The present invention relates to a practice ball for teaching a person to bat a baseball or a softball, and also to permit fielding practice and the like.

Baseball and so-called softball are extensively played throughout the United States, and, in fact, throughout the world. A great deal of emphasis has been placed particularly on baseball in recent years with the innovation of the so-called "little leagues" and "pony leagues." The individual players have heretofore had difficulty in practicing batting or fielding unless a substantial playground area was available to them. For example, it is rather difficult in an ordinary city or village back yard for a person to practice batting a baseball or a softball, or to do any fielding practice. As a result, practice for these individuals has been limited to times when they could reach a playground which affords a substantial area for this purpose. It would be desirable to provide a practice ball either for baseball or for softball which would permit one to practice batting in a small area such as the back yard of any city lot, and, similarly, to be able to practice fielding in an equally small area. If this were possible, individuals could obtain a great deal of practice, in any event much more than is now possible, without having to travel to a playground which might be some distance away from their home. Also, it would be desirable to have a practice ball whereby one could obtain extensive batting practice by merely having one additional individual to assist in such practice.

Accordingly, it is an object of the present invention to provide an improved practice ball for permitting an individual to obtain batting practice or fielding practice in an area not much greater than thirty feet in diameter. It is another object of the present invention to provide an improved practice ball for use in teaching baseball player or softball player how to bat or how to field a ball.

It is a further object of the present invention to provide a baseball or softball with a heavy core attached thereto permitting the ball to be swung in the arc of a circle of substantial diameter, with the batter in a position to swing at the ball as it reaches a certain point in its travel around the circle.

Further objects and advantages of the present invention will become apparent as the following description proceeds, and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

For a better understanding of the present invention, reference may be had to the accompanying drawing in which:

Fig. 1 is a view showing an application of the practice ball of the present invention in which a batter is obtaining batting practice therewith;

Fig. 2 is a plan view of a baseball embodying the features of the practice ball of the present invention;

Fig. 3 is an enlarged sectional view through the ball portion of the practice ball of the present invention illustrating one step in the process of manufacture thereof;

Fig. 4 is a view similar to Fig. 3 illustrating still another step in the process of manufacturing the practice ball of the present invention;

Fig. 5 is a view of the end of the cord secured to the practice ball of the present invention illustrating another step in the process of manufacturing the ball;

Fig. 6 is a sectional view similar to Fig. 3 and illustrating still another step in the process of manufacturing the practice ball of the present invention;

Fig. 7 is an enlarged fragmentary view of a portion of Fig. 6.

Briefly, the present invention is concerned with a baseball or softball, or any other type of ball which is used in a bat type game, secured to the end of a relatively strong cord of substantial length, such as of the order of fifteen feet in length, whereby the ball may be moved around the circumference of a thirty-foot circle. At one point beneath the arc of this circle there would be placed on the ground a device or indicator curves, respectively, in baseball or softball vernacular, and the batter would stand to the side of the plate, as in baseball or softball, and hit the ball as it moves past him. The batter can only hit the ball as it passes directly over the plate.

Referring now to the drawing, and specifically to Fig. 1, there is illustrated the practice ball of the present invention, generally designated by the reference numeral 16. This practice ball, if it is used for baseball practice, will comprise a standard baseball 11, to which is suitably secured in accordance with the present invention a cord 12 of the length preferably of the order of about fifteen feet, and at least between eight and twenty feet. This cord may have any weight and strength, but is preferably the type of cord which is commonly sold on the market as wash line. In any event, it has substantial strength and great flexibility. As is illustrated in Fig. 1 of the drawing, the ball portion 11 is moved along the circumference of a circle of any size, a portion of which is indicated in dashed lines 13, which with the fifteen-foot cord 12 might be the circumference of approximately a thirty-foot circle.

The person manipulating the practice ball 10 will preferably wrap the end of the cord around one hand, the left hand if the person manipulating it is right-handed, and then grasp the cord at some intermediate point thereon with the other hand 14 and begin to swing the ball 11 in a circle, with the hand 14 acting as the center of the circle raised above the head of the person manipulating the ball. The centrifugal force will move the ball out to the maximum distance that it is permitted to move by the cord 12, and the speed can be controlled by the operator, as can also the height above the ground and various other factors. In practicing batting, a batter, designated as 15 in the drawing, will stand in a conventional place relative to a plate 16, and the arc of the circle in which the ball 11 is travelling will be such as to cause the ball 11 to move directly over the plate 16. The operator, in manipulating the practice ball 10, can cause the ball 11 to move toward the batter just as it reaches the plate 16, or to move away from the batter just as it reaches the plate 16, as is desired, to simulate pitching "in" and "out" curves, respectively. This control is obtained by the control hand 14 of the operator, which hand determines the center of the circle around which the ball 11 is travelling. Moreover it will be understood that by manipulating this hand the ball can be made to drop as it crosses the plate 16, or to rise upwardly suddenly as it crosses the plate, and thus, by proper control of the ball, it can be made to travel over the plate 16 in the manner of a ball thrown to the plate by a pitcher. The batter will swing at the ball as it comes over the plate, and the operator who is manipulating the ball will be able to watch the batter and will be able to give him pointers as to his stance, watching the ball and the like.
The ball can be moved over the plate at a relatively slow speed to start with, and as the batter becomes more skilled at batting the ball may be moved faster and may be caused to go at various angles, and the like, by a twist of the wrist of the operator. It has been found that greatly improved coordination of the eye, stance, swing and follow-through is obtained with the practice ball of the present invention, and this can all be accomplished in a very small back yard or the like.

When the batter hits the ball, it will merely reverse the direction of rotation, and, of course, if the ball is fouled, it may rise upwardly or drop to the ground. The operator can readily determine what type of hit was made.

With the present invention fielding practice can also be obtained by one person only. In this case a loop is made in the end of the cord 12, and this is tied around the gloved hand of the ball player, who then throws the ball out in front of him with the other hand. When the ball reaches the end of the cord 12, a quick jerk on the taut rope from the arm to which it is secured will cause immediate return of the ball for fielding the same as if it had been hit by the batter.

In Fig. 2 of the drawing, there is illustrated the practice ball 10 in the form of a baseball 11 to which has been secured the cord 12, only a small portion of which cord is shown. It will be appreciated that the present invention is equally applicable to a softball, and the application to a baseball is merely by way of example.

For the purpose of giving accurate baseball practice or softball practice, as the case may be, the ball 11 should be a standard or official baseball or softball. A problem then arises with respect to securing the cord 12 thereto without interfering with the construction and without changing the response or other characteristics of the ball when used in batting or fielding practice. In accordance with the present invention, there is provided a novel arrangement for securing the cord 12 to the ball 11. Preferably, and as illustrated in Fig. 3 of the drawing, the baseball 11 comprises the conventional cork or rubber center 17, and the surrounding string section 18, all of which is enclosed within the conventional horsehide cover 19 which is made in two sections united by the conventional seams 20. The cork or rubber center 17 and surrounding string section 18 may be generally termed a core. In accordance with the present invention, either before the cover is applied to the ball or at least before the section 19a of the cover, as shown in Fig. 3 of the drawing, is applied thereto, a hole 21 is drilled directly through the center of the ball of a size to accommodate the cord 12. The next step in the process of manufacture comprises inserting the cord 12 through the opening 21, which is a passageway directly through the center of the ball. The end of the cord inserted into the opening 21 is then pulled through a short distance and frayed, as indicated at 22, best shown in Fig. 5 of the drawing, where a portion only of the cord 12 is illustrated. The frayed end of the cord is then immersed in a liquid rubber or similar material, so that a mass of rubber-like material firmly united to the cord 12, as designated at 23 in Fig. 6 of the drawing, is provided. This mass of rubber is then caused to conform to the periphery of the ball, and the section 19a of the cover 19 is then put in place. With this arrangement a very strong connection between the ball 11 and the cord 12 is provided which in no way impairs the standard construction of the ball. Extensive use of the practice ball 12 of the present invention has demonstrated that a very firm bond is obtained between the cord 12 and the ball 11 in the manner described. If the rubberlike material secured to the frayed ends of the cord 12 should happen to start to slip through the rubber or cork section 17. In any event, no difficulty has been found in the cord 12 coming loose from the ball 11.

It will be understood that the specific means of securing the cord 12 to the ball 11 which has been found to be very satisfactory may be modified. If desired a swivel means may be included somewhere along the length of the cord 12.

In view of the detailed description included above, it will be appreciated that there has been provided a practice ball which becomes a very useful tool in teaching one to hit a baseball or a softball, as the case may be, and it is also useful in giving one fielding practice. Moreover, the ball permits use in a very small space where otherwise it would be impossible to practice batting a baseball or softball. Extensive use of the device of the present invention has demonstrated its usefulness, and has shown that persons practicing with the ball find their batting averages greatly improved after practice therewith.

While there has been illustrated and described an improved practice ball, as well as the process of manufacturing the same, it will be apparent that numerous changes and modifications thereof will occur to those skilled in the art, and it is intended in the appended claims to cover all those changes and modifications as fall within the true spirit and scope of the present invention.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A ball and cord combination comprising a ball having a solid core, a cover for said core, said ball having a hole therein which extends diametrically through said core and through one side of said cover, said hole being enlarged at one end of said core opposite the end of said hole adjacent the hole in said cover, said cord being disposed in said hole, and an enlargement on said cord disposed in the enlarged end of said hole and wholly within the normal periphery of the ball to prevent disassembly of said cord from said ball.

2. The combination of claim 1 wherein said enlargement comprises a mass of resilient matter in which the end of said cord is embedded.

3. The combination of claim 2 wherein said mass of resilient matter conforms to the periphery of said core.

References Cited in the file of this patent

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Patent No.</th>
<th>Inventor</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,863,910</td>
<td>Minnix</td>
<td>Sept. 11, 1928</td>
</tr>
<tr>
<td>1,907,412</td>
<td>Zimmer</td>
<td>May 2, 1933</td>
</tr>
<tr>
<td>2,547,776</td>
<td>Rankin</td>
<td>Apr. 3, 1951</td>
</tr>
</tbody>
</table>

FOREIGN PATENTS

<table>
<thead>
<tr>
<th>Patent No.</th>
<th>Country</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>281,497</td>
<td>Great Britain</td>
<td>Dec. 8, 1927</td>
</tr>
<tr>
<td>597,176</td>
<td>Germany</td>
<td>May 18, 1934</td>
</tr>
<tr>
<td>456,645</td>
<td>Canada</td>
<td>May 17, 1949</td>
</tr>
</tbody>
</table>