

Jan. 19, 1954

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2,666,641

BASKETBALL GOAL ATTACHING MEANS

Filed March 30, 1950

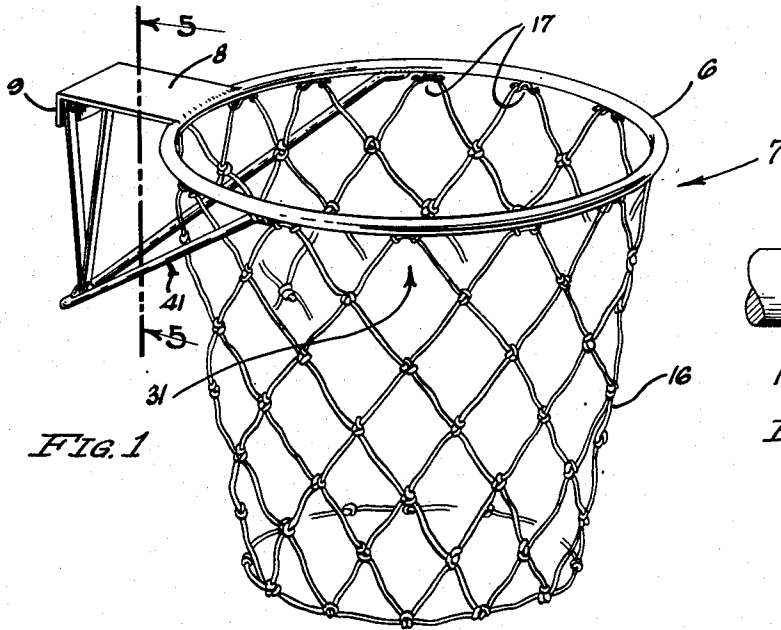
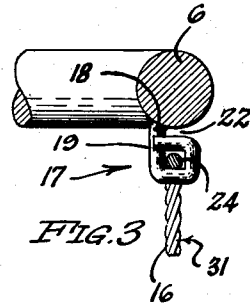
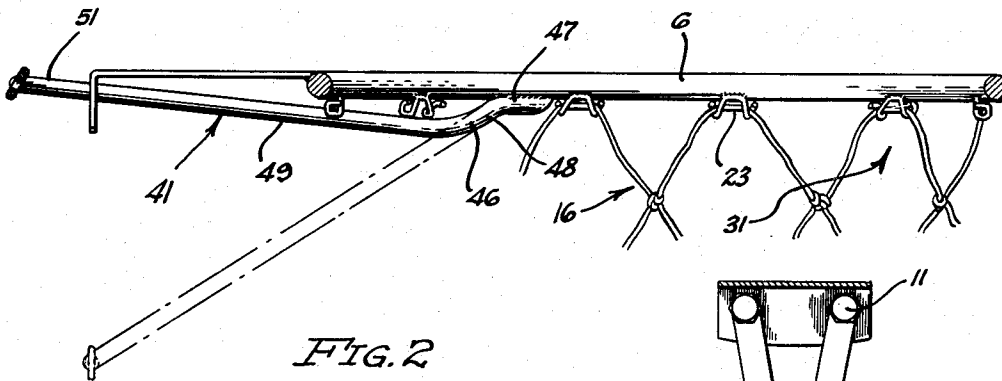
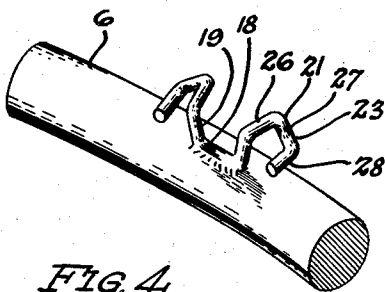
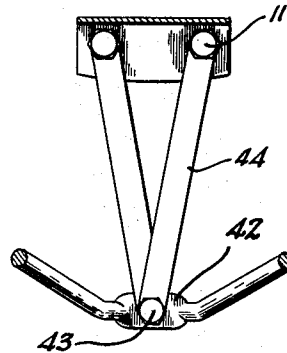


FIG. 5



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2,666,641

BASKETBALL GOAL ATTACHING MEANS

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Application March 30, 1950, Serial No. 152,785

1 Claim. (Cl. 273—1.5)

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This invention relates to amusement devices and games, and more particularly to improvements in the design and construction of basketball goals.

An object of my present invention is to provide an improved device for attaching the conventional net to the ring portion of a basketball goal without tying, in an extremely easy manner requiring only a minimum of time, and yet in full compliance with the formal rules and regulations which have been established governing the game of basketball.

A more detailed object is to provide a net attaching device adapted to be permanently attached to the under side of the ring portion of a basketball goal in the form of a pair of hooks which extend oppositely from a point of attachment to the under surface of the goal ring, but both of which open at a common side, so that a strand of the net can be engaged simultaneously with both hooks by the simple expedient of holding the strand straight and substantially parallel to the associated portion of the ring, and moving the strand laterally through the open portions of both hooks in a simple, single motion of such short duration that it is practically instantaneous.

A further object in this connection is to provide the oppositely extending hook portions hereinabove referred to, in the form of spirals of opposite pitch, and of such design that their whorls clear the under surface of the goal ring by a distance less, but only slightly so, than the diameter of the strands of the goal net, so that a strand of the net can be forced with comparative ease through the space between ring and hook when engagement or disengagement of the net is purposely being affected, and yet ample assurance is provided against accidental disengagement of the net.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of my invention which is illustrated in the drawing accompanying and forming a part of the specification. It is to be understood that I do not limit myself to the showing made by the said drawing and description, as I may adopt variations of the preferred form within the scope of my invention as set forth in the claim.

Referring to the drawings:

Figure 1 is a perspective view of a basketball goal incorporating the principles of the present invention.

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Figure 2 is an enlarged view in vertical, medial section, portions of the figure being broken away to reduce the size of the figure.

Figure 3 is a still more highly enlarged detail view taken through a portion of the goal ring and showing in end elevation one of the net attaching devices of the present invention.

Figure 4 is a perspective view of a portion of the under side of the goal ring and one of the attaching devices of the present invention.

Figure 5 is an enlarged view in transverse, vertical section, taken upon the line 5—5 of Figure 1, with the direction of view as indicated.

In the drawing, the net-attaching devices incorporating the principles of the present invention are illustrated as being incorporated with the goal ring 6 of a conventional basketball goal indicated in its entirety at 7 and having a mounting bracket in the form of a plate 8 rigidly and permanently secured to the ring as by welding so that it extends aft from the ring 6 substantially within the plane thereof. A down-turned flange 9 at the after end of the plate 8 is provided with suitable holes (not shown) through which attaching means, such as suitable lag screws 11 can extend in fastening the goal 7 to a suitable supporting wall such as the conventional back board of a basketball game.

A net 16 of generally tubular formation is suspended from the goal ring 6; and the present invention is concerned with the means whereby the net is attached to the ring 6. I have provided, in accordance with the principles of the present invention, an attaching device, indicated in its entirety at 17, so designed that it is highly effective in permitting attachment of the net 16 to the ring 6 easily and quickly and with great security, without the necessity of performing any tying or taping operation, and yet in full compliance with the rules and regulations governing the equipment and playing of the game of basketball.

A suitable number of these attaching devices 17 is securely and permanently attached to the under side of the ring 6, so as to permit each of the looped strands defining the top of the tubular net 16 to be engaged within a separate attaching device 17. Each of these attaching devices 17 is preferably formed of wire of suitable gauge and temper to assure the necessary degree of strength and rigidity, which wire preferably is of circular cross-section so as to minimize the tendency to abraid the cord of which the net 16 is fabricated. Each attaching device 17 is of generally U-shaped configuration, having its mid portion 18 rigidly and permanently secured to

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the under surface of the ring 6 as by welding. Both legs 19 extend downwards from the point of attachment of the bracket, preferably in a substantially vertical plane slightly offset to one side of the exact center of the ring 6 as clearly shown in Figure 3. Within the vertical plane referred to, the two legs 19 diverge somewhat as they extend downwards, as clearly shown in Figure 2. A substantially spiral portion 21 is formed in each of the two legs 19, the spiral beginning in that leg at a distance below the under surface of the ring 6 which is slightly greater than the outside diameter of the spiral. Because of this arrangement, a space 22 remains between the under surface of the ring 6 and the uppermost portion of each of the whorls 23 of which the spirals 21 are formed; and each of these spaces 22 is slightly narrower than the diameter of the strand 24 of the net 16 which is to be engaged upon the attaching device 17. Each of the spirals 21 extend through substantially 360 degrees, being composed of a horizontal portion 26 extending laterally from the lower end of the downwardly extending portion 19, and upwardly extending portion 27, and an upper, horizontally extending portion 28. As a matter of expediency in manufacture these portions 19, 26, 27, and 28 may join each other at substantially right angles, although they may be rounded and merged gradually into each other in accordance with the more usual conception of a spiral without deviating from the principles of the present invention. It is desired, however, that the outer portion 28 of each spiral extend substantially horizontally and beyond the vertical plane including the axis of the associated spiral, far enough at least to reach the plane which includes the two vertical portions 19 which plane has been referred to hereinabove. This arrangement is clearly shown in Figure 3; and adds the measure of security to the engagement with which the net is retained upon the fastening devices. The two spirals 21 are of opposite pitch, as is best shown in Figure 4, with the result that both spirals open at the same side of the fastening device 17, that side being the one which includes the vertical, downwardly extending portion 19 with the result that the axis of the spiral is substantially directly below the axis of the associated portion of the ring 6 as is also clearly shown in Figure 3.

Because of this configuration of the attaching device 17, a strand 24 of the net 16 can be engaged thereupon with extreme ease and within a time so short as to be substantially instantaneous. All that is necessary to attain such engagement is for the operator to grasp one of the loop portions 31 at the top of the net at two points spaced two or three inches apart, the thumb and finger of each hand being used so as to enable him to stretch the portion of that strand which is between the two points substantially straight. Then, holding the strand substantially parallel to the adjacent portion of the ring 6 it is moved laterally so that it passes through the spaces 22 above the whorls 23 of the two spirals and below the ring 6. This movement is continued until the strand engages the proximal faces of the downwardly extending portion 19, whereupon continued movement of the strand in the same direction will cause the strand to flex slightly where it engages each portion 19 of the fastening device permitting the strand to pass around the extreme end of the horizontal portion 28 and thus, when moved downwards, to drop into the open central portion of the spiral

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and come to rest upon the upper surface of the horizontally extending portion 26, as clearly shown in Figure 3. Disengagement of the strand from the fastening device is attained, of course, in a reversal of the described movement; but because of the fact that it is necessary to hold the strand substantially tight, extending in a straight line, and then to flex it slightly in order to cause it to pass around the extreme end of the horizontal portion 28, substantially positive assurance is provided that the strand will not become dislodged from the fastening device 17 inadvertently as when the net is struck by the basketball during playing of the game.

Another detail of the present invention is concerned with the braces 41 which co-operate with the bracket 8 in holding the ring 6 rigidly and in a horizontal plane in conformity with official rules of the game. Each of these braces 41 is rigidly and permanently attached at its forward end, as by welding, to the under surface of the ring 6 at a point spaced a substantial distance from the bracket 8. When the goal is erected for use, each of these braces 41 extends angularly downward from the ring 6 in a substantially straight line to a preferably relatively short and flat mounting plate 42 to which both of the braces 41 are rigidly and preferably integrally joined at their ends. This plate 42 also is provided with a suitable hole through which an attaching device, such as a cap screw 43, can extend, as mentioned hereinabove in connection with the fastening devices 11. In order to obtain a greater degree of strength and rigidity and to impart the element of uniformity to the mounting of a large number of the goals, I prefer to provide a pair of rigid links 44 each of which interconnects the lower cap screw 43 with one of the upper cap screws 11, as clearly shown in Figures 1 and 5.

However, in order to reduce the overall size of the goal and thus reduce the cost of shipment and facilitate all operations involving handling of the goal up to the time when the goal actually is to be installed for use, each of the braces 41 is provided with a weakened section 46 only a slight distance below the point 47 of its attachment to the ring 6. Initially the brace is flexed at this section 46 so that after extending obliquely downwards from the ring 6 as indicated at 48, but for only a very short distance, the brace extends obliquely upwards again as indicated at 49 so as to dispose the outer end 51 of the brace substantially within the plane of the ring 6, as indicated in full lines in Figure 2. This weakened section 46 in each brace 41 may be provided by actually forming a portion or reduced diameter, if desired, but in actual practice I have found that merely to bend the metal of which the brace is formed at that point so strains the molecular construction of the material that it is weakened adequately to attain the purposes of the present invention. Consequently, even though the basketball goal of the present invention is shipped in such form that it occupies only a minimum space, when it is desired to erect the goal in playing arrangement, it is necessary merely to bend the braces 41 away from the plane of the ring 6 and until they take on a form indicated in broken lines in Figure 2. As such bending occurs, the flexure will take place entirely at the portion 46 of weakened section, thus assuring that the braces will be substantially straight and capable of affording the maximum strength and support for the ring 6 where the goal is mounted in its operating position.

I claim:

A device for attaching a basketball goal net to a goal ring comprising a double hook member secured at its mid portion to the under surface of said ring in spirals of right and left hand pitch both ways from said mid portion with the whorls of said spirals spaced from said ring by a distance slightly less than the normal diameter of a strand of said net whereby said strand can be forced therebetween to become engaged with or to be released from said spirals but whereby dislodgment of said strand from said spirals during use of said goal as such is prevented, said mid portion extending substantially vertically downwards from said ring and being disposed substantially tangential with respect to both of said spirals whereby said mid portion is offset laterally with respect to the axes of said spirals and a strand of said net can be moved laterally between said whorls and said ring when stretched in a straight line sub-

stantially parallel to the associated portion of said ring, and the outer end of each of said spirals terminating in a portion extending substantially horizontally at least to the vertical plane which includes said mid portion whereby said strand must be flexed from said straight line and about said mid portion in order for said strand to move laterally past both of said ends.

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