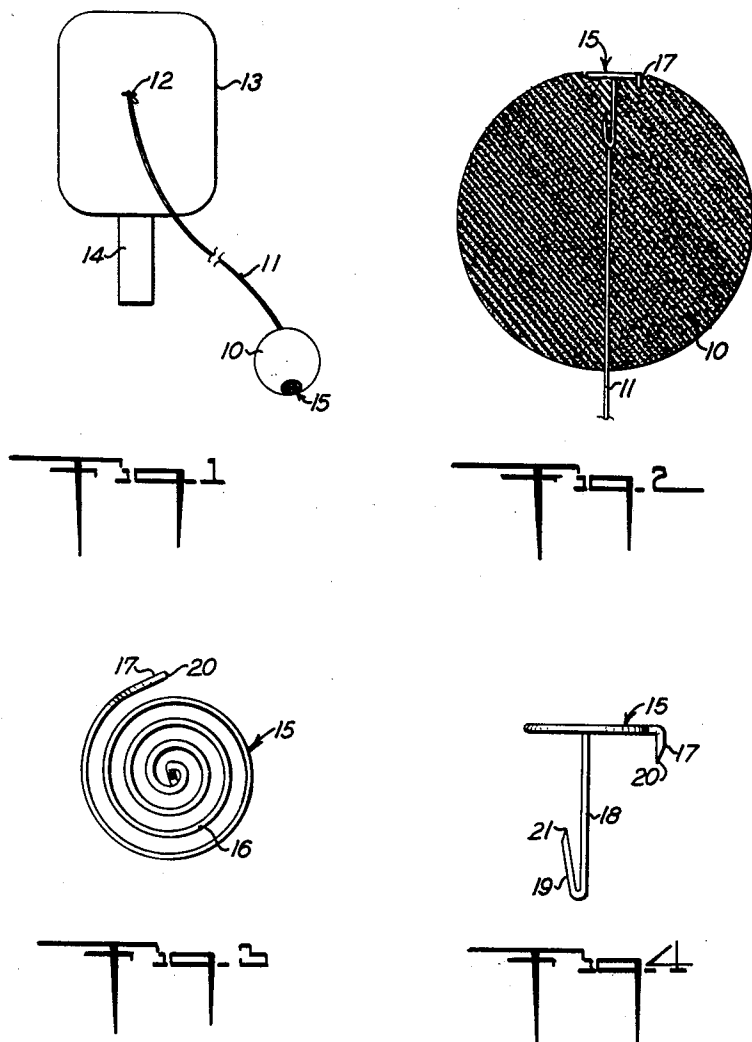


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TETHERED SPONGE BALL
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TETHERED SPONGE BALL

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2 Claims. (Cl. 273—58)

This application relates to amusement devices and more particularly to a device for retaining an elastic thread in a sponge rubber ball which is normally used in connection with a paddle, or for bouncing against a surface such as the pavement.

Heretofore, sponge rubber balls have been provided with elastic thread in order to assist in the retraction thereof, after the same bounces against a surface or to retract the same after flight in midair due to the impact of a paddle or other impelling device. In these prior art devices the elastic thread has usually merely been threaded through the sponge rubber ball and no retaining means therefore, has been provided, the resiliency and frictional engagement between the thread and the ball being relied upon to prevent withdrawal of the same. Unfortunately, this method of retention has not proved entirely satisfactory since the thread tends to gradually work out of the ball thereby requiring frequent re-threading.

It also frequently occurs that the elastic thread will become detached from the ball in flight, thereby resulting in the ball traveling an unexpected distance and in certain instances damage to surrounding objects may result or the ball may be lost. Furthermore, since upon separation of the elastic thread from the ball the game was over for the time being, much pleasure was lost due to the fact that it was necessary to procure a needle to rethread the elastic thread through the ball and consequently, any means which will prevent such separation of the thread from the ball is a very worth while step forward in the art.

It is accordingly an object of this invention to provide a retaining means for an elastic thread passing through a sponge rubber ball to prevent inadvertent separation thereof.

A further object of the invention is the provision of a retaining means for preventing withdrawal or separation of an elastic thread from a sponge rubber ball, such retaining means being inserted within the ball and with the outer portion thereof imbedded in the surface of the ball to present a pleasing appearance and preserve the outer spherical contour of such ball.

A still further object of the invention is the provision of a retaining means for preventing withdrawal or separation of an elastic thread from a sponge rubber ball, which retaining means assists in returning the ball to the player after a flight thereof to a predetermined distance, determined by the elasticity of the elastic thread.

Another object of the invention is the provision of a retaining means preventing withdrawal or separation of an elastic thread from a sponge rubber ball, which retaining means may be economically manufactured from readily available spring wire stock and thus salable in a highly competitive market.

Further objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawings wherein:

Fig. 1 is a view in perspective showing a paddle with

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a sponge rubber ball having an elastic thread secured thereto by the retaining means of this invention, with the elastic thread in turn secured to the paddle adjacent the center thereof;

Fig. 2, a transverse sectional view of a sponge rubber ball with an elastic thread extending therethrough and secured in place by the retaining means of this invention;

Fig. 3, a plan view of the retaining means of this invention; and

Fig. 4, a side elevational view of the retaining means shown in Fig. 3.

With continued reference to the drawing there is shown a ball 10 which may be formed of sponge rubber or other suitable yieldable resilient material, and to which is secured by the retaining means of this invention an elastic thread 11 which if desired, may in turn be secured by a staple 12 or other suitable means to a paddle 13 having a handle 14. It is not necessary that the elastic thread 11 be secured to a paddle 13, since such thread may be held in the hand of the player and the ball merely bounced with contact of such hand rather than by contact with the surface of the paddle 13.

The thread retaining means 15 of this invention may be conveniently formed of spring wire which may be galvanized or plated to preclude oxidation thereof and to present a pleasing appearance, and this retaining means 15 may as best shown in Figs. 3 and 4, be in a form of a flat spiral of several convolutions 16. The convolutions 16 may terminate in an interned end 17, the purpose of which will be presently described.

The wire convolutions 16 terminate at the center of the spiral in a downwardly depending shank 18 which may be formed at its lower end with a reversely bent hook portion 19. Since the wire which is utilized to form the retaining means of this invention is cut from an endless length thereof, the end 20 of the downwardly extending member 17 and the end 21 of the reversely bent hook portion 19 are sharp due to the action of the wire cutting mechanism.

The use of the retaining means of this invention is best shown in Fig. 2, in which the elastic thread 11 is threaded through the sponge rubber ball 10 by use of a needle or any other desired means, the thread being extended beyond the opposite side of the ball from the point of entry. At this time the thread 11 is looped over with such loop being received in the hook portion 19 of the downwardly depending shank 18 of the retaining means 15. Since the thread 11 is yieldable, the same will be tightly gripped between the hook portion 19 and the shank 18. At this time, the shank 18 is forced into the ball 10 with the elastic thread 11 being withdrawn from the opposite side to maintain the same taut. The shank 18 is forced into the ball 10 until the spiral convolutions 16 engage the surface of the ball and slightly indent the same. At the same time, the sharpened end 20 of the downwardly extending member 17 at the circumference of the convolutions 16 will imbed itself in the surface of the ball 10 to prevent rotation and displacement of the retaining means 15.

Should the elastic 11 break it is only necessary to engage the convolution 16 of the retaining means 15 by the fingernails of the player in order to draw the same from the ball 10, after which a new elastic thread 11 may be threaded through the ball and attached to the hook portion 19 of the retaining means 15 and the same again fastened to the ball in the same manner described above.

It will thus be seen that there has been provided by the above described invention a convenient and economical means for retaining an elastic thread in a sponge rubber or other resilient and yieldable ball, which means

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prevents gradual withdrawal of the thread from such ball and which may be conveniently utilized to reattach the thread to the ball upon breakage thereof. Furthermore, the retaining means of this invention does not in any way interfere with the normal playing of a game with the ball and does not impair the rebound thereof, but on the contrary, due to the resiliency of the spiral convolutions, adds to such rebound since upon a pull on the elastic thread, the retaining means will give and will thus increase the resiliency of the elastic thread. Obviously, the retaining means of this invention may be manufactured by conventional wire working operations in high speed production machinery and thus be produced at an extremely low cost which permits the sale thereof in a highly competitive market.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is shown in the drawing and described in the specification, but only as indicated in the appended claims.

What is claimed is:

1. The combination of a sponge rubber ball, an elastic thread extending into said ball and retaining means for preventing withdrawal of said thread from said ball, said retaining means comprising a one-piece wire member provided with a plurality of flat spiral convolutions, said convolutions terminating at the outer end in a sharp prong projecting at right angles to the plane of said convolutions and penetrating said ball with said convolutions embedded in the surface of said ball, said convolutions

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terminating at the inner end in a shank extending at right angles to the plane of said convolutions on the same side as said prong, said shank penetrating said ball and terminating within said ball in a hook portion, said thread being tightly received in said hook portion to prevent withdrawal of said thread from said ball.

2. The combination of a sponge rubber ball, an elastic thread extending into said ball and retaining means for preventing withdrawal of said thread from said ball, said retaining means comprising a one-piece wire member provided with a plurality of flat spiral convolutions, said convolutions terminating at the inner end in a shank extending at right angles to the plane of said convolutions, said shank penetrating said ball with said convolutions embedded in the surface of said ball, said shank terminating within said ball in a hook portion, said thread being tightly received in said hook portion to prevent withdrawal of said thread from said ball.

References Cited in the file of this patent

UNITED STATES PATENTS

360,418	Clark	Apr. 5, 1887
667,563	Oakley	Feb. 5, 1901
717,629	Schultz	Jan. 6, 1903
1,278,446	De La Parra	Sept. 10, 1918
1,344,224	Gross	June 22, 1920
1,463,020	Olson	July 24, 1923
2,572,790	West	Oct. 23, 1951

FOREIGN PATENTS

315,623	Italy	Mar. 2, 1934
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