



US 20060030435A1

(19) **United States**

(12) **Patent Application Publication**  
**Opdyke**

(10) **Pub. No.: US 2006/0030435 A1**

(43) **Pub. Date: Feb. 9, 2006**

(54) **BATTER'S STRIDE TRAINING DEVICE**

(52) **U.S. Cl. .... 473/453**

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(57) **ABSTRACT**

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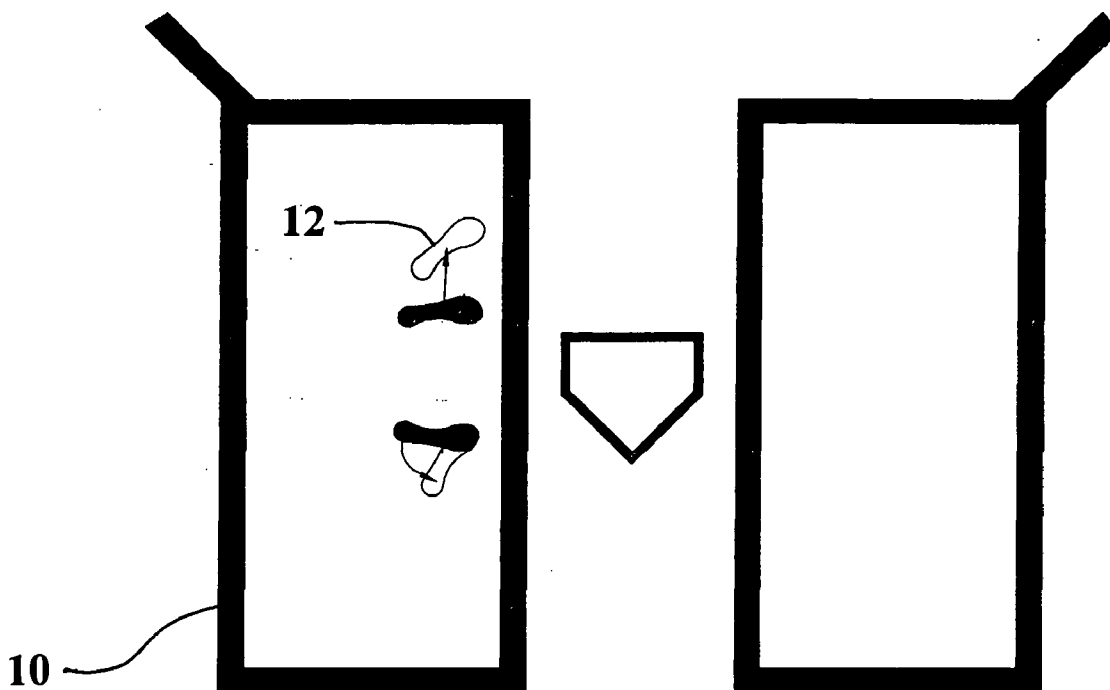
A baseball stride mat when properly positioned within the batter's box relative to homeplate occupies the area of unwanted final front foot stride position subsequent to the batter's swing. Sensors in the mat detect the pressure of the batter stepping onto the mat. The sensors activate signaling means such as an RF transmitter which signals a remote audible alarm which sounds when an improper stride has been taken, thus creating a negative reinforcement for repeating this unwanted behavior. The alarm may be placed any comfortable distance away from the batter so that it is easily heard but protected from damage. The alarm may further include amusing sound effects or a funny saying to add to the amusement and fun of using the device.

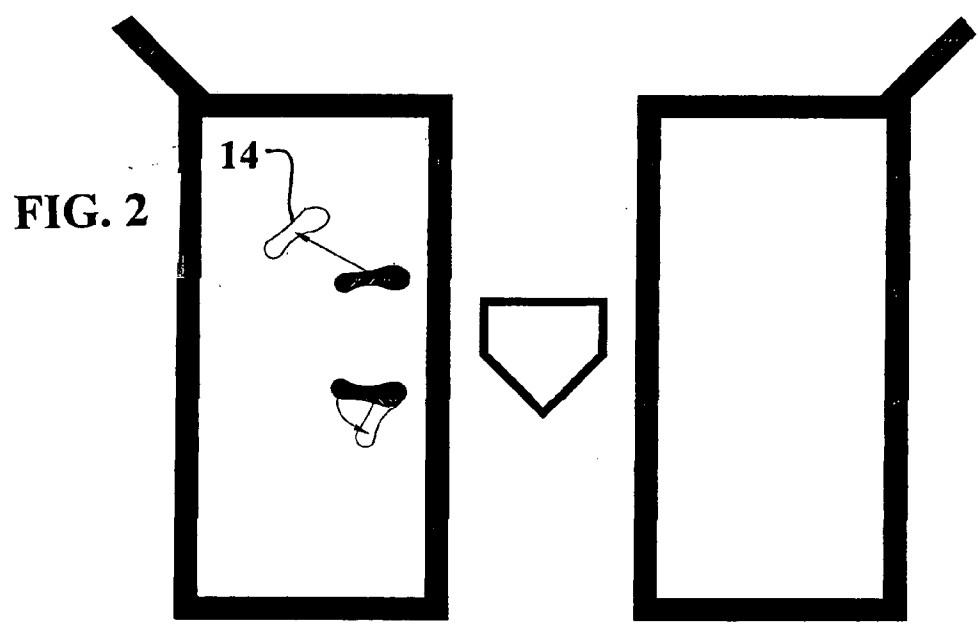
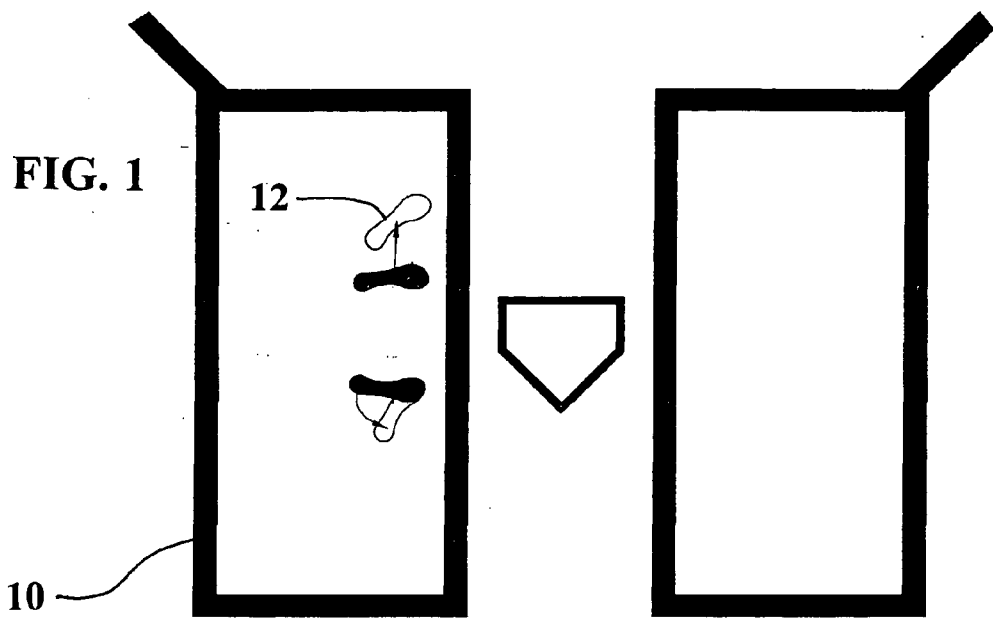
(21) **Appl. No.: 10/911,594**

(22) **Filed: Aug. 5, 2004**

**Publication Classification**

(51) **Int. Cl.**  
**A63B 69/00 (2006.01)**





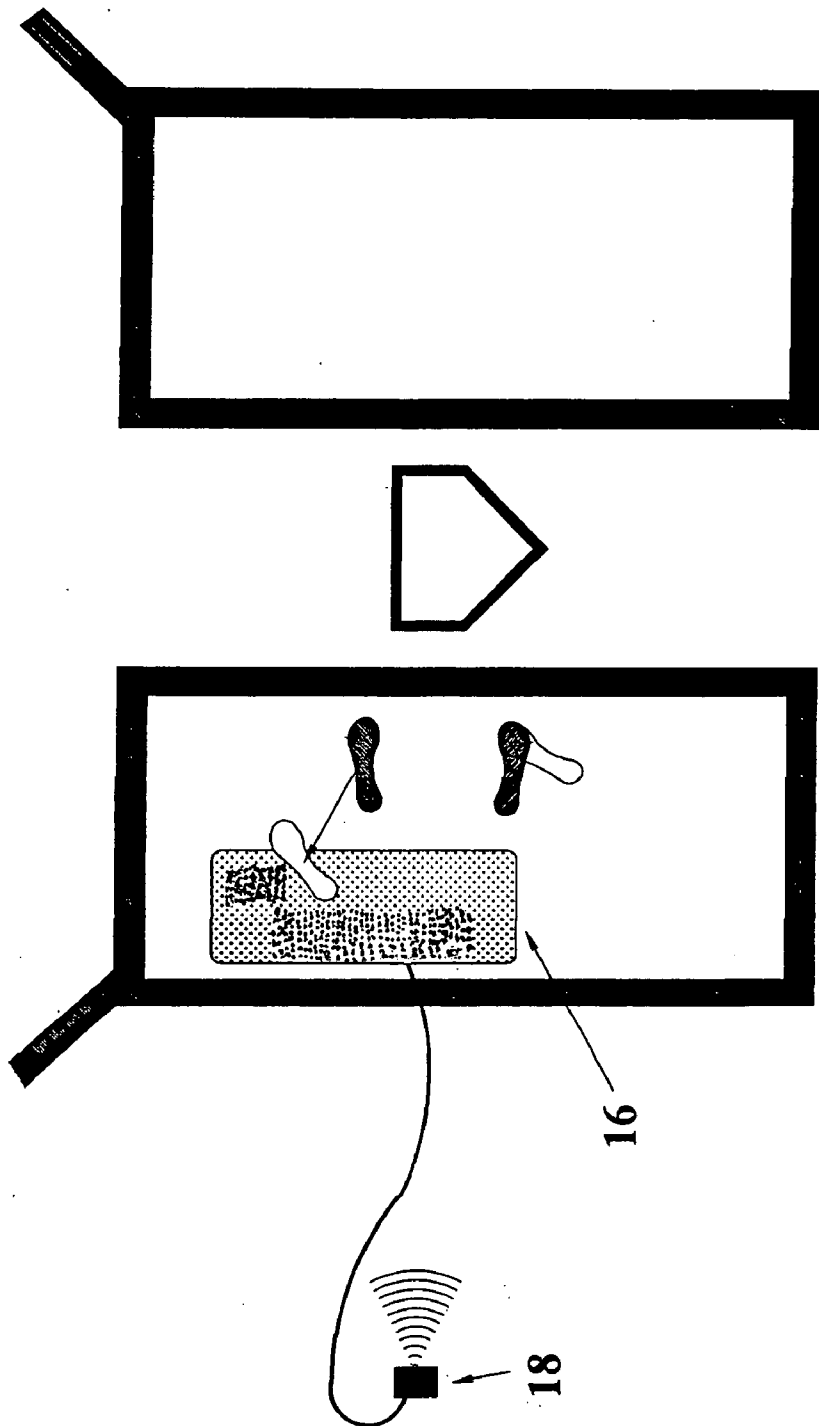


FIG. 3

**BATTER'S STRIDE TRAINING DEVICE****SUMMARY OF THE INVENTION****FIELD OF THE INVENTION**

[0001] The present invention relates to a training device for proper body movement when striking a baseball with a bat. More specifically, it relates to training an individual's foot movement to develop the optimum stride when hitting a baseball.

**BACKGROUND OF THE INVENTION**

[0002] Baseball is perhaps the most widely played American sport. One aspect of the game around which most training occurs is hitting the baseball because all players take turns as batters and hitting the ball is what scores runs and wins the game. Thus, a great deal of research has gone into proper batting stance, foot positioning, swing dynamics, and foot movement during the delivery of the baseball pitch and hitting the ball. This research has yielded the best body position and movement by which the greatest hitting power is delivered to the baseball by the bat. Accordingly, there have been many devices which have been devised and utilized to train individuals to adopt these optimal body positions and kinematics to enhance their ability to play the sport most effectively.

[0003] Among the known training devices for developing the optimal stance and batting stride are several U.S. Patents, for example U.S. Pat. No. 4,932,656 which includes a rectangular panel upon which the batter stands to provide indicators for initial position of the feet and also indicators to indicate movement or secondary positions of the feet (stride position) for optimum performance. In another similar training device, U.S. Pat. No. 5,330,176 discloses stance and training aid for baseball batters which utilizes a plurality of stance indicators provided by a grid pattern on the ground which includes stride indicators that correspond to the locations on the grid from which they extend for indicating the proper stride when swinging a bat. In yet another prior art device, U.S. Pat. No. 5,642,880 discloses a mat marked with indicia and a pressure sensitive area for temporarily indicating the final position of the batter's front foot subsequent to swinging the bat.

[0004] Foot mats which utilize sensors and with remote signaling capability such as disclosed in U.S. Pat. No. 4,924,214 are known, however there is no such known use for this type of structure in combination with baseball batter positioning means to be used as a negative reinforcement tool for batter stride training. The use of these type of devices as disclosed in the aforementioned patent are for use as a household doormat for indicating the pressure of an entrant.

[0005] While all of the above-described devices provide passive visual systems for aligning the batter in the batter's box with respect to homeplate and the secondary position of the batter's feet after the swing to indicate the stride which the batter has taken, none of these devices provides active sensory feedback. This makes using these devices more difficult and not interesting or exciting for the novice player who is typically a child 12 years old or younger. There is therefore a need in the art for a stride training device for baseball batters which reinforces proper hitting technique and which is effective and fun for novice players to use.

[0006] In order to solve the needs in the art described above, the present stride training device apparatus has been devised. The invention comprises a stride mat properly positioned within the batter's box relative to homeplate such that the mat occupies the area of unwanted final front foot stride position subsequent to the swing. The most common improper stride is to the side away from homeplate rather than directly toward the pitcher. This improper stride is often referred to as "stepping into the bucket." Hence, the mat need only cover an area behind and in front of the batter. The mat includes sensing and signaling means to sound a remote alarm when the batter's foot has stepped on the mat. In this way, the alarm sounds when an improper stride has been taken and creates the negative reinforcement for repeating this unwanted behavior.

[0007] The mat may be of any suitably durable material that can be used outdoors and which contains a transmitter and sensors that are sufficient to detect the pressure of the batter stepping onto the mat. Signaling means such as an RF transmitter may be used to indicate the player's contact with the mat to signal a remote alarm which includes an RF receiver compatible with the transmitter. The alarm may be placed any comfortable distance away from the batter so that it is easily heard but protected from damage by the batters, the bats, or the balls. The audible alarm may further include amusing sound effects or a funny saying to add to the amusement and fun of using the device. Both the remote alarm and the mat contain their own separate power sources such as storage batteries.

[0008] More specifically, the applicant has devised a baseball batter's stride training device comprising a batter's box including a zone in front of and behind the batter outside of the area where a batter should step while properly swinging the bat to hit a pitched ball. The pressure sensitive mat is located within the zone and said mat includes pressure sensing means to which a transmitter within the mat responds. An audible alarm is signaled by the mat transmitter when the sensors are compressed and thereby a batter properly positioned in the batter's box will activate the alarm when he steps onto the mat.

[0009] Other objects and advantages of the invention will become apparent to those of skill in the art from the following drawings and description of the preferred embodiment.

**BRIEF DESCRIPTION OF THE DRAWINGS**

[0010] **FIG. 1** is a diagram which illustrates before and after batter's foot positions showing the batter's proper stride within the batter's box.

[0011] **FIG. 2** is a diagram illustrating a common improper batter's stride where the left foot of the batter steps forward but undesirably backward in the batter's box.

[0012] **FIG. 3** is a diagram which indicates the placement of the invention within the batter's box.

**DESCRIPTION OF THE PREFERRED EMBODIMENT**

[0013] Referring now to **FIGS. 1 and 2**, these diagrams show a batter's box **10** and the before and after placement of

the batter's feet while executing a stride while swinging the baseball bat. The solid foot impressions show the batter's stance before the stride and the other foot outlines indicate the foot position after the stride. In **FIG. 1**, the proper stride is shown where the left foot of a right-handed batter ends in the position shown as foot outline **12**. **FIG. 2** is a similar diagram, however the final foot position outline **14** is not directly forward toward the pitcher but forward and backward which represents an improper stride generally referred to as "stepping in the bucket."

[0014] Referring now to **FIG. 3**, the invention is shown as applied to the diagram shown in **FIG. 2**. The invention includes a contact pad which is placed forwardly and behind the batter's stance. The contact pad is electrically connected to an audible alarm such that sensing means in the contact pad will activate the alarm upon sensing the pressure of the batter's foot onto the pad. It will be seen from this diagram and previous **FIGS. 1 and 2** that the location of the pad will not cause it to be activated unless the batter makes an improper stride as shown in this figure. The particular electrical circuitry and components of the contact pad and audible alarm are well known in the art. The embodiment shown in **FIG. 3** shows a hardwired alarm, however it should be understood that the contact pad may include radio frequency transmitter means and the alarm may include compatible radio frequency receiver means so that the physical hardwired connection between the contact pad and the alarm unit can be anything audible including an irritating noise or amusing sound effects. The sound may also include a verbal instruction or a funny saying to add to the amusement and fun of using the device.

[0015] It should be understood that there may be other modifications and changes to the present invention that will be obvious to those of skill in the art from the foregoing description, however, the present invention should be limited only by the following claims and their legal equivalents.

1. A baseball batter's stride training device, comprising:
  - a batter's box;
  - a preferred area within said batter's box where a batter's feet are properly placed before and after executing a proper swing motion;
  - a zone outside of said preferred area in front of and behind the batter's stance;
  - a pressure sensitive mat located within said zone, said mat including pressure sensing means;
  - a transmitter located in said mat responsive to said pressure sensing means; and
  - an audible alarm signaled by said transmitter when said pressure sensing means is activated when a trainee strides onto said mat thus indicating an improper stride.
2. A baseball batter's stride training device, comprising:
  - a batter's box;
  - a preferred area within said batter's box where a batter's feet are properly placed before and after executing a proper swing motion;
  - a zone outside of said preferred area in front of and behind the batter's stance;
  - a pressure sensitive mat located within said zone, said mat including pressure sensing means; and
  - an audible alarm electrically connected to said pressure sensitive mat being activated by said pressure sensing means when a trainee strides onto said mat while performing a batting swing thus indicating an improper stride.
3. The training device of claim 1 or claim 2 wherein the pressure sensitive mat is placed within the batter's box forward and behind the batter's stance.
4. The training device of claim 1 or claim 2 wherein said audible alarm includes speech.
5. The training device of claim 1 or claim 2 wherein said alarm sound is amusing.
6. The training device of claim 1 or claim 2 wherein said transmitter signals said alarm by means of a radio frequency.

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