

[54] BASEBALL PRACTICE DEVICE

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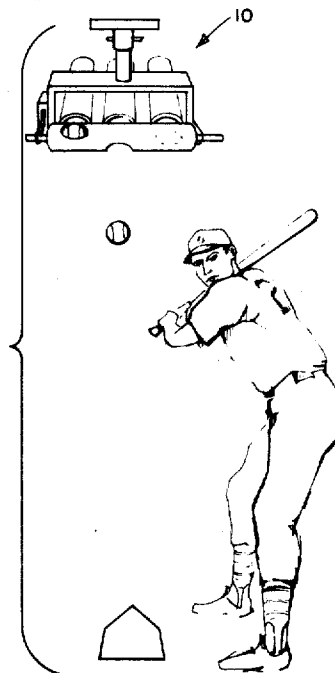
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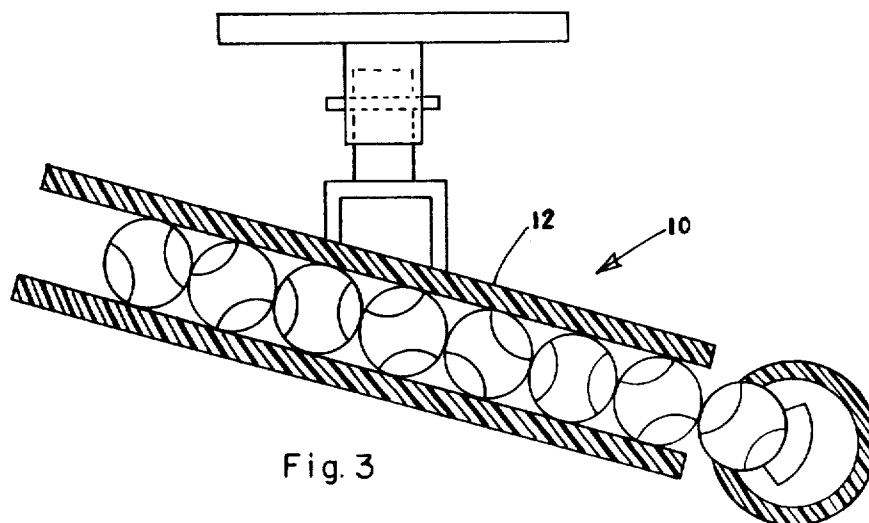
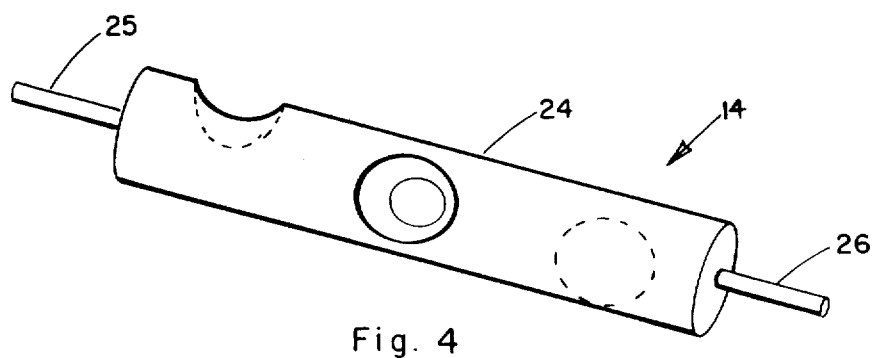
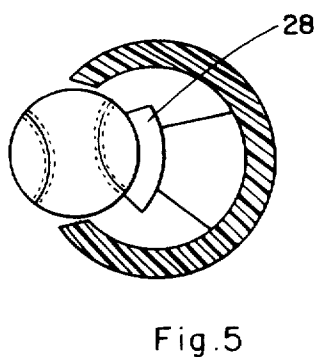
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ABSTRACT

Baseball batting device for sequentially delivering baseballs to a hitter for batting practice and comprising ball storage tubes for retaining a plurality of baseballs for sequential introduction into a baseball delivery apparatus wherein the baseball delivery apparatus intermittently receives baseballs from the ball storage tubes so as to intermittently drop the baseballs to the hitter. The delivery apparatus includes a ball receiving member journaled for axial rotation along a point disposed adjacent the storage tubes, the delivery tubes being provided with at least one ball receiving socket formed as a radially extending cavity therein for receiving and dispatching baseballs therefrom. In addition, a mount is provided for positioning the baseball batting practice device in elevated disposition for gravitational dropping of baseballs from the delivery apparatus.

6 Claims, 5 Drawing Figures





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BASEBALL PRACTICE DEVICE

The present invention relates generally to baseball batting practice means, and more specifically to a batting practice means which sequentially delivers baseballs to a hitter at spaced intervals of time. Still more specifically, the apparatus may be designed to sequentially deliver baseballs to the batter on a delivery basis which is either inside, outside, or centrally disposed for the hitter relative to the normal "home plate" used in baseball.

In the training of baseball players for batting, a variety of means have been developed for sequentially delivering baseballs to the hitter. Frequently these devices are complicated in their operation and maintenance, and accordingly require highly skilled individuals for operation and maintenance. Devices of this type are, of course, expensive to own and operate.

The present invention provides a baseball batting practice device which is uncomplicated in its features, and provides for dispatching or dropping baseballs to the hitter with deliveries which are inside, outside, or center types. These deliveries are intermittent, and the batter is given time following each delivery to prepare for the next subsequent delivery. If desired, the delivery pattern may be varied in such a way that the batter will be generally unaware of the forthcoming delivery, and hence will train his reflexes to respond to deliveries which are either inside, outside, or centrally disposed.

In accordance with the present invention, a batting practice device is provided which has ball storage or hopper means for retaining a plurality of baseballs for ultimate introduction into a delivery means. The delivery means comprises essentially a ball receiving member which is journaled for axial rotation along a point disposed adjacent the storage means and is adapted to intermittently receive and dispatch baseballs at various timed intervals. The delivery means is preferably provided with a plurality of axially spaced radially extending cavities which are arranged to receive a baseball at one arcuate disposition, and thereafter dispatch it at a second arcuate disposition spaced from the first arcuate disposition. The speed of rotation of the delivery means will accordingly determine the timing of each delivery event. The axial spacing will, of course, determine whether the delivery is inside, outside, or centrally disposed.

Therefore, it is an object of the present invention to provide an improved baseball batting practice device which sequentially delivers baseballs to a hitter in intermittently timed relationship, the practice means preferably including means for sequential delivery of baseballs corresponding to inside, outside, or central pitches.

It is yet a further object of the present invention to provide an improved baseball batting practice means which is arranged to intermittently receive and dispatch baseballs from a baseball delivery means comprising a ball receiving member journaled for axial rotation and having a plurality of ball receiving sockets formed as cavities therein, the rotation of the delivery means determining the rate at which baseballs are dispatched therefrom.

It is yet a further object of the present invention to provide an improved baseball batting practice means for sequentially delivering baseballs to a hitter, the practice means including a baseball delivery mechanism having a ball receiving member journaled for axial rotation, the ball receiving member being in the form of a tubular structure having a plurality of axially spaced baseball receiving sockets formed therein, each of the sockets being arranged in arcuately spaced relationship, one from another.

Other and further objects of the present invention will become apparent to those skilled in the art upon a study of the following specification, appended claims, and accompanying drawings wherein:

FIG. 1 is a perspective view of the apparatus in operation, and illustrating a hitter utilizing the device in one operational mode;

FIG. 2 is a detail perspective view of the apparatus;

FIG. 3 is a side elevational view of the apparatus and illustrating a number of baseballs being retained in the delivery tube for dispatching by the delivery means;

FIG. 4 is a detail perspective view of a tubular member utilized as the baseball delivery means of the apparatus of the present invention; and

FIG. 5 is a vertical elevational view taken transversely through one of the ball receiving sockets in the baseball delivery means.

In accordance with the preferred modification of the present invention, the baseball batting practice means generally designated 10 includes a storage means in the form of a plurality of ball receiving tubes 11, 12, and 13, along with a baseball delivery means generally designated 14. A frame member 15 is utilized to hold the individual portions of the practice means in proper relative disposition. In addition, as is illustrated in FIGS. 1 and 2, a means is provided for mounting the practice device in elevated disposition for gravitational dropping of baseballs from the delivery means, this mounting means being shown in the form of concentric tubes 17 and 18. A through-pin is shown at 19 for retaining the device in proper disposition. While the device of FIG. 2 shows a retaining pin 19, it will be appreciated that for a variety of elevated positions, the device may be utilized with suitable counter-weights or other schemes for retaining the apparatus in proper disposition relative to the user.

The ball storage means are utilized for retaining a plurality of baseballs for sequential introduction into the baseball delivery means, and, as indicated, this storage means is preferably in the form of a plurality of elongated tubes, each tube forming a hopper or the like for receiving and retaining baseballs for ultimate sequential introduction into the delivery means 14. These tubes 11, 12 and 13 are preferably fabricated from plastic extruded tubing, or may, for example, be fabricated from thin-gauge metallic tubing or the like. In order to retain the individual tubes 11, 12 and 13 in proper disposition, a guide plate 21 is provided for this purpose.

For purposes of stability and guiding of the individual tubes 11, 12 and 13, the member 15 is provided. In this connection, the individual tubes are retained for the purpose of introducing baseballs in sequential relationship into the delivery means. This arrangement is illustrated in greater detail in FIG. 3.

Attention is now directed to FIGS. 1, 4 and 5 of the drawings for a detailed explanation of the structure of the baseball delivery means. In this connection, the delivery means 14 includes a ball receiving member 24 which is preferably in the form of a tubular member, the member 24 being journaled for axial rotation at a point adjacent the ball storage means as shown in FIGS. 2 and 4. As is illustrated in FIG. 4, shafts 25 and 26 may be employed for this purpose. With continued attention being directed to FIGS. 4 and 5, the tubular member 24 is provided with a plurality of ball receiving sockets in the form of radially extending cavities. These individual sockets are preferably arcuately spaced apart a distance of 120° thus providing equally axially spaced cavities. Upon encountering a baseball in the ball storage means, the baseball will enter the ball receiving socket and rest against the pad means 28, for ultimate dispatching to the user. In order to provide for inside, outside, and center simulated pitches, the individual ball receiving sockets are arranged at an axial distance of about 9-1/4 inches on center. This will provide for the proper spacing when the batter is positioned to be facing obliquely at about 45° to the axis of the delivery means 14 of the batting practice device.

The individual sockets are formed with a peripheral diameter which is about 10 percent greater than the diameter of the baseball. This will provide for proper entry or feeding of the ball into the delivery means without encumbering the mechanism. Also, it is preferred that the depth of the ball receiving socket be such that it is between about 60 percent and 75 percent of the diameter of the baseball, this also providing for a minimum of interference between adjacently

disposed baseballs in the loading apparatus. For most purposes, the tubing utilized will have an outer diameter of about 5 inches.

In order to cause rotation of the tubular member 24, a motor means is provided such as is shown at 30, this motor means, preferably an electric motor, having an output shaft which is provided with a belt 31 and a corresponding pulley member 32. Thus, upon initiation of the cycle, the user will load the individual tubes 11, 12 and 13, and thereafter apply power to the motor 30 for rotating the tubular member 24.

For proper intermittent delivery, it is preferred that about six seconds be provided between individual ball dispatching events. This provides the user with sufficient time to prepare for subsequent delivery events. Also, for height, it is preferred that adults utilize a height of delivery of between about 6-½ feet and 7-½ feet from the ground to the delivery means 14, while a height of about 5 feet has been found adequate for juniors.

It will be appreciated that the details of structure provided herein are illustrative of the preferred embodiment of the apparatus, and those skilled in the art may depart from these details by appropriate substitution.

What is claimed is:

1. Baseball batting practice means comprising, in combination, a baseball home plate defining a batting zone for a hitter, and means for sequentially delivering baseballs to a hitter for practice comprising:

a. ball storage means for retaining a plurality of baseballs for sequential introduction into a baseball delivery means;

b. baseball delivery means including a ball receiving member journaled for axial rotation about an axis disposed adjacent said storage means, said baseball delivering means having at least one ball receiving socket formed as a cavity therein having a peripheral diameter about 10 percent greater than the diameter of the stan-

dard baseball, and extending radially of said axis, said baseball delivery means being adapted to intermittently receive baseballs from said storage means at a first arcuate disposition and for intermittently dropping said baseballs from said ball receiving member at a second arcuate disposition spaced from said first arcuate disposition; and

c. means for mounting said baseball batting practice means in elevated disposition for gravitational dropping of baseballs from said baseball delivery means toward certain spaced zones of said baseball home plate.

2. The baseball batting practice means as defined in claim 1 being particularly characterized in that said delivery means is an elongated tubular member having a plurality of axially spaced baseball receiving sockets formed therein, said sockets being arranged at arcuately spaced dispositions therealong and having portions intersecting said axis.

3. The baseball batting practice means as defined in claim 2 being particularly characterized in that said baseball receiving sockets are disposed at 120° arcuate dispositions.

4. The baseball batting practice means as defined in claim 3 being particularly characterized in that said sockets are substantially equally spaced axially so as to provide for simulated inside, outside, and center of home plate deliveries.

5. The baseball batting practice means as defined in claim 2 being particularly characterized in that said sockets formed in said tubular member has a ball support pad therein permitting entry for between about 60 percent and 75 percent of the baseball diameter.

6. Baseball batting practice means as defined in claim 1 being particularly characterized in that said ball storage means comprises a ball receiving ramp arranged along a plane inclined away from said baseball delivery means.

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