United States Patent

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[54] **BASKETBALL NET ANTIWHIP DEVICE**
6 Claims, 4 Drawing Figs.

[52] **U.S. Cl.** **273/1.5**
[51] **Int. Cl.** **A63b 65/00**
[50] **Field of Search** 273/1.5

[56] **References Cited**

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ABSTRACT: The combination of a basketball net support ring and a basketball net having a lower portion formed of cord and an upper portion formed of a flexible material stiffer than the cord connected to the lower portion and to the support ring to prevent the net from whipping over said support ring when a basketball passes through said net. The upper portion is of a V-shaped configuration and provides the only connection and support between the lower cord portion and the support ring.

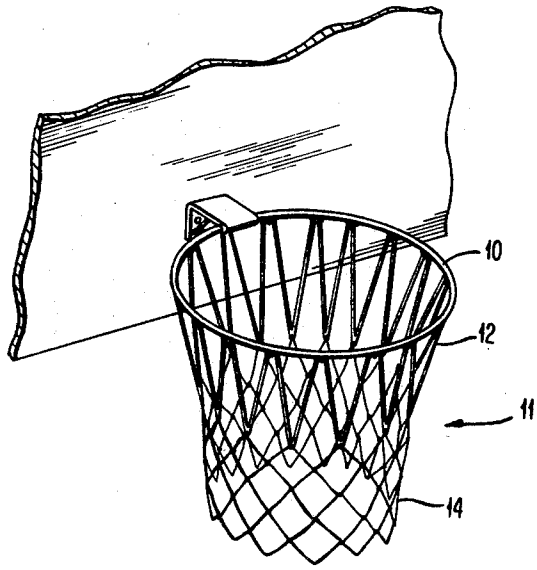


FIG. 1

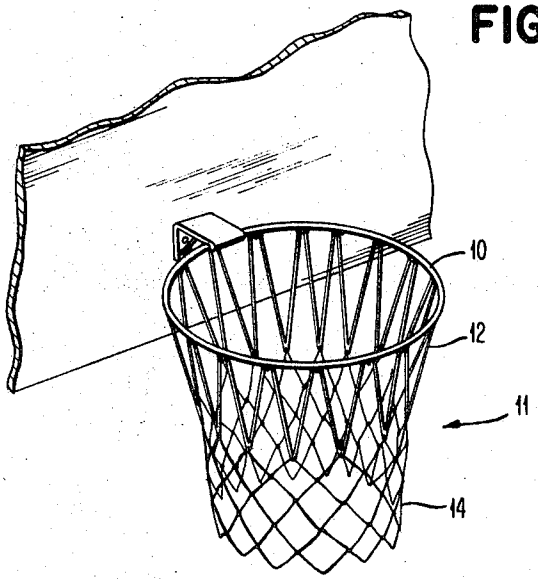


FIG. 2

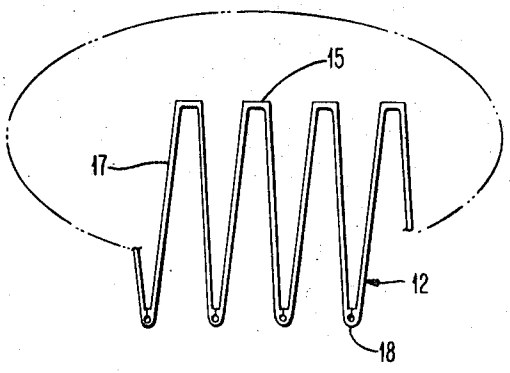


FIG. 3

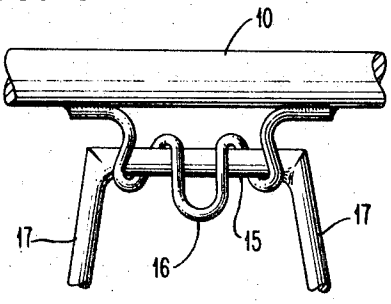
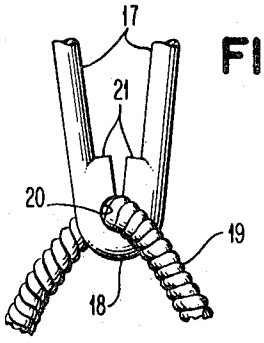


FIG. 4



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BASKETBALL NET ANTIWHIP DEVICE

A basketball net is required to be capable of indicating visually that a goal has been made when the basketball passes through the net support ring and into the net. Thus, the net must have a sufficiently small diameter at its bottom end in comparison with the diameter of the basketball so as to check the speed of the basketball as it passes through the net. This will result in some slight movement of the net whereby the officials may readily determine that a goal has been made.

When a basketball goal is made without the ball touching the support ring as the ball passes therethrough, the speed of the ball in entering the net is such that the cord, which forms the conventional net, is elongated. After the ball passes through the net, the cord contracts to its original length. This contraction of the cord may produce a whipping or flipping action. As a result, the lower end of the net may flip or whip over the support ring.

When this occurs, it is necessary to stop the progress of the game to return the net to its proper position beneath the support ring. Thus, this delay impairs the offense of one of the teams. For example, if play is stopped just after the goal is made, then the team, which has been scored upon, will have any fast break opportunity eliminated by the official having to stop the game to return the net to the proper position. If the net is not observed until the team, which scored the goal, has returned into its offensive court, then this team may have its fast break or other offensive opportunity impaired. Additionally, when the net is stuck on the support ring, this usually produces an embarrassing situation to the officials in their efforts to return the net to its original position. Therefore, the whipping or flipping of a net above the support ring after a goal has been made is an inconvenience to the officials and unfair to both teams in a basketball game.

Since a cord net forms the best material for checking the speed of the basketball as it passes through the net, it is desirable to be able to stop the flipping or whipping action of the basketball net without eliminating the cord in the lower portion of the net in which the speed of the ball is checked. Accordingly, the present invention solves the foregoing problem by permitting the utilization of a cord net in the lower portion while providing flexible means of sufficient rigidity or stiffness in the upper portion of the net to prevent any whipping or flipping of the net over the support ring.

Since the players have sufficient height and jumping ability to extend portions of their bodies into contact with the net, the net must not be formed of any material that may injure a player. The present invention satisfactorily meets this requirement by forming the upper portion of the net of a flexible material that will not harm the players while still providing sufficient rigidity or stiffness to prevent the net from being whipped or flipped over the support ring.

Furthermore, the net must be formed of a material that will not cause the basketball to be forced back up through the goal after the basketball has entered and passed through the support ring. The present invention satisfactorily meets this requirement since the flexible means for connecting the cord portion of the net to the support ring will not force the basketball back through the support ring any more than would the cord net.

Most support rings utilized with cord nets have hooks to receive portions of the cord net for connection thereto. Thus, various loops of the cord net are attached to the hooks to connect the net to the support ring. Therefore, in order for any type of new net to be readily acceptable and to be utilized, it must be compatible with the presently available support rings.

The present invention satisfactorily meets this requirement since the upper flexible portion of the net of the present invention may be easily attached to the hooks of the presently used support rings. Thus, no alteration or change in the presently used support rings is necessary for utilization of the net of the present invention.

An object of this invention is to provide a basketball net that will not flip or whip over its support ring.

Another object of this invention is to provide a basketball net that is readily usable with presently available support rings.

Other objects, uses, and advantages of this invention are apparent upon a reading of this description, which proceeds with reference to the drawing forming part thereof and wherein:

FIG. 1 is a perspective view of the net of the present invention supported from a support ring and forming a basketball goal;

FIG. 2 is a perspective view of a portion of the upper portion of the net of the present invention;

FIG. 3 is an enlarged fragmentary elevational view showing the attachment of the upper portion of the net of the present invention to a hook on the support ring;

FIG. 4 is an enlarged fragmentary perspective view showing the connection between the cord portion of the net and the flexible portion of the net.

Referring to the drawing and particularly FIG. 1, there is shown a support ring 10, which forms the rim or goal through which the basketball must pass for a goal to be made. A net 11 is attached to the support ring 10 and extends downwardly therefrom. The net 11 includes an upper portion 12, which is attached to the support ring 10, and a lower portion 14.

The upper portion 12 of the net 11 is formed of a suitable flexible material with sufficient rigidity or stiffness to prevent the net 11 from whipping or flipping over the support ring 10 when a basketball passes through the net 11. One suitable example of the material of the upper portion 12 of the net 11 is a low density polyethylene resin sold under the trade name "Petrothene" by the United States Industrial Chemical Company and having specification number 292. Any other suitable material having the same desired characteristics of being flexible but adding rigidity or stiffness to a cord net to prevent it from whipping over its support ring may be employed. The material of the upper portion 12 also must have the characteristics of not injuring any of the players and of not preventing the basketball from passing through the net 11.

As shown in FIG. 2, the upper portion 12 of the net 11 is a single continuous member. The continuous member has a plurality of upper horizontal portions 15 with each of the portions 15 adapted to be secured to one of a plurality of circumferentially spaced hooks 16 (see FIG. 3) on the support ring 10. A leg 17 extends downwardly from each side of each of the upper horizontal portions 15 and a retaining portion 18 joins the lower ends of the two legs 17 to each other. The retaining portion 18 is adapted to receive a loop 19 of the lower cord portion 14 of the net 11.

As shown in FIG. 4, the loop 19 is retained within the retaining portion 18 of the upper portion 12 of the net 11 through being disposed within an opening 20 formed at the junction of the lower ends of the legs 17. The adjacent surfaces of the legs 17 have projections 21 extending over the loop 19 to retain the loop 19 within the retaining portion 18 of the upper portion 12 of the net 11. It should be understood that any other suitable type of means to retain the loop 19 within the retaining portion 18 of the upper portion 12 of the net 11 may be utilized. It is only necessary that the retaining means be capable of preventing the cord portion 14 from moving upwardly relative to the upper portion 12 when the ball passes through the net 11.

In installing the net 11 on the support ring 10, it is necessary to pass each of the horizontal portions 15 of the upper portion 12 around one of the circumferentially spaced hooks 16 on the support ring 10. This is accomplished through the flexibility of the upper portion 12 being capable of allowing one of the junctions of the horizontal portion 15 with one of the legs 17 to be passed beneath the hook 16 and then to straighten the horizontal portion 15 to the position of FIG. 3. When the net 11 is completely hung, each of the upper horizontal portions 15 is disposed between two of the retaining portions 18 as shown in FIG. 1.

While the present invention has been described with the upper portion 12 of the net being formed of a single continu-

ous member and the lower portion **14** being formed of cord, it should be understood that the upper portion **12** could be formed of a plurality of separate connecting means. Furthermore, it would not be necessary for all of the connecting means to be flexible and partially rigid or stiff. Thus, some of the connecting means between the lower portion **14** of the net **11** and the hooks **16** on the support ring **10** could be formed of cord. It is only necessary that a sufficient number of the flexible connecting means be utilized between the support ring **10** and the lower portion **14** to prevent the lower portion **14** of the net **11** from being flipped or whipped over the support ring **10** when a basketball passes through the support ring **10** without touching the support ring **10**.

The upper portion **12** of the net **11** has been shown as slightly longer in length than the lower portion **14**. However, it is only necessary that the upper portion **12** have a length such that the lower portion **14** cannot flip over the support ring **10**; this would be determined, to some degree, by the stiffness or rigidity of the material of the upper portion **12** of the net **11**.

An advantage of this invention is that the net will not become stuck on the support ring. Another advantage of this invention is that it meets the present rules insofar as checking the speed of the ball when it passes through the net. A further advantage of this invention is that there is no danger of any injury to any participants due to the net of the present invention. Still another advantage of this invention is that the net may be utilized with existing support rings.

For purposes of exemplification, a particular embodiment of the invention has been shown and described according to the best present understanding thereof. However, it will be apparent that changes and modifications in the arrangement and construction of the parts thereof may be resorted to without departing from the spirit and scope of the invention.

I claim:

1. In combination, a basketball net, a basketball net support ring, said net having a lower portion formed of cord, flexible means separate from and of a material stiffer than said cord connected to said lower portion of said net and connected to said support ring, said flexible means being the sole connection between said cord portion of said net and said support ring, said flexible means comprising a plurality of generally V-shaped members, each of said V-shaped members having a maximum combined spaced three point contact between said support ring and said lower portion of said net, said flexible means preventing said net from whipping over said support ring when a basketball passes through said net.

2. The combination according to claim **1** in which said generally V-shaped members have retaining means to retain a part of said lower portion attached thereto.

3. The combination of claim **2** in which said retaining means comprises gripping means at the junction of the legs of said V-shaped members for engaging a part of said lower portion and retaining it at said junction.

4. The combination of claim **2** in which said retaining means comprises a recess formed in said legs at the junction of said legs of said V-shaped members.

5. The combination of claim **4** wherein each of said legs is provided with a shoulder projecting inwardly toward the opposite leg and forming at least a partial closure for said recess.

6. The combination of claim **1** in which said flexible means comprises a single continuous member.