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PRACTICE DEVICE FOR BASEBALL PITCHERS

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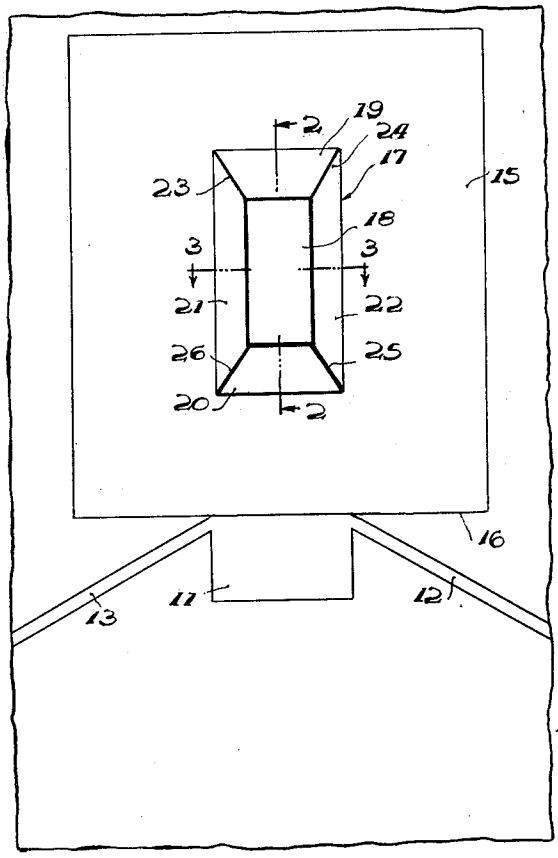


Fig. 1.

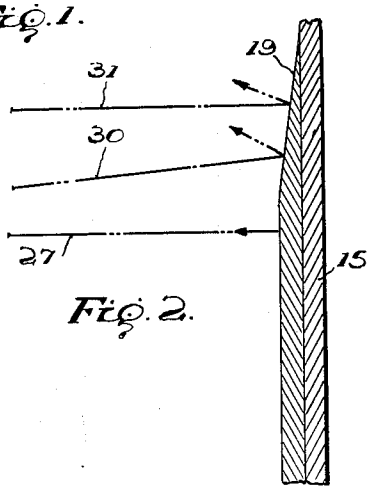
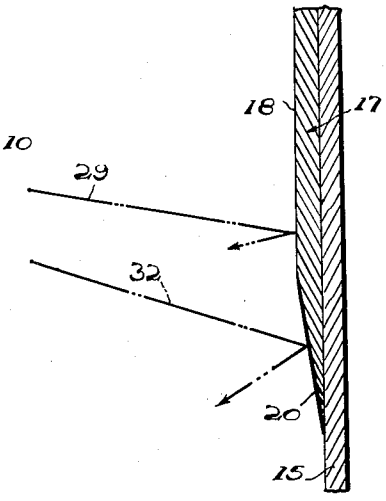


Fig. 2.



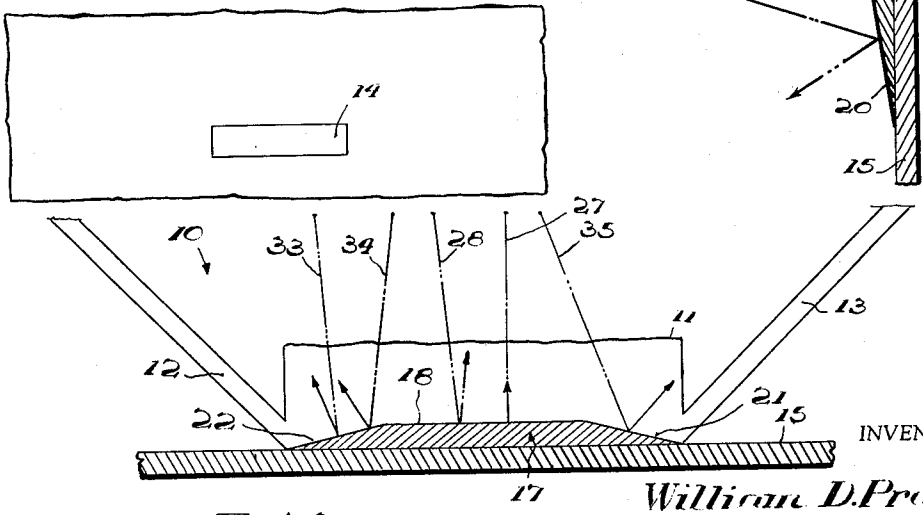


Fig. 3.

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PRACTICE DEVICE FOR BASEBALL PITCHERS

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The invention described herein, if patented, may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

The invention relates to practice devices for baseball or softball pitchers and/or to a game which may be played by a plurality of players in lieu of the usual "pepper game" but which will, at the same time provide worthwhile practice for those performing as pitchers and fielders, particularly infielders.

The greatest asset a baseball or softball pitcher can have is control or the ability to cause each pitch to travel to successively selected aiming points in or adjacent to an invisible target called the strike zone. The strike zone is defined by vertical parallel lines spaced apart the width of home plate and parallel horizontal lines which are spaced apart the distance between a batter's knees and his shoulders. Thus, although the strike zone is constant as to width, it varies in height according to the height of the batter.

In the past, to enable a pitcher to practice without the aid of a catcher, targets representing average strike zones have been provided. These vary from openings the size of a strike zone in a vertical target, targets formed by cords or ropes arranged to define the limits of a strike zone, or simply planar targets of the size and shape of a strike zone. It is with the latter type of target that this invention is concerned. In that type of target, the ball rebounds more or less directly to the pitcher if it hits the target with the only variances being supplied by any slight angle from normal at which the ball strikes the target. Thus, a side arm pitch or a curve ball will strike the target at an angle of incidence from normal and will rebound therefrom at an opposite angle generally equal to the angle of incidence although slight variances will result in the instance of a curve ball on account of the excessive spin inherent in these pitches. However, the important thing is that with these planar targets, the angle of rebound is the same irrespective of what part of the target is hit. Thus, inside pitches rebound at the same angle as center or outside pitches and the same is true of high or low pitches. Thus, the rebound is not a true rebound because an inside pitch will normally be pulled to left field by a right hand batter, a center pitch will normally be hit to center field while an outside pitch will normally be hit to right field. Likewise, a high pitch will normally result in a fly ball, a waist high pitch will usually produce a line drive, while a low pitch will normally result in a ground ball, all going in directions according to whether they are inside, outside or in the center of the target.

With the foregoing in view, it is an object of the invention to provide an improved target for baseball or softball pitchers which will cause the ball to rebound in the manner expected of a batted ball according to whether or not the pitch is high, low, inside, outside or in the center.

A further object is to provide a rebounding type of target which represents an average strike zone and which includes a planar portion or panel centrally of the target which is bounded by rearwardly inclined border portions or panels.

Other objects and advantages reside in the particular structure of the invention, the structure of the several elements of the same, combinations and sub-combinations of such elements with each other and/or with a ball

diamond and the homeplate thereof, all of which will be readily apparent to those skilled in the art upon reference to the attached drawing which illustrates a preferred embodiment of the invention and to the following specification wherein the invention is described and claimed.

In the drawing:

FIGURE 1 is a frontal elevational view of the invention showing the same applied to a ball diamond, the latter being shown fragmentarily with parts broken away;

FIGURE 2 is an enlarged and partly broken away vertical sectional view taken substantially on the plane of the line 2—2 of FIGURE 1; and

FIGURE 3 is an enlarged horizontal sectional view taken substantially on the plane of the line 3—3 of FIGURE 1, parts being broken away.

Referring specifically to the drawing, wherein like reference characters designate like parts in all views, **10** generally indicates a baseball or softball diamond which includes a homeplate **11**, third baseline **12**, first baseline **13** and a pitcher's box or rubber **14**, the latter preferably being the legal distance from homeplate for either softball or baseball according to which sport is being practiced. However, these distances are critical only when a pitcher is actually practicing to improve his control. When the invention is being used as a substitute for a "pepper game," the pitchers rubber may be eliminated and the ball pitched from any selected point in front of homeplate **11**, which point will usually be closer than the legal distance to the pitcher's box.

The invention itself, comprises a backstop **15** of any suitable size or shape which is considerably larger than the strike zone and which may be formed of any suitable material having sufficient strength to survive being repeatedly struck by a thrown ball. Preferably, backstop **15** should have a straight lower edge **16**. In use, the lower edge **16** is placed on the ground so that its central portion extends across homeplate **11** in parallel relation to the pitcher's rubber **14**. Backstop **15** is supported in such position by any suitable props or the like, not shown. Although the backstop **15** is shown as being set up on an actual ball field, it is understood that it could as well be hung on a wall either indoors or outside. In such instance, diamond **10** and its components **11—14** would be simulated by paint or other suitable marking material.

Backstop **15** mounts the target **17** of the invention in upwardly spaced relation to the lower edge **16** of the former and in a vertical plane. Target **17** may be made of any suitable material such as wood, plastic, metal or concrete. Preferably it should be hard and solid enough to insure a fast rebound. Of course, it should be strong enough to endure repeated hits by a ball. The outer surface should be smooth to avoid damaging the ball. The target **17** includes a central panel **18** which is planar and which is vertically disposed relative to homeplate **11** and in parallel relation to the pitcher's rubber **14**. Central panel **18** is surrounded by border panels which are rearwardly inclined relative the central panel. In the embodiment illustrated, the target **17** is rectangular as is the central panel **18** which is centered thereon to provide upper and lower panels **19** and **20** respectively and side panels **21** and **22**, all in the shape of isosceles trapezoids separated by rearwardly inclined ridges **23**, **24**, **25** and **26**.

FIGURES 2 and 3 illustrate the manner in which a thrown ball will rebound from various areas of the target **17**. Thus, a perfectly horizontal pitch which strikes the central panel **18** normal thereto will rebound along its line of approach as illustrated by the arrow **27**. The same pitch thrown with a side arm motion, arrow **28** of FIGURE 3, will rebound as a line drive but at a slight horizontal angle. By the same token, an overhand pitch thrown low but striking the central panel **18**, arrow **29**

of FIGURE 2, rebounds as a hard grounder. Such rebounds would be true of any planar target but would occur from any point on target. In the invention such rebounds occur only when they hit in the central panel **18**, and represent the directions in which a batter would be expected to hit a thrown ball pitched to those areas of panel **18** in actual practice.

As seen in FIGURE 2, an underhand pitch, arrow **30**, or an overhand pitch, arrow **31**, which strikes the upper border panel **19** will rebound as fly balls rather than as line drives. Likewise, a low overhand pitch striking the lower border panel **20**, arrow **32**, rebounds as an easy ground ball rather than as a hard one.

As illustrated in FIGURE 3, an inside pitch to a right handed batter, either a right hand fast ball, arrow **33**, or a left hand curve ball, arrow **34**, which strikes the inside border panel **22** will rebound at various angles more or less along the third baseline **12**. In like manner, an outside pitch such as a right hand curve which strikes the outside panel **21**, arrow **35**, will rebound generally along the first baseline **13**.

It is apparent from the foregoing that the angles of rebound from the border panels **19—22** or from the ridges **23—26** will vary greatly from the rebound angles which would occur from corresponding areas of a monoplanar target. Also, the rebounds from pitches striking such border panels or ridges are substantially what a batter would be expected to hit were he to bat such pitches. Thus, the rebounds are much more realistic than could be obtained from a monoplanar target. Likewise, by providing clearly defined border panels, the pitcher is not only provided with targets for "pitching to the corners" but knows immediately when he hits any such border panel because of the resultant wider angle of rebound.

A pitch which misses target **17** entirely will encounter the backstop **15** and will rebound therefrom. However, it is preferred that the backstop **15** be formed of material other than that forming the target **17** whereby it will have different rebounding characteristics. Thus, the backstop should be made of soft or padded material so that there would be little or no rebound therefrom. Hence, balls hitting the back-stop **15** will fall dead close to the same where they can be readily retrieved.

When used as a substitute for a "pepper game," a number of players will align themselves between the baselines **12** and **13** about tweinty or thirty feet in front of the target. Then one player throws the ball in an effort to make it rebound to another player either as a grounder, line drive or fly. As he keeps his target secret until he throws the ball, none of the other players know when the expect the ball or the type of rebound, whereby each is kept alert and caused to move rapidly when a rebound comes his way. Thus, a lively game ensues and the players are warmed up exactly as in a regular "pepper game."

Obviously, when a pitcher is using it alone to improve his control, he may also improve his fielding by actually fielding all rebounds which come within his normal fielding zone. To a lesser extent, an entire infield could get practice from fielding all rebounds, provided the target is formed of sufficiently resilient or rigid material to cause rebounds fast enough to compare with actual batted balls.

It should be noted that each side border panel **21** or **22** is narrower than the height of the upper and lower border panels **19** and **20**. A desirable arrangement is to provide each side border panel **21** or **22** with a width one half that of the central panel **18**. This allows the pitcher a total of one half the target for corner pitches in lateral directions. The proportional height of the upper and lower border panels **19** and **20** is not as critical. In the embodiment illustrated their heights are greater than the widths of the side border panels **21** and **22**. Considerable variance in actual height of the target as well as the heights of the upper and lower border panels is contemplated depending upon whether the target is intended for use with adults or various sizes of children. However, irrespective of the size of the targets or of the several panels thereof, the effect will be the same.

Moreover, while there has been shown and described what is now thought to be a preferred embodiment of the invention, it should be understood that the same is susceptible of other forms and expressions. Consequently, I do not consider the invention to be limited to the precise structure shown and described hereinabove but only as hereinafter claimed.

I claim:

1. A practice device for baseball pitchers for use with a standard or simulated homeplate and pitcher's box, comprising a rectangular target, means mounting said target in a vertical position above said home plate transversely of the same, said target having a width equal to that of said home plate, said target having free upper and lower edges defining the upper and lower limits of a strike zone, said target including a relatively wide central panel and fixed relatively narrower border panels completely surrounding said central panel, said border panels being rearwardly inclined relative to said central panel, whereby said target causes a ball thrown thereat from said pitcher's box to rebound from said target in a direction commensurate with the panel struck thereby as modified by the angle at which said ball strikes said panel.

2. A practice device according to claim 1, wherein said central panel is rectangular and centered on said target, said border panels comprising four isosceles trapezoids, there being two opposed side border panels as well as opposed upper and lower border panels, said upper and lower panels merging with said side panels to provide outwardly and rearwardly inclined ridges.

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