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[54] **BASKETBALL GOAL WITH NET-LOCKING RING**
8 Claims, 8 Drawing Figs.

[52] U.S. CL. 273/1.5 R

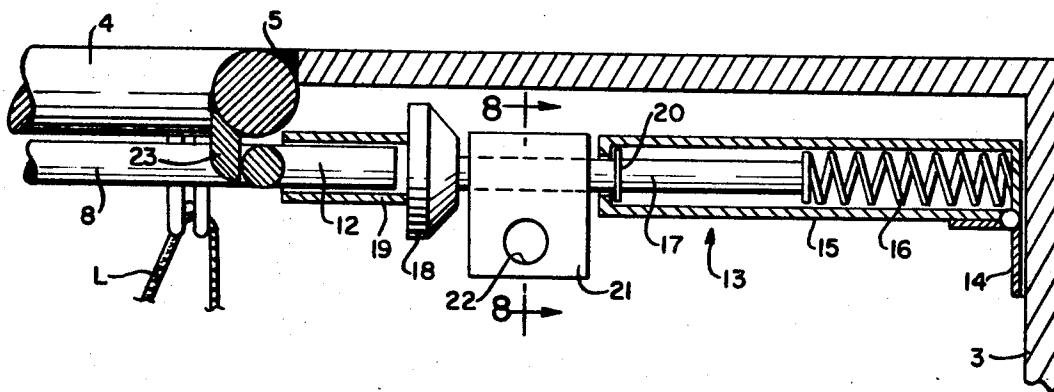
[51] Int. CL. A63b 63/00

[50] Field of Search 273/1.5 R,
1.5 A

[56] **References Cited**
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ABSTRACT: A basketball goal wherein the supporting loops of the net are secured against removal from their supporting hooks on a main ring, by a removable locking ring which, when in operating position, obturates the opening in each hook. The locking ring is formed in halves pivoted together and having contacting radial extensions at their free ends. A spring-pressed sleeve assembly is hinged to the ring bracket and in assembled and operating position engages over and about the aforesaid extensions. Locking means are provided to prevent retraction of the sleeve, thus making impossible the removal of the locking ring and net.



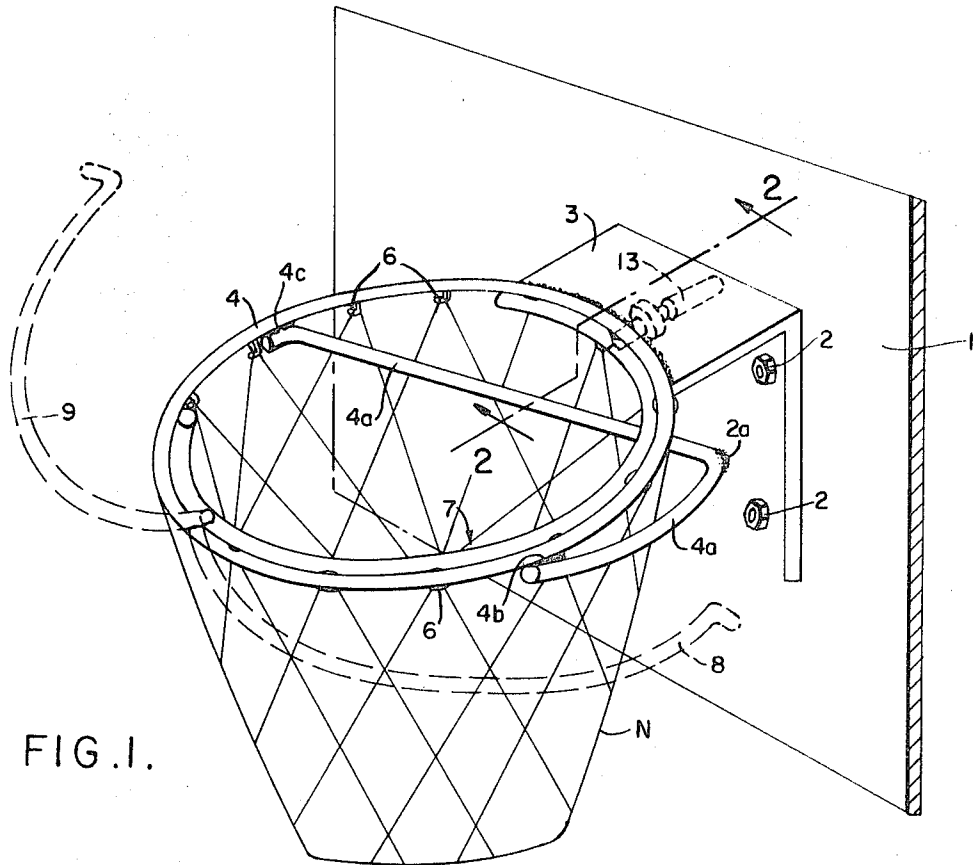


FIG. 1.

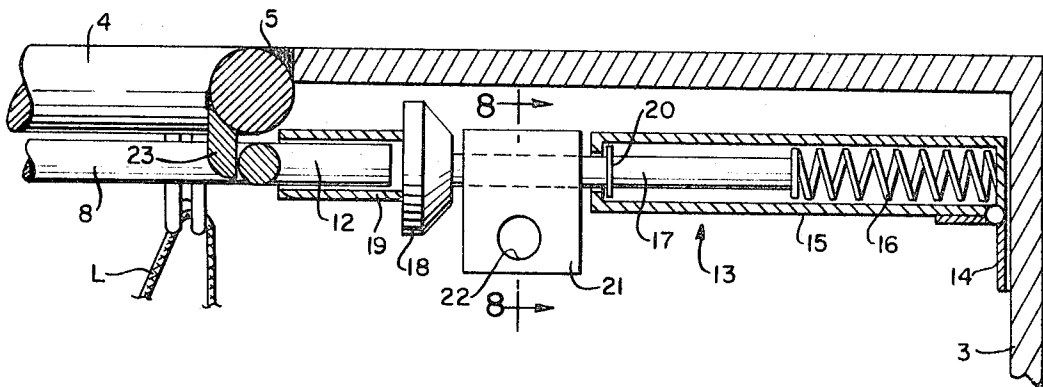


FIG. 2.

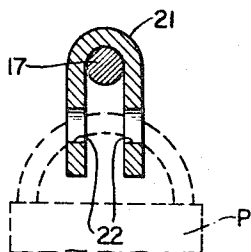


FIG. 8.

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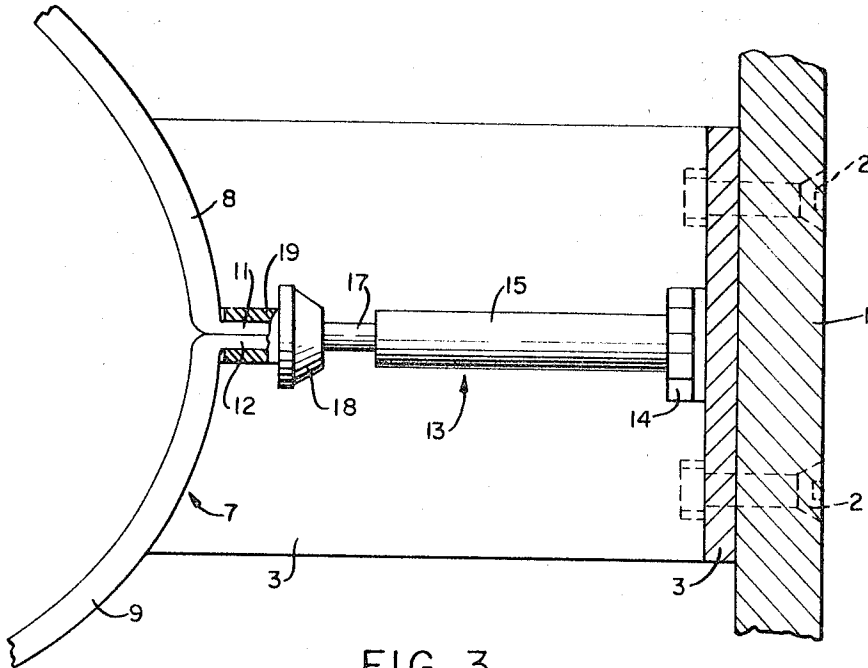


FIG. 3.

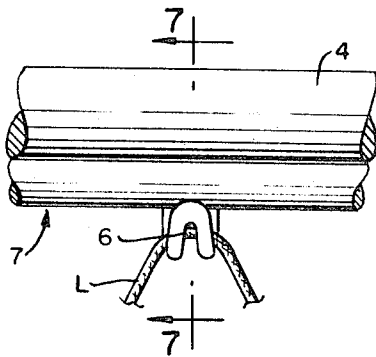


FIG. 4.

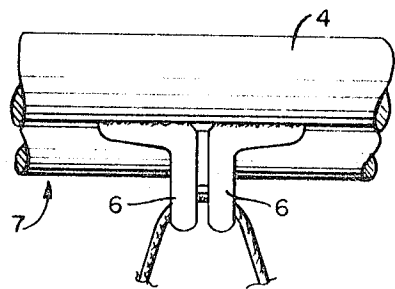


FIG. 5.

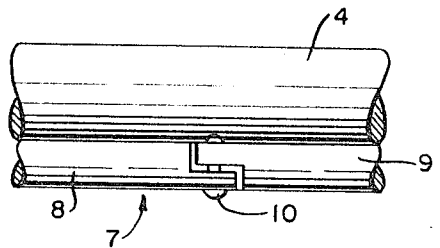


FIG. 6.

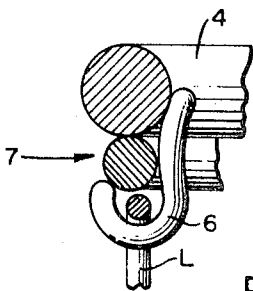


FIG. 7.

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BASKETBALL GOAL WITH NET-LOCKING RING

This invention relates to basketball goals and, more particularly to a goal wherein the net or basket may be releasably locked against removal.

It is the principal object of the invention to provide a goal of the type described wherein the net-supporting hooks over which the net loops are passed, may be obturated to prevent detachment of the net, accidentally or otherwise.

A further object is the provision of a locking ring for the purpose aforesaid, which extends beneath and in substantially coextensive contact with the main or net-supporting ring.

Another object is to provide a locking ring as in the immediately preceding paragraph, which is readily removable and replaceable and which, in assembled or operating position, obturates the openings of the supporting hooks and thus positively prevents removal or detachment of the net.

Yet another object is the provision of means by which the locking ring aforesaid, may be locked in position but which is readily released or removed to enable facile removal of the locking ring and subsequent removal of the net, as for repair and/or replacement.

Ancillary to the foregoing objects it is another object to provide an efficient, easily operated device which in its assembled condition presents no sharp projections or edges which might otherwise injure the hands or fingers of players.

Another object is to provide a goal as aforesaid which is solid and substantial, highly satisfactory in use, and which may be constructed of standard metallic shapes and forms.

Other objects and advantages of the invention will become clear to those skilled in the art, after a study of the following detailed description, in connection with the accompanying drawing.

In the drawing:

FIG. 1 is a perspective view showing the goal assembly mounted upon its backboard, a part of the locking ring being broken away to show details otherwise obscured;

FIG. 2 is a detail view to a scale enlarged over FIG. 1, taken in a plane identified by line 2-2, FIG. 1;

FIG. 3 is a plan view looking up, showing the ring lock in operating position but with locking yoke removed;

FIG. 4 is an enlarged detail view of a portion of the main and locking rings, looking from the outside, and showing one basket hook;

FIG. 5 is a view corresponding to FIG. 4 but looking from the inside of the rings and showing how each of the hooks is rigidly secured to the main ring;

FIG. 6 is a detail view to the same scale as FIGS. 4 and 5, showing the pivot between the two halves of the locking ring;

FIG. 7 is a detail sectional view taken in a plane identified by line 7-7, FIG. 4; and

FIG. 8 is a sectional detail view in a plane identified by line 8-8, FIG. 2.

Referring in detail to the drawing and in particular to FIG. 1, a portion of a backboard is indicated at 1, to which is bolted, as at 2, metallic L-bracket 3. The forward edge of the horizontal arm of the bracket is arcuately shaped to conform to the curvature of a main ring 4 and to which it is welded as indicated at 5, FIG. 2. A brace rod 4a is welded at its central portion, to the vertical arm of bracket 2, as at 2a, and its ends are welded to the main ring at 4b, 4c, FIG. 1.

A number of net hooks 6, 12 in the model illustrated, are welded to the lower inside surface of the main ring 4, as shown upon FIGS. 5 and 7. Each hook consists of a single length of heavy wire bent double intermediate its length. As seen in FIG. 5 the two ends of the wire are bent outwardly at about 90° to extend in alignment in opposite directions. The parallel arms of the wire extend downwardly and arcuately outwardly, then upwardly, to terminate below and spaced from the main ring by a radial distance which, from FIG. 7 is seen to be about equal to the diameter of locking ring 7. From FIG. 5 it is noted that the aligned ends of the wire are welded to main ring 4 at positions about 15° from that of the currently standard goal,

measured about the center of a radial cross section of the ring. As noted, there are 12 of these hooks 6. They are regularly spaced at 30° about the center of the ring and are so disposed that one contiguous pair is located at 15° on opposite sides of the pivot locking ring 7, subsequently described, while a diametrically opposite pair is located at 15° on opposite sides of the separable ends of ring 7.

Locking ring 7 consists of two semicircular halves 8 and 9 which, as shown at FIG. 6, are cut away at their meeting ends to form a complementary half-circular overlapping portions pivoted together by pin or rivet 10, which passes through aligned holes in the overlapping end portions. The construction is such that the two halves of the locking ring may pivot relatively in their common plane.

The free ends of ring halves 8 and 9 are provided with outwardly extending radial extensions 11 and 12 respectively, FIG. 3. These extensions may be welded to the ends of the ring halves or they may be formed as integral bent ends of the halves and ground to the desired shape. However constructed they are each generally semicylindrical in form so that when in closed or contacting relation they conjointly form a cylindrical projection extending radially outwardly from the ring proper.

A releasable locking assembly is generally identified at 13, FIGS. 1, 2 and 3. This assembly includes a hinge 14 having one leaf welded or otherwise secured to the vertical depending leg of bracket 3 and its other leaf fixed with the contiguous end of a tubular cylinder 15. The parts are so constructed and arranged that when in the position of FIG. 2, the axis of cylinder 15 is the plane of locking ring 7, radially thereof. When released from the extensions 11, 12 however, the assembly may pivot downwardly about the hinge axis, to an essentially vertical position.

Referring to FIG. 2, cylinder 15 contains a compression coil spring 16 abutting at its inner end against the closed end of the cylinder, and at its other end against the flanged rearward end of the locking plunger 17. The plunger projects with a smooth sliding fit through an aperture in the forward end of the cylinder and terminates in a flange 18 and sleeve 19 rigidly and coaxially secured to the plunger. A flange 20 is secured to the plunger inside the cylinder and in a way clear from FIG. 2, acts to limit the outward movement of the plunger. Alternatively the abutment flange at the inner end of the plunger may be omitted and spring 16 may then be of a size to surround the plunger with a smooth fit and to abut against flange 20. It will be understood that any suitable expedient may be employed to facilitate assembly of unit 13, such as by providing the rearward end of the cylinder with a plug threaded or welded in place. The construction is such that the plunger has free, smooth, guided translation within the cylinder to the right, as viewed upon FIG. 2.

Sleeve 19 forming an integral part of the locking assembly 13, is sized so that when the extensions 11, 12 are in contact, that is, when locking ring 7 is fully closed and in operating position, it fits snugly and smoothly over and about the extensions to thus positively maintain the ring closed as shown on FIGS. 1, 2 and 3. The parts are so dimensioned that in this position and relation there is an exposed forward portion of plunger 17, of three-fourths inch to 1 inch, between the contiguous end of cylinder 15 and flange 18. The exact dimension is not critical except that a metallic U-shaped member or yoke 21 has a corresponding width dimension and is, as apparent from FIGS. 2 and 8, sized to fit smoothly over and about plunger 17. Aligned holes 22 in the ends of yoke 21 enable the shackle of a padlock P to be passed through. When the padlock is in position as described, the yoke cannot be removed from the plunger, the plunger cannot be retracted from the position of FIG. 2, and with extensions 11, 12 within sleeve 19, ring 7 is locked in place, thus obturating the space between each of the hooks 6 and main ring 4.

Still referring to FIG. 7, when the locking ring 7 is closed and in assembled relation with main ring 4, it fits smoothly beneath the main ring and closes the opening in hooks 6, as aforesaid. Further, when in hook-obturing position, ring 7

substantially abuts a depending portion of each hook so that it cannot be shifted in its own plane relatively to main ring 4. The hooks are dimensioned so that each loop L of net N, FIG. 1, is freely supported in the space between the bight of its hook and ring 7, in the way clear from inspection of FIG. 7. As shown upon FIG. 2, a lug 23 is welded to the inner portion of main ring 4 and overlies the meeting ends of ring 7. The lug may have a circumferential extent of about 1 inch and makes it impossible to flex the meeting ends inwardly.

In use, assuming padlock P and locking member 21 to be removed, the plunger may be moved radially from the position of FIG. 2, by grasping flange 18 and forcing it to the right against the urge of spring 16. With sleeve 19 clear of extensions 11, 12 the ring halves 8 and 9 may pivot about the axis of pivot 10 and thus be readily removed from operating position within hooks 6.

Assuming that net N is to be emplaced, each loop L thereof is threaded over a respective one of hooks 6 and ring 7 is repositioned by a simultaneous movement of closing its two halves together while positioning it within the hooks as in FIG. 7. In this operation the extensions 11, 12 are, of course, located so that when they move into contact they are in alignment with sleeve 19. On release of flange 18, spring 16 moves the sleeve over the extensions to the position shown upon FIG. 2. Yoke 21 is slipped over the exposed part of plunger 17 and the shackle of padlock P is passed through holes 22 thereof. Locking ring 7 is thus positively held in position relatively to main ring 4 and net N cannot be removed because of the presence of the ring in the opening of each hook 6. Reference to FIGS. 4 and 7 shows that due to the construction and arrangement of the hooks there are no sharp ends, edges or protrusions which might otherwise injure the hands or fingers of the players.

Numerous modifications, changes of shape and form of the parts, the substitution of equivalents and rearrangement of elements will readily occur to those skilled in the art, after a study of the foregoing disclosure. The disclosure is therefore to be taken in an illustrative rather than a limiting sense.

Having fully disclosed the invention, what I claim and desire to secure by Letters Patent is:

1. A basketball goal comprising, a main ring, bracket means attached to said main ring to secure the same to a backboard,

a plurality of net-supporting hooks secured to said main ring in spaced relation about the circumference thereof and having openings through which the loops of a net may be passed to mount the net to and in depending relation with said main ring, and a single locking ring removably mounted to said main ring and of essentially the same diameter as said main ring, said locking ring being constructed and arranged to obturate the openings of all said hooks.

2. The goal of claim 1, each said hook being secured at one end to the inner periphery of said main ring, in depending relation therefrom and terminating in an outwardly and upwardly curved end spaced from and below said main ring to form an opening therewith, said locking ring being removably positioned to obturate all said openings.

3. The goal of claim 2, each said hook being a single length of wire bent double to form a loop, and adjacent ends extending opposite aligned directions, said ends being rigidly attached to said main ring.

4. The goal of claim 1, said locking ring being in two essentially semicylindrical halves pivoted together at a first point and having mating radially and outwardly extensions at a second point diametrically opposite said first point.

5. The goal of claim 4, locking means hinged to said bracket means and movable from a first position holding said extensions together, to secure said locking ring in hook-obturator position, to a second position free and clear of said extensions.

6. The goal of claim 5, said locking means comprising a cylinder hinged at one end to said bracket means, a plunger in and extending from said cylinder and movable from a first extended position, to a second retracted position, and a sleeve fixed with said plunger and movable over and about said extensions, in said first position, to hold said locking ring in hook-obturator position.

7. The goal of claim 6, and a spring in said cylinder engaging and urging said plunger to said first position.

8. The goal of claim 6, a portion of said plunger being exposed when in said first position, a locking yoke fitting over and about said exposed portion and effective to prevent retraction thereof to its said second position, and means securable to said yoke to prevent removal thereof from its position over and about said plunger.

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