Feb. 8, 1966 V. D. HERSHBERGER 3,233,899

PITCHING PRACTICE APPARATUS

Filed April 12, 1963

FIG. 1.

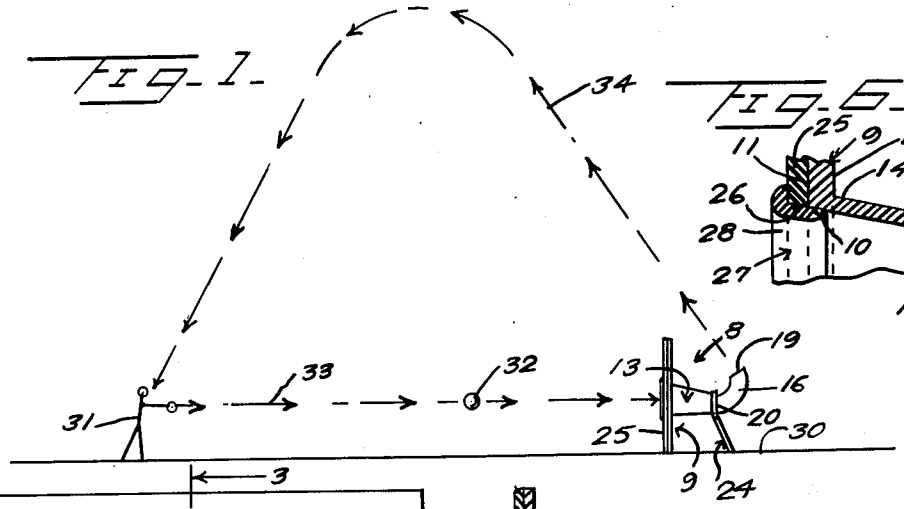


FIG. 6.

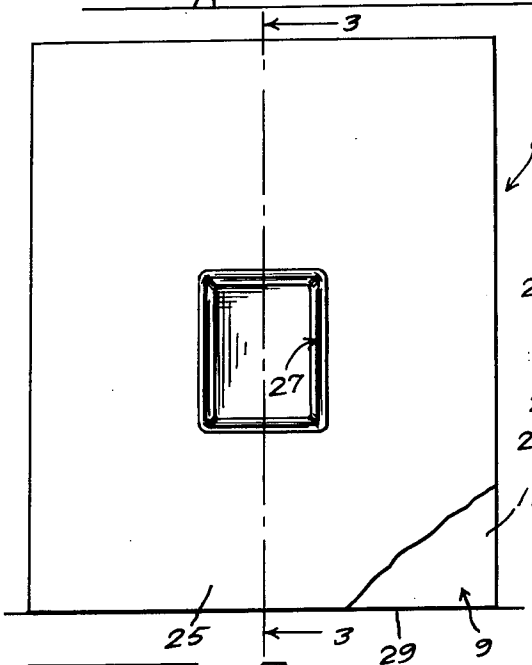


FIG. 3.

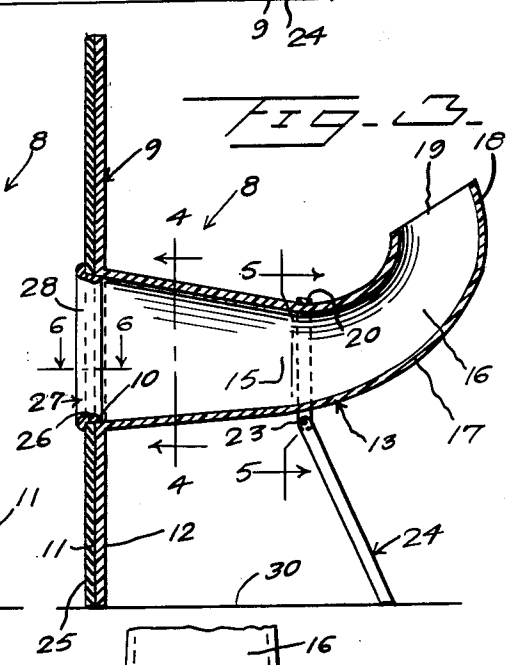
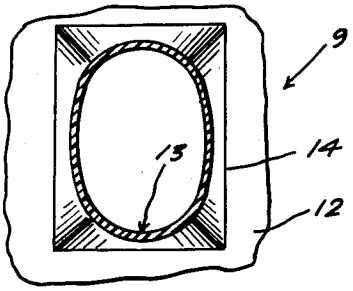


FIG. 2.

FIG. 4.



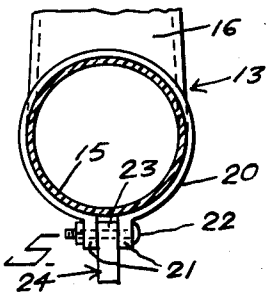


FIG. 5.

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PITCHING PRACTICE APPARATUS

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This invention relates to a novel game apparatus affording amusement and exercise to the user, and more particularly to a game apparatus which may be effectively utilized for improving the pitching skill of the user or the user's ability to throw a ball accurately.

More particularly, it is an object of the invention to provide an apparatus which may be utilized by one or a group of persons for improving the user's skill and accuracy in throwing a ball and which is so constructed that an accurately thrown ball will be returned to the thrower by traveling a trajectory similar to a "pop-up fly" ball in a baseball game.

A further object of the invention is to provide a game apparatus wherein less accurately thrown balls will be returned by rebounding along the ground to the user from the apparatus.

Still another object of the invention is to provide a pitching practice apparatus of extremely simple construction which may be very economically manufactured, yet which will be extremely efficient and durable for its intended purpose.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, illustrating a presently preferred embodiment thereof, and wherein:

FIGURE 1 is a view partially in side elevation and partially diagrammatic, on a small scale, illustrating the intended function of the pitching practice apparatus;

FIGURE 2 is an enlarged front elevational view, partly broken away, of the apparatus;

FIGURE 3 is a substantially central vertical sectional view thereof taken along a plane as indicated by the line 3—3 of FIGURE 2;

FIGURES 4 and 5 are cross sectional views through the ball return tube, taken substantially along planes as indicated by the lines 4—4 and 5—5, respectively, of FIGURE 3, looking in directions as indicated by the arrows; and

FIGURE 6 is an enlarged fragmentary sectional view taken substantially along a plane as indicated by the line 6—6 of FIGURE 3.

Referring more specifically to the drawing, the pitching practice apparatus in its entirety is designated generally 8 and includes a rigid rectangular board, designated generally 9, which is provided with a rectangular opening 10. The board 9 includes a front face 11 and a rear face 12. A ball return tube, designated generally 13, has an enlarged rectangular forward end 14 which is preferably formed integral with the board 9 around the opening 10 thereof. The tube 13 extends from the rear face 12 of the board 9 and tapers from said board 9 into an oval shape as shown in FIGURE 4, the longitudinal axis of which is parallel to the longitudinal axis of the opening 10, and into a still smaller portion of circular cross section, as seen in FIGURE 5, and which is designated 15. Rearwardly of the tube portion 15, the tube 13 continues to taper and is curved upwardly, as seen at 16 in FIGURE 3, to provide a bottom portion 17 having an initial radius from adjacent the tube portion 15 which is substantially greater than the radius thereof remote from said tube portion 15, so that the bottom 17, which is inclined upwardly, has its angle of incline progressively increased away from the tube portion 15, until said bottom portion 17 assumes an upright position and terminates in a forward curvature as seen at 18 adjacent the outlet end 19

of the tube which opens upwardly and forwardly with respect to the board 9. The board 9 and tube 13, which are formed integral with one another, are preferably formed of Fiberglas or other suitable strong plastic material having sufficient strength to withstand the impact of a thrown ball.

A metal band 20 encircles the tube portion 15 and has terminals defining outturned spaced substantially parallel ears 21 which are preferably made thicker than the remainder of the band 20 and which are apertured to receive a bolt of a nut and bolt fastening 22. Said bolt 22 additionally passes through an apertured end 23 of a leg 24 which is disposed between the ears 21 and which is clamped immovably to the band 20 by tightening the fastening 22. The leg 24 is clamped to extend downwardly at an incline from beneath the tube 13 and in a direction away from the board 9.

A thick sheet 25 of a resilient material, preferably rubber, is suitably secured to and completely covers the front face 11 of the board 9 and has an opening 26 coinciding with the opening 10. A rectangular member 27 of hard rubber is secured to and lines the openings 10 and 26, as seen in FIGURES 3 and 6, and has a smooth exposed inner face or surface 28 which is rounded in cross section.

The board 9, constituting a rebound board, is preferably of a height greater than its width, as seen in FIGURE 2, and the opening 10 thereof is disposed midway between the side edges of the board 9 and preferably somewhat nearer its bottom edge 29 than the top edge thereof. The longer axis of the opening 10 is disposed lengthwise of the board and vertically to more nearly simulate the shape of the "strike zone" of a batter in the game of baseball.

The apparatus 8 is supported on the ground or other suitable supporting surface 30 by the bottom edge 29 of the board 9 and the lower end of the leg 24 resting on said surface, and as the lower end of the leg 24 is disposed in substantially the same plane as the edge 29, the board 9 will be disposed in nearly an upright position, as seen in FIGURES 1 and 3.

The user 31, as illustrated diagrammatically in FIGURE 1, stands at a predetermined distance from the apparatus 8 and facing the board 9, from which position he throws a ball 32 toward the apparatus 8 and aimed at the opening outlined or defined by the border member 27. If the pitch or throw is made with sufficient accuracy and skill the ball will follow the broken arrow-tipped line 33 and enter the tube 13 through the opening of the border 27, and in most instances will strike the bottom 17 adjacent the tube portion 15, or even between said tube portion 15 and the enlarged entrance end 14. As the bottom portion of the tube 13 is inclined upwardly slightly from its entrance end 14, the ball 32 will strike with a glancing impact and will thereafter follow the bottom 17 and the turned back rear portion 18. If the ball is thrown with sufficient speed, it will be deflected by the tube portions 17 and 18 outwardly through the tube outlet 19 and will follow the trajectory as indicated by the broken arrow-tipped line 34 back to the thrower 31, traveling in a high arc very similar to that of a "pop-up fly" usually received by pitchers during a baseball game. Even when the ball 32 enters the upper part of the entrance end 14 of the tube 13 it will still strike the bottom 17 with a glancing impact and be guided by the tube portions 17 and 18 so as to substantially follow the trajectory as indicated at 34 in FIGURE 1. A ball striking any of the inner part of the surface 28 of the border 27 will also be deflected into the tube 13.

Balls thrown with less skill and which fail to enter the tube 13 will strike the resilient sheet 25 covering the front

face of the rebound board 9 and will be caused to rebound toward the thrower 31 and may be caught by him similar to a batted ground ball.

Various modifications and changes are contemplated and may be resorted to, without departing from the function or scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. A pitching practice apparatus comprising a substantially flat rigid upright board having an opening therein spaced from the marginal edges thereof, said board including a front face and a rear face, a tube having an entrance end connected to said board around the opening thereof, said tube extending from the rear face of said board, being tapered rearwardly and curved upwardly remote from said board to define a rear exit end which is disposed below the level of the upper edge of the board and which opens upwardly and at an incline toward the plane of the board, said board being rectangular and having a vertical length and horizontal width each several times greater respectively than the vertical and horizontal dimensions of said opening, and a supporting leg connected to and extending downwardly from said tube remote from the board and having a lower end disposed in the plane of the bottom edge of the board and combining therewith to form a support for the apparatus.

2. A pitching practice apparatus as in claim 1, the entrance end of said tube being of a shape and size corresponding to the opening, said tube tapering from its entrance end to its exit end and being substantially circular from intermediate of its ends to its exit end, said tube having an upwardly sloping bottom portion the inclination of which increases in a direction away from said board and including an upwardly turned back rear portion terminating at said exit end.

3. A pitching practice apparatus as in claim 1, a thick sheet of resilient material secured to and covering the front face of said board and having an opening coinciding with the opening of the board, and a hard rubber frame member secured to and lining the openings of said resilient sheet and board, said frame member being internally rounded in cross section.

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