A device to improve the swing of a baseball player is provided. The device is a flexible removable cone which is secured to the exterior surface of a baseball bat. The removable cone may have a temporary adhesive on the bottom which prevents the cone from sliding with respect to the bat. The removable cone has a plurality of colored zones which allows the user and/or a trainer to determine precisely where on the bat a ball is struck. The removable cone may have a carbon layer which allows the user to not only see exactly where on the bat the ball was struck, but to keep a record of the same.
BASEBALL BAT SWING TRAINING DEVICE

BACKGROUND OF THE INVENTION

[0001] A device to improve the swing of a baseball player is provided. The device is a flexible removable cone which is secured to the exterior surface of a baseball bat. The removable cone may have a temporary adhesive on the bottom which prevents the cone from sliding with respect to the bat. The removable cone has a plurality of colored zones which allows the user and/or a trainer to determine precisely where on the bat a ball is struck. The removable cone may have a carbon layer which allows the user to not only see exactly where on the bat the ball was struck, but to keep a record of the same.

[0002] Over the years numerous devices have been developed to help baseball players practice their swing. For example, U.S. Pat. No. 8,137,219 to Giant discloses a training baseball batter having an internal movable magnet that accelerates to the end of the bat when swung at a fast enough speed. As the magnet moves it passes through a coil that is connected to one or more LEDs so that the LEDs momentarily flash as the magnet moves through the coil. An axially positional stationary magnet can be used to hold the movable magnet until sufficient centrifugal force is imparted by the swing to overcome the magnetic holding force.

[0003] U.S. Pat. No. 7,198,581 to Black discloses a training bat system for increasing the batting skills of a baseball player. The training bat system includes a tubular member having a center bore, a plurality of weight members removably positioned within the center bore, an inner cap secured to an inner end of the tubular member, and an outer cap secured to the outer end of the tubular member. A compression spring is preferably positioned between the weight members and the inner cap for maintaining the weight members non-movably adjacent one another. The tubular member in the preferred embodiment has an outer diameter similar to a handle grip of a baseball bat. The tubular member’s outer diameter over the area of the bat used for hitting a ball is much smaller than a conventional bat. The tubular member’s length is similar to a conventional bat.

[0004] Further, U.S. Pat. No. 8,282,510 to Englund discloses a hollow tube with a handle portion and a knob attached at the proximal end for use in training a batter. A hitting portion is attached at the distal end of the tube that provides two elongated, opposed striking surfaces that are narrower than the striking surface of a conventional baseball bat, and are offset from the axis for improving swing accuracy and wrist control.

[0005] The relative weights of the components combine to produce a training bat that is substantially similar in overall weight and balance to a conventional baseball bat. The face of each narrow striking surface is substantially similar in convexity to the striking surface of a conventional baseball bat, thereby providing a familiar feel and sound to the hitter when used to hit a ball.

[0006] However, these baseball bat swing teaching devices fail to provide a baseball bat training device having the features described below. A need, therefore, exists for an improved baseball bat training device.

SUMMARY OF THE INVENTION

[0007] A device to improve the swing of a baseball player is provided. The device is a flexible removable cone which is secured to the exterior surface of a baseball bat. The removable cone may have a temporary adhesive on the bottom which prevents the cone from sliding with respect to the bat. The removable cone has a plurality of colored zones which allows the user and/or a trainer to determine precisely where on the bat a ball is struck. The removable cone may have a carbon layer which allows the user to not only see exactly where on the bat the ball was struck, but to keep a record of the same.

[0008] An advantage of the present device is that the present device allows a batter to improve his/her hand-eye coordination with respect to swinging a bat.

[0009] Still another advantage of the present device is to provide a baseball bat training device which may be used repeatedly and then discarded or recycled.

[0010] And another advantage of the present device is that the present device may be used near the handle of a bat or near the distal end (away from the handle) of a bat.

[0011] Yet another advantage of the present device is to provide a baseball bat training device which allows user to see exactly where on a bat a ball strikes.

[0012] Still another advantage of the present device is to provide a baseball bat training device which allows a user to keep a record of his/her hitting history.

[0013] And yet another advantage of the present device is to provide a baseball bat training device which has a plurality of different colored zones for immediately visualizing where the ball strikes the bat.

[0014] Another advantage of the present baseball bat training device is that the present baseball bat training device may have an adhesive on the back which prevents the training device from accidently moving with respect to the bat.

[0015] Still another advantage of the present baseball bat training device is that the present baseball bat training device may be used with baseball bats of various sizes and weights.

[0016] Another advantage of the present baseball bat training device is that the present device is lightweight and easily transported and stored.

[0017] Still another advantage of the present baseball bat training device is that the present device may be moved from a generally flat transporting and storing position into a useful generally cylindrical position.

[0018] Another advantage of the present baseball bat training device is to provide a training device which is inexpensive.

[0019] Yet another advantage of the present baseball bat training device is that the present baseball bat training device may be used to train softball players, baseball players using hard or rubber-coated baseballs, or players of other similar sports.

[0020] Another advantage of the present baseball bat training device is that the present baseball bat training device allows a user to exactly compare the hitting habits of one player with another player.

[0021] And another advantage of the present baseball bat training device is that, in an embodiment, the device may be weighted so as to allow a user to develop a quicker swing.

[0022] Yet another advantage of the present baseball bat training device is that the device is useful in helping pitching and batting coaches.

[0023] Still another advantage of the present device is that the present baseball bat training device may be stored and transported in a flat manner.
Yet another advantage of the present device is that the present device forces a batter to intensely focus on the swing and contact therein improving the same.

And another advantage of the present device is that the present device may not alter a batters swing when the device is inserted on a bat.

Still another advantage of the present device is that with the present device a pitching coach may call out a colored zone for a batter to aim at.

And another advantage of the present device is that the present device may be used by, for example, a pitching coach pitching a ball, a batter using a T (such as in little league) or a batter hitting by him/herself.

Yet another advantage of the present baseball bat training device is that the present device may have a durable under-layer which protects the baseball bat from damage.

For a more complete understanding of the above listed features and advantages of the present baseball bat training device, reference should be made to the following detailed description of the preferred embodiments. Further, additional features and advantages of the invention are described in, and will be apparent from, the detailed description of the preferred embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a view of the baseball bat training device—First Position A.

FIG. 2 illustrates a side view of the baseball bat training device.

FIG. 3 illustrates the baseball bat training device rolled up in the Second Position B.

FIG. 4 illustrates the baseball bat training device secured to a baseball bat.

FIG. 5 illustrates a computer obtaining an electronic record of the performance of a batter using the device.

FIG. 6 illustrates an embodiment of the device being inserted on a baseball bat.

FIG. 7 illustrates an embodiment of the device already secured to a baseball bat.

FIGS. 8A-8C illustrate a front view of the device and a front view of a baseball bat.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A device to improve the swing of a baseball player is provided. The device is a flexible removable cone which is secured to the exterior surface of a baseball bat. The removable cone may have a temporary adhesive on the bottom which prevents the cone from sliding with respect to the bat. The removable cone has a plurality of colored zones which allows the user and/or a trainer to determine precisely where on the bat a ball is struck. The removable cone may have a carbon layer which allows the user to not see exactly where on the bat the ball was struck, but to keep a record of the same.

Referring now to FIG. 1, a baseball bat training device 1 is provided. The baseball bat training device 1 may have a top 2, a bottom 3 (FIG. 2), a front 4, a back 5, a first side 6, a second side 7 and a length 25. The baseball bat training device 1 may be used in conjunction with a baseball or softball bat 10 (FIG. 4) having an exterior surface 11. In an embodiment, the bottom 3 of the baseball bat training device 1 may be secured to the exterior surface 11 of the baseball bat 10.

In an embodiment, the device 1 may assume a generally flat orientation when produced, transported, stored and/or purchased. (First Position A, as illustrated in FIG. 1.) Alternatively, the device 1 may be constructed and/or purchased in a generally tapered-cylindrical manner (as discussed below). In the embodiment wherein the device 1 is purchased in a flat orientation, the device 1 may be later rolled into a generally cylindrical orientation, Second Position B, prior to use, as illustrated in FIG. 3.

The device 1 may be generally flexible so as to allow the rolling from the First Position A to the Second Position B (if originally purchased in the flat orientation). Preferably, the device 1 is made from, for example, paper, wax, plastic, a thin metal, neoprene rubber or a combination thereof which may be easily bent, stretched and rolled (if originally in the flat orientation).

As illustrated in FIG. 1, the back 5 of the baseball bat training device 1 may be generally larger than the front 4 of the baseball bat training device 1. In particular, the back 5 of the device 1 may have a length 12 and the front 4 of the device 1 may have a length 13. Preferably, the length 13 of the front 4 of the device 1 may be approximately seventy to ninety percent as big as the length 12 of the back 5 of the device 1. As stated above, although the lengths 12, 13 of the front 4 and back 5 may vary, typical lengths for a little league bat would be 6 1/2 inches on the front 4 and 7 3/8 inches on the back 5; senior league 7 1/2 inches on the front 4 and 8 1/8 inches on the back 5; and professional 7 3/4 inches on the front 4 and 8 1/4 on the back 5. In an embodiment, the overall length 25 of the device 1 may be consistently 9 inches.

The larger length 12 of the back 5 of the device 1 (when originally in the flat orientation) may allow the device 1 to be rolled (in Second Position B) onto the baseball bat 10 and remain substantially flush with the exterior 11 of the baseball bat 10 just as the baseball bat 10 gets thicker as it proceeds away from the handle. The exact ratio of the length 12 of the back 5 to the length 13 of the front 4 of the device 1 may vary depending on the size of the bat (softball bats being thicker) and the desired overall length 25 of the device 1. For example, the device 1 may be manufactured or altered to have various lengths 25 depending on, for example, the type of bat being used, the area of the bat to be used or the desired size of the “sweet spot” to be practiced on.

In an embodiment, the device 1 may have a first layer 48 and a second layer 49 (FIG. 2) which together form a width 200 (FIG. 8A). The first layer 48 may be the top 2 of the device 1. In particular, the first layer 48 may be the surface which actually contacts a baseball or softball ball 60 (FIG. 4). In an embodiment, the second layer 49 may be removed from the first layer 48 so as to replace one of the layers. In an embodiment, the first layer 48 may have multiple zones 20, 30 and 40. FIGS. 3 and 4 illustrate the first layer 48 as having three zones, but it should be understood that the first layer 48 may have more or less zones 20, 30, 40. The first layer 48 and second layer 49 may also protect the bat 10 from damage. In an embodiment, the zones 20, 30, 40 are of equal length such that the length of the first zone 20 equals the length of the second zone 30 and third zone 40. In an embodiment, the first layer 48 and the second layer 49 may be of different weight so as to allow the device 1 to be selectively weighted by the user.
In an embodiment, the baseball or softball may be white or may be colored. The baseball or softball may be white so as to contrast with one of the colored zones of the device 1 or the baseball or softball may be colored the same as one of the colored zones of the device 1 so that a batting coach may visualize exactly where the ball contacts the device 1.

The zones 20, 30, 40 of the device 1 may have various distinct solid bold colors. Preferably, the various colors of the zones 20, 30, 40 create a contrast with the color of the ball 60 such that a user of the device 1 may easily visualize which zone 20, 30, 40 the ball 60 strikes when the ball 60 makes contact with the bat 10. In an embodiment, the first layer 48 and/or second layer 49 may be made of a heavy material so as to add weight to the bat 10. The increased weight may require the batter to practice with a faster bat swing. When the device 1 is removed in actual competition, the batter will often have a faster bat swing thereby creating more power. In another embodiment, the device 1 is manufactured as thin as possible so as to provide as true of a swing with respect to an actual game experience as possible.

In an embodiment, the first layer 48 and/or second layer 49 may have a thin coating 75 which easily leaves a permanent mark when contacted with a force. In an embodiment, the thin coating 75 may be made out of a wax or a carbon (or other suitable material) such that when a ball 60 strikes the device 1 a user may visually inspect exactly where on the device 1 the ball 60 struck. The coating 75 may operate in a similar fashion as a carbon copy layer as is often used in checks. Although the color variations of the zones 20, 30, 40 helps determine where a ball 60 strikes the bat 10, the thin coating 75 and/or carbon may be useful in that it may be difficult to always gauge the exact location a baseball bat strikes a ball as a result of the high rate of speed of the ball and the bat during swinging.

If the user originally obtains the flat orientation device 1, to use the device 1, the user may first place the device 1 over the exterior surface 11 of the bat 10. The user then rolls the device 1 into a generally cylindrical configuration (Second Position B) surrounding a portion of the exterior surface 11 of the bat 10. The user may select where on the bat 10 the device 1 is placed. In an embodiment, a temporary adhesive 100 (Fig. 2) may be located on the bottom 3 of the device 1 so as to temporarily allow the device 1 to be secured to the bat 10 without causing damage to the bat 10 when removed.

In an embodiment, the user may alter the overall length 25 of the device 1 to further aid in the training. For example, a user may completely remove section 20 (keeping sections 30 and 40) therein having a device 1 with a shorter overall length 25. As a result, the bat is forced to practice swinging to aim for a more specific area on the bat 10. The user may also alter the length of the device 1 to fit various sized bats 10.

The user may alter the overall length 25 of the device 1 by, for example, manually cutting the device 1. In an embodiment, a perforation line 80 (Fig. 3) may allow a user to easily alter the length 25 of the device 1 without the need for scissors or other cutting means. The length 25 of the device 1 may therein be altered very quickly and while even in the batter’s box. In an embodiment, the angle of the device 1 (i.e. the ratio of the back 5 to the front 4) may also be easily altered by cutting a portion of the first side 6 or second side 7 so as to accommodate a thicker or thinner bat. In an embodiment, the user may also simply overlap a portion of the device 1 if the ratio of the back 5 to the front 4 of the device 1 does not align with the size of the baseball bat 10.

In an embodiment, no adhesive 100 is needed on the bottom 3 of the device 1. In this embodiment, the length 25 of the device is large enough so that the device 1 is wedged between the handle of the bat 10 and thicker portion of the bat 10. In this embodiment, the device 1 is prevented from moving by the handle and thick portion of the bat 10.

Once inserted on the bat 10, the device 1 is ready to be used. During practice, a batting coach may instruct a batter to, for example, hit the ball 60 in a specific zone (for example zone 20) so as to practice a specific swing. Further, the batting coach may pitch and then immediately call out a color representing one of the zones 20, 30, 40. The batter may then be forced to immediately alter his/her swing in an attempt to hit the ball 60 in the correct zone 20, 30, 40 on the device 1. The device 1 may also be used when batting on a T by T-ball players.

After use, in the embodiment with the adhesive 100, a user may simply pull back on the device 1 to overcome the adhesive 100 on the bottom 3 of the device 1 so as to remove the device 1 from the bat 10. In the embodiment without adhesive 100, the user simply pulls on the device 1 with enough force to overcome the friction between the device 1 and the bat 10.

In the embodiment with the carbon or thin coating 75, as a result of the carbon or thin coating 75 on the device 1 leaving the exact marks on where the ball 60 struck the device 1, the user may determine if the training session was successful with respect to hitting the ball 60 on the desired zones 20, 30, 40 of the bat 10. The device 1, once removed, may also be dated and stored (in a flat or rolled position) so as to have a durable visual record of his/her hitting performance. Further, in an embodiment, the device 1 may be flattened out (First Position A) and fed into a computer 125 or scanned so as to provide an electronic record of the batter’s performance. Improvement in swings over time may thereby be evaluated. In addition, the device 1 is especially suitable for comparing the batting habits of one player with another player.

Referring now to Figs. 6-8, in an embodiment, the device 1 is constructed as a preformed generally tapered-cylindrical device. More specifically, in this embodiment, the first side 6 and second side 7 are fused together by, for example, use of an industrial cement. As a result, the device 1 is sold as a generally cylindrical device 1 and there is no rolling of the device required. In this preformed embodiment, the device 1 may have a diameter (not shown) at the front 4 and a diameter 201 at the back 5. The diameter 201 at the back 5 being greater than the diameter at the front 4 such that the device 1 does not have a true cylindrical, but is tapered. Further, at the end 203 of the bat 10 (farthest away from the handle) the baseball bat 10 may have a diameter 202. The diameter 201 of the back 5 of the device 1 may be slightly less than the diameter 202 at the end 203 of the bat 10 such that the device 1, when properly installed, remains secured to the bat 10 by friction. In particular, during use, the diameter of the device 1 (all along the length 25) may be slightly stretched out to match the diameter of the bat 10 such that friction reduces the movement of the device 1 with respect to the bat 10. Further, in use, the width 200 of the device 1 may be slightly compressed as a result of the diameter of the bat 10 being slightly greater than the diameter of the device 1.
FIG. 6 illustrates the device 1 being inserted over the end 203 of the bat 10. In an embodiment, once properly installed (FIG. 7), the device 1 may be secured near, for example, the far end 203 of the bat 10 (away from the handle of the bat 10) as opposed to being used closer to the handle (as illustrated in FIG. 4). As a result, the batter may aim to strike the ball 60 near the far end 203 of the bat (closer to the “sweet spot”).

Although embodiments of the invention are shown and described therein, it should be understood that various changes and modifications to the presently preferred embodiments will be apparent to those skilled in the art. Such changes and modifications may be made without departing from the spirit and scope of the invention and without diminishing its attendant advantages.

Claim:

1. A baseball bat training device comprising:
   a generally cylindrical contact surface having a front, a back, a first side, a second side, a top, a bottom and an interior wherein the interior of the generally cylindrical contact surface is temporarily inserted over a barrel of a baseball bat; and
   a plurality of zones on the generally cylindrical contact surface wherein the plurality of zones each have a specific color and wherein a user attempts to strike a baseball on one of the plurality of zones in an attempt to improve his/her swing.

2. The baseball bat training device of claim 1 further comprising:
   a first layer and a second layer wherein the first layer is substantially the same size as the second layer and wherein the first layer substantially covers the second layer and wherein the first layer and second layer are comprised of materials of different weights.

3. The baseball bat training device of claim 1 further comprising:
   an adhesive material located on the bottom of the generally cylindrical contact surface wherein the adhesive temporarily secures the generally cylindrical contact surface to the baseball bat and restricts the movement of the generally cylindrical contact surface.

4. The baseball bat training device of claim 1 wherein the generally cylindrical contact surface is secured to the baseball bat by friction.

5. The baseball bat training device of claim 1 wherein the baseball has a color which is distinct from the colors of the plurality of zones.

6. The baseball bat training device of claim 1 wherein the baseball has a color which is identical or similar to a single color in one of the plurality of zones.

7. The baseball bat training device of claim 1 wherein the generally cylindrical contact surface moves from a first position to a second position wherein the first position the generally cylindrical contact surface is generally flat and wherein in the second position the generally cylindrical contact surface is substantially cylindrical.

8. The baseball bat training device of claim 1 further comprising:
   a coating located on the top of the generally cylindrical contact surface wherein the coating leaves a visual mark when struck by a ball.

9. The baseball bat training device of claim 8 wherein the coating is made from carbon.

10. The baseball bat training device of claim 1 further comprising:
    a perforation line between at least two of the zones of the plurality of zones wherein a user may remove a zone of the plurality of zones and therein shorten an overall length of the generally cylindrical contact surface.

11. The baseball bat training device of claim 1 further comprising:
    a diameter at the front and a diameter at the back of the generally cylindrical contact surface wherein the diameter at the front and the diameter of the back of the generally cylindrical contact surface is slightly less than a varying diameter of the baseball bat such that the generally cylindrical contact surface lies substantially flush with an exterior surface of the baseball bat and remains on the exterior surface of the baseball bat by friction.

12. A method for recording the batting habits of a batter comprising:
   providing a generally cylindrical contact surface which is temporarily placed over a baseball bat;
   providing a coating on the generally cylindrical contact surface wherein the coating leaves a mark when struck by a ball;
   swinging a bat and hitting a ball;
   removing the generally cylindrical contact surface from the baseball bat;
   flattening out the generally cylindrical contact surface and scanning the generally contact surface into a computer; and
   recording the marks left by the baseball.

* * * * *