = 3/3

SHOT	POINTS
1	13
2	13
3	13
4	13
5	13
6	13
7	13
8	13
9	13
10	13
11	13

SHEET 6/7
MON-10-6094

Fig. 6

600

This is the 2ND of 6 levels
FREE THROWS and BANK SHOTS

6FOR6
FREE THROWS

1 OF 4

618 PLAYER'S DRA SCORECARD

ROCKEEM 10-GR18 PB55 ©

MONTH _____ YEAR _____

MY NAME 616 602

MY GOAL 614

to become the most consistent shooter that I can be, to helping teammates win on the Basketball Court.

EVERY THOT... 602g
USE YOUR BEST SHOOTING MOTION

AND... EVERY SHOT... 602g

CONCENTRATE ON PERFECTION

'cause 602g

THE GAME IS ON THE LINE!

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6-3-4-6		FREE THROWS				Daily Recorded Attempt			
TRY	MY SCORE	TRY	MY SCORE	TRY	MY SCORE	TRY	MY SCORE	TRY	MY SCORE
1	16	16	16	16	16	16	16	16	16
2	16	16	16	16	16	16	16	16	16
3	16	16	16	16	16	16	16	16	16
4	16	16	16	16	16	16	16	16	16
5	16	16	16	16	16	16	16	16	16
6	16	16	16	16	16	16	16	16	16
7	16	16	16	16	16	16	16	16	16
8	16	16	16	16	16	16	16	16	16
9	16	16	16	16	16	16	16	16	16
10	16	16	16	16	16	16	16	16	16
11	16	16	16	16	16	16	16	16	16

620

Aug 7

254

700

PLAYER'S DRA SCORECARD

[illegible]