United States Patent [19]

Kreag

[11] **3,880,423**

[45] **Apr. 29, 1975**

[54] **BASEBALL BAT HAVING DIFFERENT STRIKING SURFACES**

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[52] **U.S. Cl.** ..... **273/26 B**; 273/72 R; 273/67 DC; 273/26 R; 273/26 A; 273/102 A; 273/103

[51] **Int. Cl.** **A63b 69/40**

[58] **Field of Search** ..... 273/26 B, 67 R, 67 DC, 273/67 D, 72 R, 72 A; 216/63, 69, 70, 71, 72, 73, 74, 75

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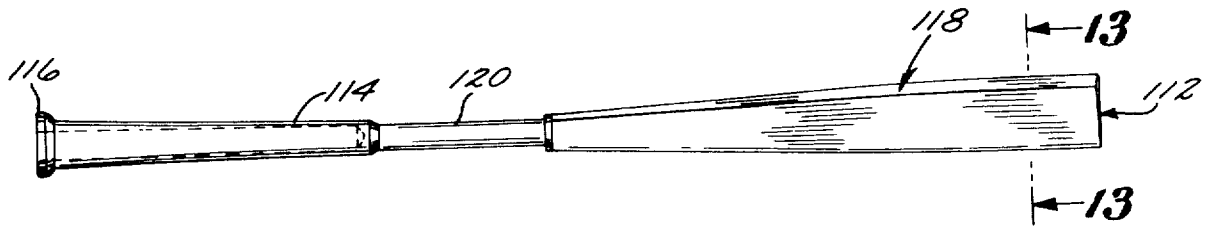
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Primary Examiner—Richard C. Pinkham
Assistant Examiner—T. Brown
Attorney, Agent, or Firm—Albert L. Gabriel

[57] **ABSTRACT**

Baseball game apparatus comprising a novel game instrument or bat, and novel modular target or fielding apparatus. The game instrument or bat has handle and striking end portions, the latter comprising a plurality of different batting surfaces of successively increasing ball controllability but respectively of successively decreasing ball reactivity. This greatly increases batting versatility, and injects a new element of surprise in some baseball-type games. Game instrument examples disclosed have two and three batting surfaces, and variations in ball controllability are provided by dissimilarities in shape, including differences in both width and curvature, while variations in reactivity with a ball are provided by differences in rigidity or resiliency. The modular target or fielding apparatus comprises a series of aligned target modules of similar construction providing access to a ball batted from a special holder aligned with the modules, with such access being made progressively more difficult as to both loft and directional accuracy from front to rear.

5 Claims, 16 Drawing Figures



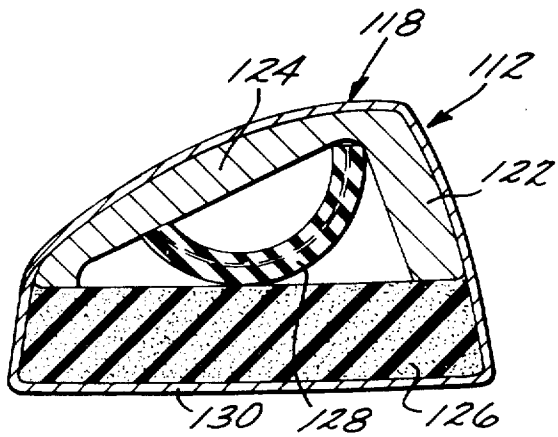
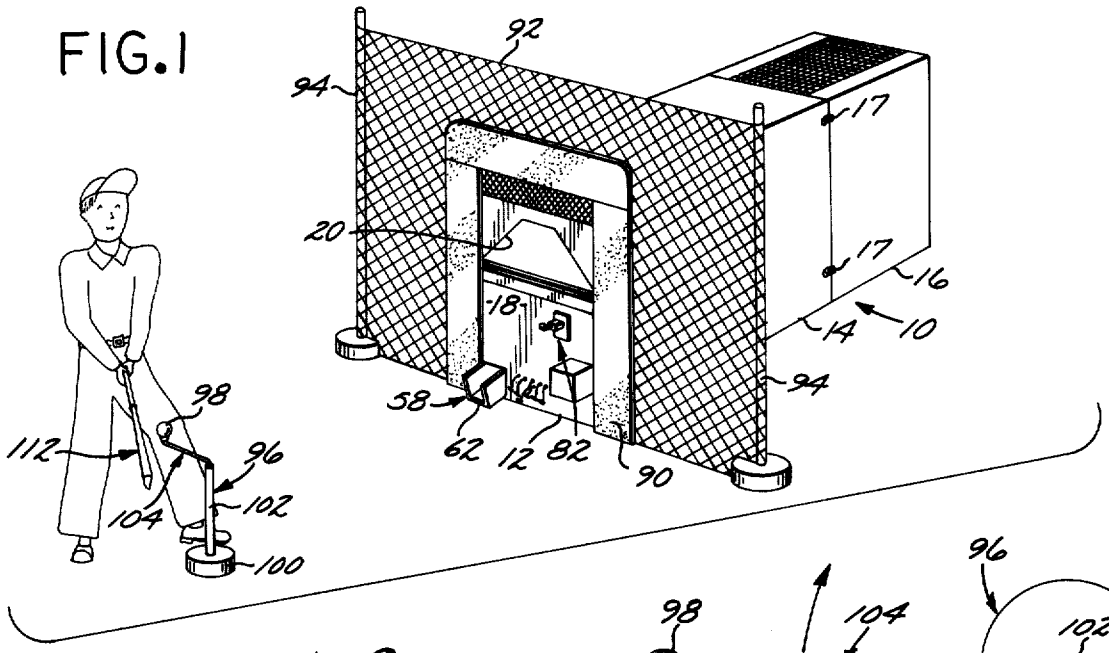


FIG. 1



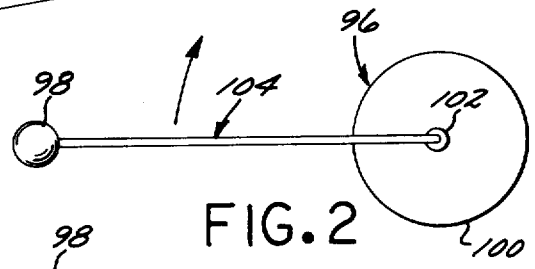


FIG. 2

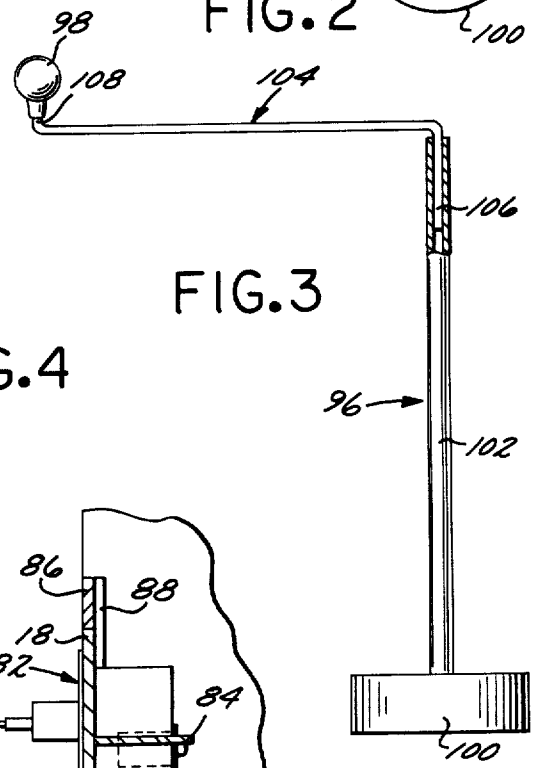


FIG. 3

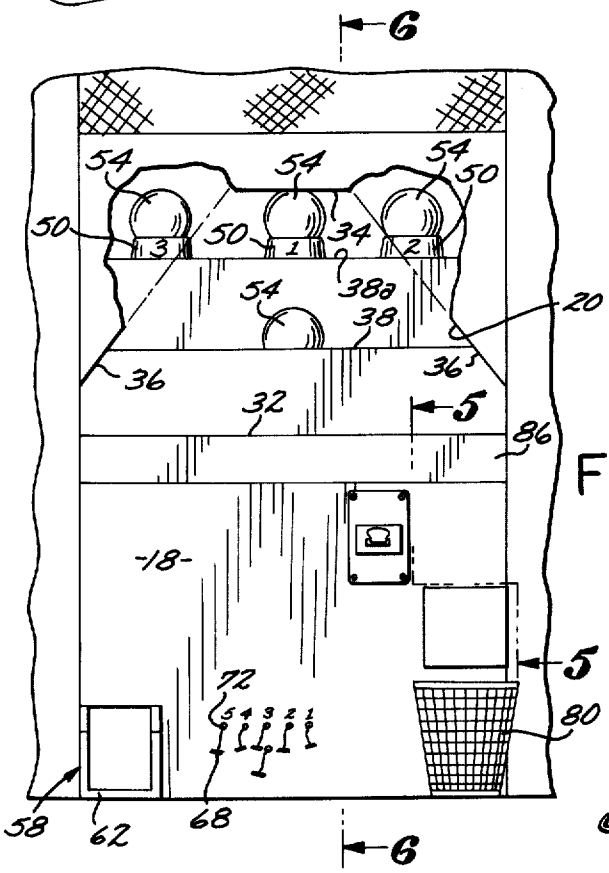


FIG. 4

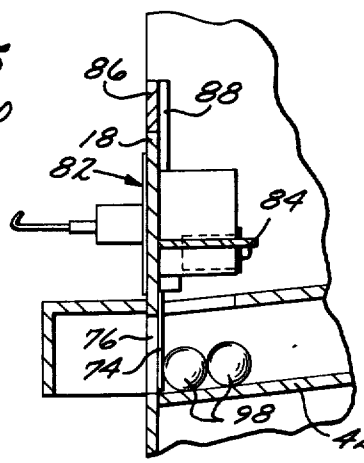


FIG. 5

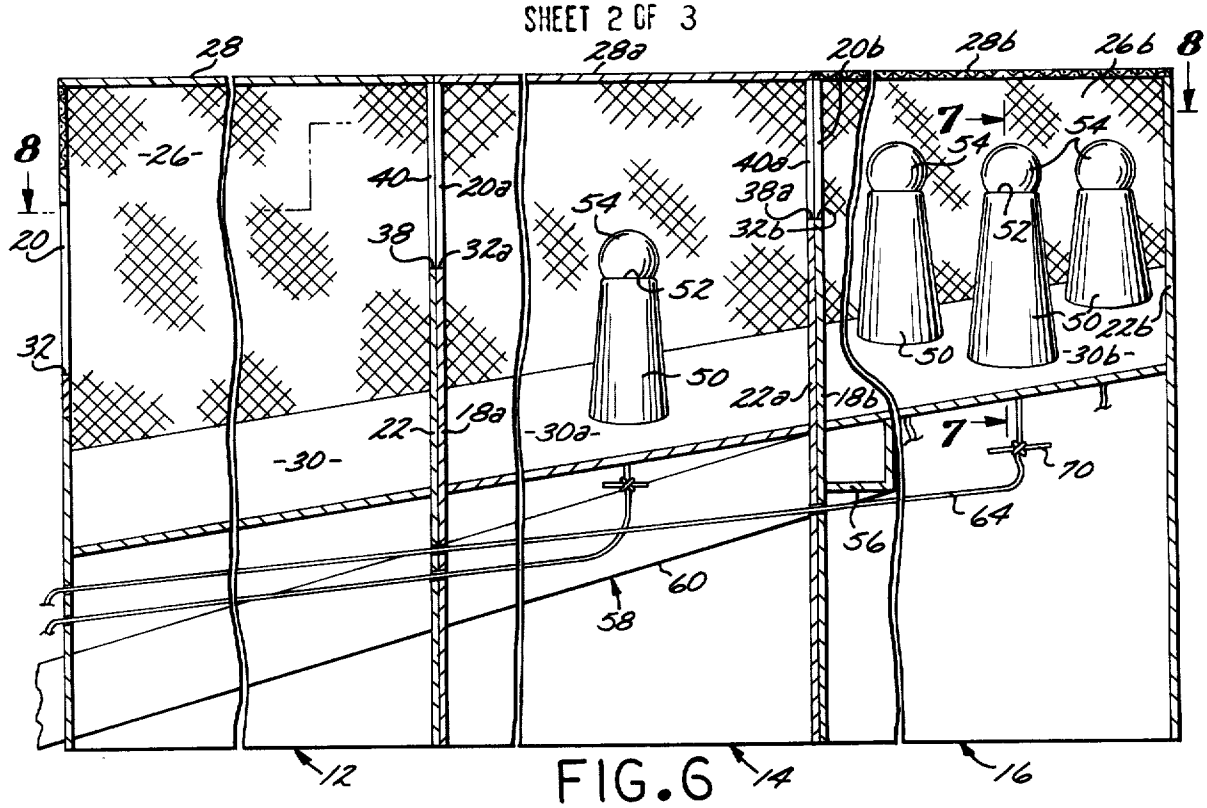


FIG. 6

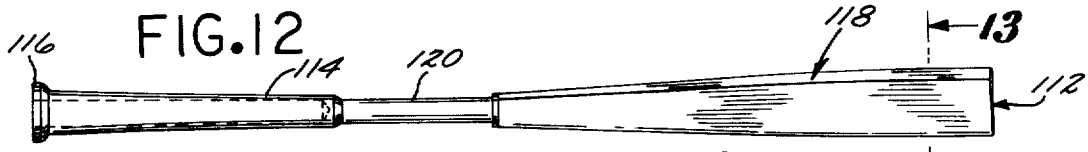


FIG. 12

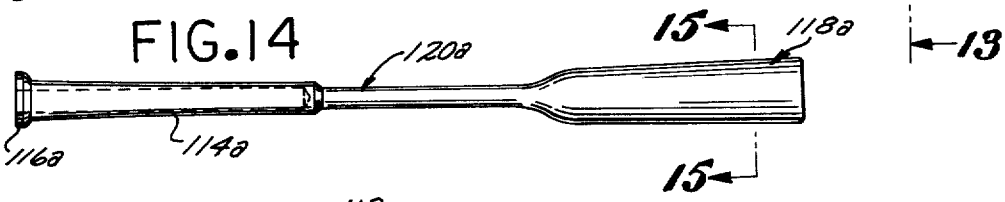


FIG. 14

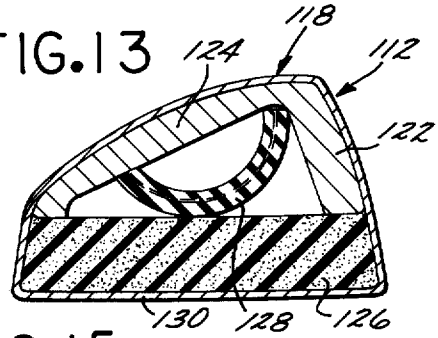


FIG. 13

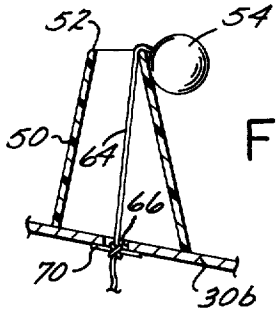


FIG. 7

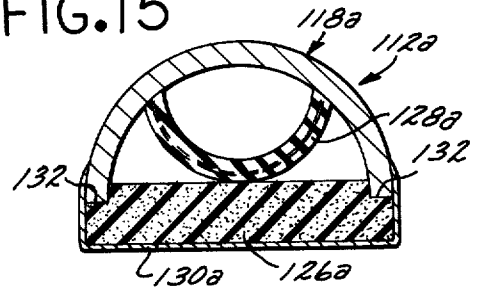


FIG. 15

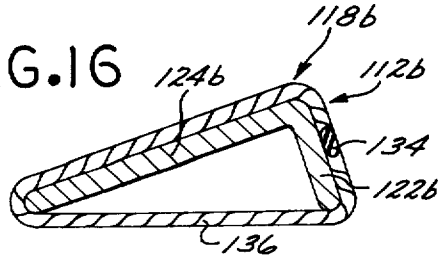


FIG. 16

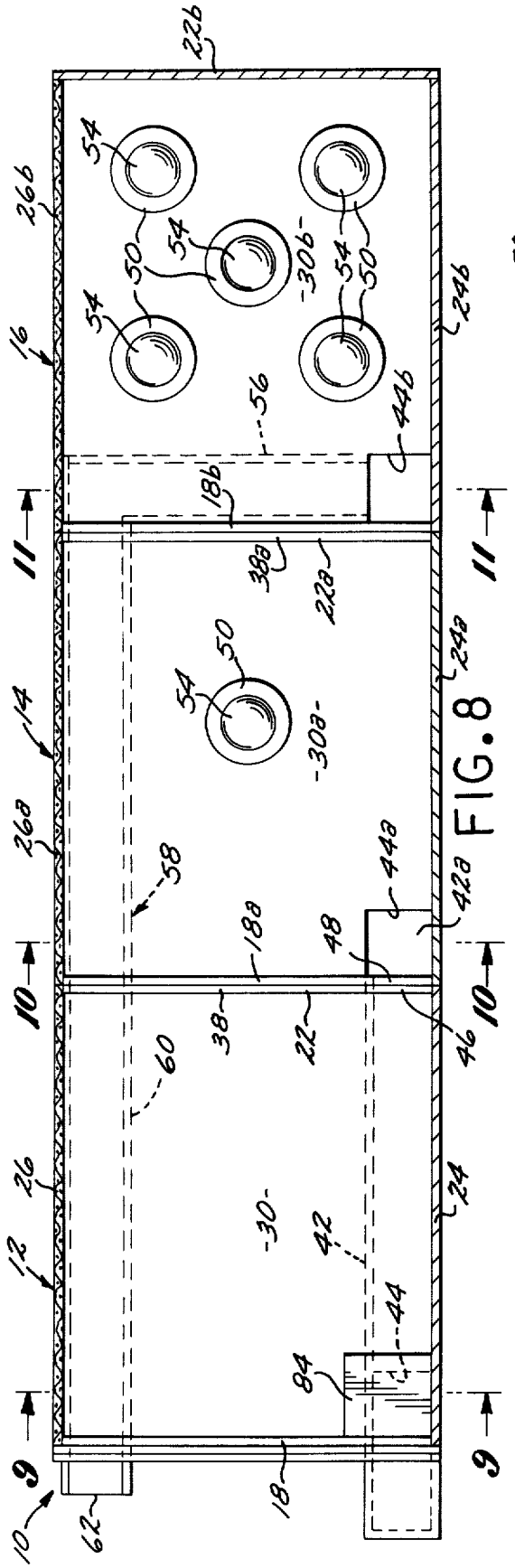


FIG. 8

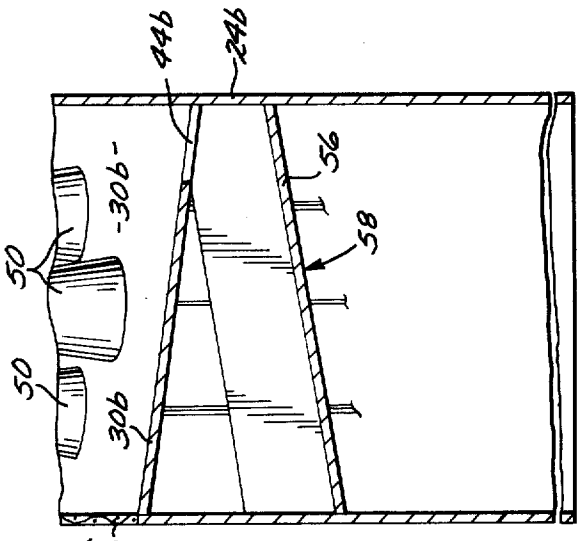


FIG. 11

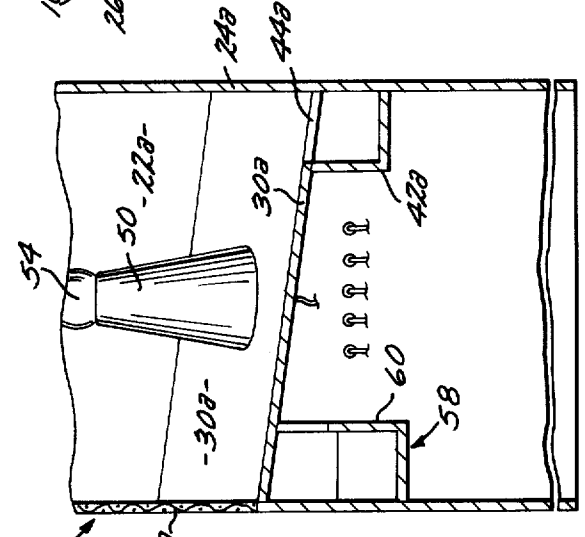


FIG. 10

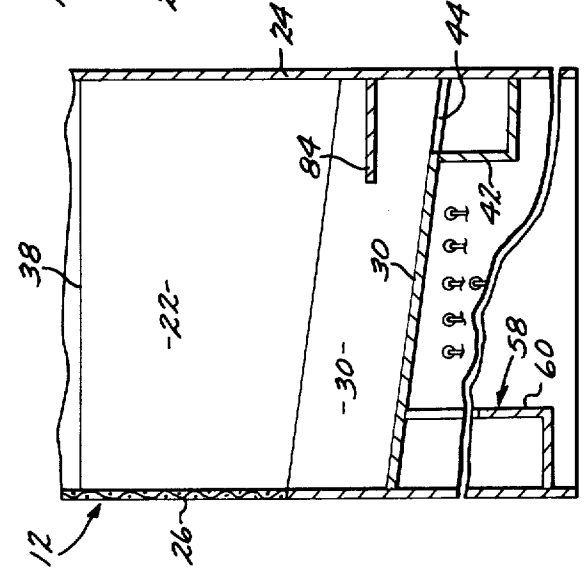


FIG. 9

BASEBALL BAT HAVING DIFFERENT STRIKING SURFACES

BACKGROUND OF THE INVENTION

In recent years the game of baseball has tended to become less interesting as a spectator sport because of the predictability of conventional baseball bats and of the batters that use them, and increasingly because refinements in pitching techniques and the development of specialized pitchers have tended to cause an overall reduction in batting performance and to minimize "surprise" ball placements by batters.

Another problem in the art is the general lack of apparatus available permitting a baseball-type game to be played by a much smaller number of people than a pair of full baseball teams, and which can be utilized in a relatively small or confined space.

The conventional baseball bat is made of solid wood, and the striking portion thereof is of round cross section, so that the conventional bat is not capable of injecting any variations in either the accuracy or the driving force with which a ball can be driven. Accordingly, the conventional round, solid prior art bat has no element of surprise built into it, and the accuracy and driving capability thereof are both completely predictable.

There have been attempts in the art to provide baseball bats made of lightweight metal such as aluminum, but such metal bats have not been adopted on any widespread basis. Such attempts have involved a round, tubular striking portion of the bat in an attempt to minimize the weight thereof, but the density of aluminum is still so much more than that of wood that it has generally heretofore been necessary to make the striking portion of an aluminum bat narrower than desired for good accuracy. Also, the amount of metal required, and also the amount of machining necessary, have in general made the cost of aluminum bats prohibitive.

SUMMARY OF THE INVENTION

In view of these and other problems in the art, it is a general object of the present invention to provide a novel baseball game instrument or bat which permits better ball maneuverability by a batter than for a conventional bat, so as to make baseball-type games less predictable and hence more interesting.

Another general object of the invention is to inject a new element of surprise into baseball-type games by adding versatility to batting capability without adding substantially to the maximum physical batting capacity.

A more specific object of the invention is to provide a novel game instrument or bat adapted for use in baseball type games which has an elongated striking portion comprising a plurality of different batting surfaces of successively increasing ball controllability but respectively of successively decreasing ball reactivity. Variations in ball controllability between two such batting surfaces are provided by dissimilarities between the shapes of such surfaces; and such dissimilarities may include differences between the widths of the surfaces or differences between the curvatures of the surfaces, or a combination of differences in both widths and curvatures of the surfaces. Variations in reactivity between two such batting surfaces may be caused by differences in the resiliency of materials employed in such surfaces (as for example foam and neoprene versus aluminum), or by differences in structural rigidity (as for example a thin wall versus a thick wall of the same material, or a wide, narrowly flanged wall versus a narrow, thickly flanged wall of the same material).

Another object of the invention is to provide a novel game instrument or bat of the character described having an elongated body defining a generally channel-shaped striking end portion that defines at least one elongated striking surface of the bat, and wherein a bridging member of another material extends between the free edges of the channel to provide another elongated striking surface of the bat that differs in both shape and reactivity. With this novel construction, the amount of material or, "meat" in the body of the bat can be minimized by making the channel wall as thin as desired, while nevertheless permitting the striking surfaces to be as wide as desired, whereby the body of the bat can be made of a relatively heavy material such as cast aluminum or the like without making the overall bat undesirably heavy. The channel-shaped striking portion of the body of the bat may be of simple arcuate construction to provide a single rounded striking surface, or it may be two-sided in a generally L-shaped configuration, or it may define any other desired number of striking surfaces. The bridging member may be generally flat or otherwise configured, and may be of a generally resilient material such as foam neoprene or wound nylon cord, or may be of a more rigid material if desired.

Further objects and advantages of the present invention will appear during the course of the following part of the specification, wherein the details of construction and mode of operation of presently preferred embodiments are described with reference to the accompanying drawings, in which:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view illustrating the complete game apparatus of the present invention operatively arranged for use, including the novel game instrument or bat, ball holder and ball, and modular target or fielding apparatus.

FIG. **2** is a top plan view of the ball holder with a ball supported thereon.

FIG. **3** is an elevational view of the ball holder and ball.

FIG. **4** is a fragmentary front end elevational view of the modular target or fielding apparatus, with portions broken away to better illustrate targets therein.

FIG. **5** is a fragmentary vertical section taken on the line **5—5** in FIG. **4** illustrating a portion of the ball return structure.

FIG. **6** is a longitudinal vertical section taken on the line **6—6** in FIG. **5**, with portions broken away, illustrating a modular target or fielding apparatus according to the invention which embodies a succession of three modules.

FIG. **7** is a fragmentary vertical section taken on the line **7—7** in FIG. **6** illustrating one of the targets within a module.

FIG. **8** is a horizontal section taken on the line **8—8** in FIG. **6**, showing floor, target, and ball return portions of the modular apparatus in top plan view.

FIG. **9** is a transverse vertical section, with portions broken away, taken on the line **9—9** in FIG. **8**, showing structure in the region of the first or front module.

FIG. **10** is a transverse vertical section taken on the line **10—10** in FIG. **8** illustrating structure in the region of the second or middle module.

FIG. 11 is a transverse vertical section taken on the line 11—11 in FIG. 8, illustrating structure in the region of the third or rear module.

FIG. 12 is a plan view of a three-sided game instrument or bat according to the invention.

FIG. 13 is a transverse section taken on the line 13—13 in FIG. 12, illustrating details of construction of the striking portion of the game instrument or bat.

FIG. 14 is a plan view of another form of game instrument or bat which has two striking surfaces.

FIG. 15 is a transverse sectional view taken on the line 15—15 in FIG. 14 showing details of construction of the striking portion of this game instrument or bat.

FIG. 16 is a transverse section of the striking portion of another form of game instrument or bat having three striking surfaces.

DETAILED DESCRIPTION

Referring to the drawings, and at first particularly to FIGS. 1 through 11 thereof, the modular target or fielding apparatus according to the invention is generally designated **10**, and includes a series of aligned target modules providing access to a batted ball from the front end of the forwardmost module, with such access being progressively more difficult for the successive target modules from front to rear. In the illustrative embodiments there are three such target modules, a first or front module **12**, a second or middle module **14**, and a third or rear module **16**, connected in line by latches **17**.

The first module **12** includes a generally upright front wall **18** defining an access aperture or window **20** for the batted ball which is in the general shape of an isosceles trapezoid. The first module **12** also includes a generally upright rear wall **22**, a pair of generally upright side walls **24** and **26**, a generally horizontal top wall or roof **28**, and a floor **30** which is inclined so as to tilt downwardly toward both the front wall **18** and the side wall **24**.

The access aperture or window **20** in front wall **18** is in part defined between generally horizontal lower and upper edges **32** and **34**, respectively, which define the maximum vertical limitations for entry of a batted ball into the modules. Vertical and lateral limits are further defined by the inclined side edges **36** of aperture **20**. The rear wall **22** terminates at a generally horizontal upper edge **38** that is located substantially higher than the edge **32** of the front aperture **20**, defining a more limited aperture **40** for the second module **14** requiring better control of ball trajectory. The upper portion of one side wall **26** may be made of a wire mesh material as seen in FIGS. **6** and **8** for spectator viewing.

A ball return trough portion extends the length of module **12** adjacent to side wall **24** underneath floor **10**. Any balls which are trapped in the first module **12** are enabled to roll into this trough portion **42** through an opening **44** in the floor **30** at its lowermost corner. Access is also provided to the trough portion **42** by an opening **46** in the rear wall **22** to receive balls that are trapped in the second or middle module **14**. Means for recovering balls from the trough portion **42** at the front of the first module **12** will be described hereinafter.

The second module **14** is similar to the first module **12**, having a front wall **18***a* terminating at a horizontal edge **32***a* defining the lower edge of an aperture **20***a* that registers with the aperture **40** to provide access for a batted ball into the second module **14**. Module **14** also includes rear wall **22***a* terminating an upper edge **38***a* defining an aperture **40**18side walls **24***a* and **26***a*; top wall or roof **28***a*; and floor **30***a*. The portion of side wall **26***a* above floor **30***a* may be of wire mesh for spectator viewing. The floor **30***a* inclines downwardly in the forward direction and toward the side wall **24***a*, and is provided with an opening **44***a* in its lowermost corner which communicates with the trough portion **42** through a trough extension **42***a* and an opening **48** in front wall **18**a which registers with the opening in the rear wall **22** of the front module.

Affixed to the floor **30***a* of the second module **14** generally centrally thereof is a target stand **50** that is preferably frusto-conical in configuration, extending upwardly from the floor **30***a* and terminating at its upper end in an annular target support rim **52** upon which a target **54** is normally seated.

The third module **16** is generally similar to modules **12** and **14**, having a front wall **18***b* terminating at a horizontal edge **32***b* defining the lower edge of an aperture **20***b* that registers with the aperture **40***a* to provide access for a batted ball into the third module **16**. It will be noted that the lower edges of the apertures or windows **20**, **20***a*, and **20***b* are successively higher from front to rear, making access of a batted ball into the second module **14** more difficult than the first module **12**, and into the third module **16** even more difficult than the second module **14**. Thus, greater skill on the part of the batter in managing the trajectory of the batted ball is required to hit the ball into the second module **14** than into the first module **12**, and particularly to hit the target **54** in the second module **14**; and even greater skill is required for the batter to hit the ball into the third module **16**, and particularly to hit one or more of the targets in the third module **16**.

The third module **16** also includes rear wall **22***b* which provides a complete rear enclosure; side walls **24***b* and **26***b*; top wall or roof **28***b*; and floor **30***b*. The portion of side wall **26***b* above floor **30***b* may be of wire mesh for spectator viewing similarly as the corresponding side walls of the first and second modules **12** and **14**; and the top wall or roof **28***b* is preferably also of wire mesh for illumination of the targets in the third module **16**.

Floor **30***b* inclines downwardly in the forward direction and toward the side wall **24***b*, and is provided with an opening **44***b* in its lowermost corner which communicates with a transverse portion **56** of a second ball return trough **58** which serves to return balls from the third module **16** independently of the balls from the first and second modules **12** and **14**, respectively. The ball return trough **58** also includes a longitudinal portion **60** which communicates at its rear end with the transverse trough portion **56** and extends forwardly along the sides **26***a* and **26** of the respective modules **14** and **12**, terminating at an open forward end **62** in front of the first module **12** proximate the bottom thereof.

Affixed to the floor **30***b* of the third module **16** is a plurality of target stands **50** which support respective targets **54** thereon. A suitable target array for the third module **16** is best illustrated in FIG. **8**, and includes a central target and four additional targets regularly spaced thereabout. It will be understood that other target arrays may be employed within the scope of the invention.

FIG. **7** illustrates details of one of the target stands **50**, and the means whereby a target **54** is adapted to be

reset on its support rim **52** after being knocked off its stand by a batted ball. This means includes a cord **64** secured to the target **54** and extending through the target stand rim **52** and hollow interior of target stand **50**, and thence downwardly through a hole **66** in bottom wall **30***b*, and then extending forwardly through suitable openings in the various transverse front and rear walls of the modules and terminating in a handle or knob **68** in front of the front wall **18** of the first module **12**. A stop member **70**, which may be a stick or rod knotted to the cord **64**, engages the lower surface of floor **30***b* to limit the extent of movement of target **54** off of its seat **52**. The target **54** may be placed back on its seat **52** by simply grasping the appropriate handle or knob **68** at the front of the apparatus and pulling it, which pulls the cord **64** and flips the target **54** back onto its seat **52**. Each of targets **54** is provided with a respective such cord **64**, and the small openings **72** in front wall **18** of the first module through which the forward cord ends extend are preferably related to their respective modules by positioning, and to the respective targets of the third module **16** by numbering, as illustrated in FIG. **4**.

It is to be noted that the ball return trough **58** returns all batted balls reaching the third module **16**, regardless of whether or not they have knocked off a target **54**, to the playing area forward of the modular apparatus **10**, whereby such balls that have been struck into the third module are retained "in play." It will also be noted that the ball return trough **58** for the third module has a maximum of incline, commencing at its rearward end immediately below the floor **30***b* at the opening **44***b* therein and inclining first laterally in the portion **56** and then longitudinally in the portion **60** a maximum extent to the open forward end **62** which is located proximate the bottom of the front module **12**. This provides a maximum velocity to the balls returned from the third module onto the surface of the playing area in front of the apparatus so that "team" type baseball games may be played with this apparatus wherein a team member is required to "field" balls rolling out of the trought **58**.

On the other hand, it is preferable to have balls that are batted only into the first module **12** or the second module **14** retained in the apparatus so as to represent "strikes" and thereby provide a definite limitation for a game that is played with the apparatus that corresponds generally to the skill of a batter similarly to conventional baseball. This is accomplished by providing a vertically slidable stop member **74** adjacent the front wall **18** of the first module **12** which slides between a lowermost closed position as shown in FIG. **3** wherein it blocks off the ball exit opening **76** in front wall **18** for the trough **42** and an upper position wherein it frees the opening **76** enabling the balls to roll forwardly therethrough. Preferably a protective hood **78** extends forwardly and downwardly over the opening **76** to deflect the released balls downwardly into a suitable receptacle such as the basket **80** shown in FIG. **4**, and to protect the stop member or gate **74** from tampering. If desired, the stop member or gate **74** may be freely manually shiftable between its closed and open positions without being locked in the closed position, as for example where the apparatus is to be used in noncommercial situations as in public parks, schools, churches, at home, or the like. However, the apparatus may be made suitable for commercial amusement establishments by having a coin control mechanism generally designated **82** operatively associated with the stop member **74**, so that the stop member **74** may only be lifted to release balls from the return trough **42** upon actuation of the coin control mechanism **82**. To further implement such commercial installation, a horizontal guard plate **84** may be disposed in spaced relationship above the ball return opening **44** in the floor of the first module **12** to prevent persons from reaching through the access aperture in the front of the first module and then down into the trough **42** to retrieve balls therefrom. Further implementation of this coin-controlled embodiment of the apparatus may also include a transverse barrier **86** mounted on an upward extension **88** of stop member **74**, the barrier **86** being adapted to shift upwardly when the stop member or gate **74** is raised to release balls from trough **42** so as to interfere with normal front access aperture or window **20**, thereby requiring the stop member or gate **74** to again be lowered to its closed position, with the barrier **86** also being lowered to its normal out-of-the-way position as shown in FIGS. **4** and **5**, before normal game play can be resumed.

In order to keep badly hit balls in the general field of play forward of the modular apparatus **10**, rapid shield means **90** may extend laterally and upwardly as a flange from the front wall **18** of the first module **12**, and if desired a protective netting may be supported on suitable stands **94** to provide further lateral and upward ball containment.

It is preferred to utilize a special ball holder generally designated **86** in conjunction with the modular target fielding apparatus **10**. The ball holder **96** enables a baseball **98** to be strategically located at a known, predetermined position in front of the modular apparatus **10** for batting, and permits a single player to use the game, not requiring that the ball be pitched. A presently preferred ball holder **96** includes a base **100** adapted to rest on the playing surface at a predetermined distance in front of the first module **12**; an upright tubular support member **102** extending upwardly from the base **100**; a generally horizontal rotatable arm **104** having a down-turned pivot end portion **106** rotatably engaged in the upper end of tubular support member **102**, and an up-turned free end portion **108**; and a ball seat member **110** mounted on the free end portion **108** of the arm and preferably being elastomeric and cupped at its upper end to receive the ball **98**. The ball holder **96** may, if desired, be vertically adjustable by suitable adjustment means (not shown) on the upright tubular support member **102**.

The manner in which the ball holder **96** is preferably used is illustrated in FIG. **1**, wherein the holder is shown being employed by a right-handed batter. The ball holder **96** is arranged so that the rotatable arm **104** extends from the upright support member **102** toward the batter, whereby the nearest part of the entire ball holder **98** to the batter is the ball seat member **110**, and of course the ball **98** supported thereon. In this position of the ball holder **96**, the rotatable arm **104** is generally transverse to the longitudinal axis of the modular target apparatus **10**, with the ball **98** positioned so as to be generally in line with the series of access apertures or windows **20**, **20***a*, and **20***b* in the modular apparatus **10**. The disposition of the baseball **98** upon the small ball seat member **110** at the free end of arm **104** remote from the main structure of the ball holder **96** provides good accessibility of the ball **98** for hitting, with a mini-

mum of obstructions. Normally the bat, designated **112** in FIG. **1**, will cleanly strike the ball **98** without hitting any part of the stand, to drive the ball into the modular target **10**. However, in case the swing is inaccurate in the low direction, the only part of the holder **96** that may be struck by the bat **112** would be resilient ball seat member **110**. The free rotatability of arm **104**, the resiliency of the elastomeric seat member **110**, and the minimal weight and inertia of the rotatable arm structure, combine to allow the arm structure **104** to swing with the movement of the bat **112** in the direction of the arrow in FIG. **2** so as to minimize both interference with the accurate guidance of the ball and damage to the bat or shock to the player's hands and wrists.

It will be apparent from the foregoing that the modular target or fielding apparatus **10** is arranged to provide increasingly greater difficulties in regions where increasingly greater scoring opportunities are available, which is also the case for conventional baseball. Further, these difficulties introduced into the game by the modular apparatus **10** are related to both directional accuracy (left/right) on the one hand, and trajectory (including both loft and velocity) on the other hand. This will be most apparent from FIG. **4**, wherein it can be seen that the upwardly stepped lower edges **32**, **38**, and **38***a* combine with the relatively low upper edge of the window **20** to require a relatively flat, high velocity trajectory for access to the third module **16** and particularly the targets **54** therein; while the upwardly converging sides **36** of the generally trapezoidal access aperture or window **20** at the same time requires greater directional accuracy to penetrate the third module **16** and strike targets **54** therein. Unique advantage of this character of the present modular target or fielding apparatus **10** is obtained by employing in combination therewith a novel game instrument or bat according to the present invention which embodies a plurality of different batting surfaces thereon of successively increasing control ability but respectively of successively decreasing reactivity. Whereas the conventional baseball bat provides no choice as to either ball controllability or reactivity, the novel game instrument or bat of the present invention has greatly increased versatility with respect to the critical factors of directional accuracy and trajectory, thereby making the game considerably more refined and interesting to play with the bat of the present invention. Nevertheless, the trade-off between controllability and reactivity in the present game instrument or bat prevents the overall performance of maximum physical capacity thereof from substantially increasing so that the game instrument or bat does not simply result in making the game easier for the batter.

Accordingly, the trade-off in the game instrument or bat of the present invention between ball controllability on the one hand, and reactivity or the ball velocity factor on the other hand, increases the versatility of the game employing the modular target or fielding apparatus **10** by enabling a player to in effect reduce the difficulty of either the directional accuracy of the trajectory difficulty factor of the modular apparatus, while at the same time subjecting himself to an increase in the other of these two difficulty factors.

While the novel multi-sided game instrument or bat of the present invention thus has unique adaptability to the modular target or fielding apparatus **10**, it is also useful in other baseball-type games, including the conventional game of baseball, by injecting a new element of surprise into the game without substantially adding to the maximum overall hitting capacity. Thus, even in conventional baseball, the novel bat of the present invention may be employed by a batter to give him a choice of a relatively harder hitting surface of relatively lesser accuracy of the one hand, or a relatively softer hitting surface of relatively greater accuracy on the other hand.

FIGS. **12** through **16** illustrate several forms of game instruments or bats embodying the principles of the invention.

The bat **112** shown in FIGS. **12** and **13** comprises a generally rigid, elongated, unitary body which may be made of any generally rigid, lightweight material such as aluminum, wood, fiberglass, or the like. The bat **112** includes a handle **114** which terminates at its free end in a security bead or flange **116**, the handle **114** preferably being hollowed out as shown in dotted lines in FIG. **12** for lightness in weight if the body of the bat is made of aluminum. At the other end of the bat the body defines the principle configuration of an elongated striking portion **118** of the bat which may extend directly from the handle **114** or may be spaced from the handle **114** by an elongated shank portion **120** of the bat.

The striking portion of the bat **112** shown in FIGS. **12** and **13** is three-sided, and if the bat is to be made of a relatively heavy material, as for example aluminum (versus a lighter material such as wood), advantages may be taken of this three-sided configuration to greatly reduce the overall weight of the bat while providing the variations in both controllability and reactivity characteristic of the invention. Thus, as best seen in FIG. **13**, the body **118** of the elongated striking portion of the bat may be generally L-shaped in cross section, including a narrow wall **122** which defines a first side of the striking portion of the bat which is the side of least accuracy but greater reactivity with the ball, and a wide wall **124** which defines a second side of the striking portion of the bat that is the side of intermediate accuracy and intermediate reactivity with the ball. The third side of the striking portion of the bat, which is the side of greatest accuracy but of least reactivity, is then formed by a pad **126** of resilient, compressible material, such as foam neoprene or the like, which is bonded to the free edges of the walls **122** and **124**, bridging the gap therebetween. Some structural support may be given to the pad **126** by a resilient backup member **128**, which may be an elongated cylindrical segment of rubber hose or the like. Finally, if desired, any number of the three walls of the striking portion of the bat may be covered with a soft leather, skin **130**.

The difference in accuracy between the three sides of the striking portion of bat **112** are provided principally by the differences in widths between the narrow side **122**, intermediate side **124**, and wide side **126**. The differences in accuracy are also in part provided by differences in curvature; for example, the striking surface of the second side **124** is more convex in cross section than the striking surface of the third side **126**, the flatter side tending to be more accurate.

The bat **112***a* shown in FIGS. **14** and **15** comprises a generally rigid, elongated, unitary body which also may be made of any generally rigid, lightweight material such as aluminum, wood, fiberglass, or the like. The bat **112***a* includes a handle **114***a* terminating at its free end in security bead or flange **116***a*, and being hollowed out

for lightness in weight if the bat is made of aluminum. The body of the bat in this case defines an elongated striking portion **118***a* of the bat which is considerably shorter than the comparable portion **118** of bat **112.** The striking portion **118***a* is spaced from the handle **114***a* by intermediate shank portion **120***a*. As will be apparent from FIG. **15,** the bat **112***a* is an example of a two-sided bat following the principles of the invention. As was the case for the bat **112,** with the bat **112***a* advantage may be taken of the novel two-sided configuration if the bat is made of a relatively heavy material such as aluminum (as compared with a lighter material such as wood) to greatly reduce the overall weight of the bat while nevertheless providing the variations in controllability and reactivity characteristic of the invention. Thus, as shown in FIG. **15,** the body **118***a* of the elongated striking portion of the bat **112***a* may be arcuate in cross section, peferably substantially semicylindrical, whereby the arcuate body **118***a* of the striking portion itself forms a first side of the striking portion of the bat which is the side of lesser accuracy but of greater reactivity with the ball. The second side of the striking portion of the bat **112***a*, which is the side of greater accuracy but of lesser reactivity, is then formed by a pad **126***a* similar to the pad **126** of resilient, compressible material, such as foam neoprene or the like, which is bonded to the free edges of the arcuate wall **118***a*, bridging the gap therebetween. The pad **126***a* may have notches **132** therein so that the pad seats down partially within the arc **118***a* for better bonding. Some structural support may be given to the pad **126***a* by resilient backup member **128***a* similar to backup member **128,** which may be an elongated cylindrical segment of rubber hose or the like. Leather covering **130***a* is shown arranged as a protective covering for the pad **126***a*, overlapping somewhat onto the edges of the arc **118***a*.

It is to be noted that the difference in controllability between the sides **118***a* and **126***a* of the bat **112***a* does not result from any difference in width between these sides, because the widths thereof applicable to the ball are substantially the same. The difference in controllability here lies in the dissimilarity between the shapes of the sides **118***a* and **126***a*, the curvature of the side **118***a* making it more difficult to control the ball than is the case for the generally flat surface presented to the ball by the resilient pad **126***a*.

FIG. **16** illustrates the striking portion only of a third form of bat **112***b* which is a three-sided form of bat. In this case, the body **118***b* of the striking portion is, like the corresponding body **118** of bat **112,** generally L-shaped in cross section, including narrow wall **122** which defines a first side of the striking portion of the bat which is the side of least accuracy but greatest reactivity with the ball, and a wide wall **124***b* which defines a second side of the striking portion of the bat that is the side of intermediate accuracy and intermediate reactivity with the ball. The third side **136** of the striking portion of the bat, which is the side of greatest accuracy but of least reactivity, is then formed by winding an elongated, flexible, resilient member **134,** which may be Nylon cord or the like, around substantially the entire length of the L-shaped striking portion **118***b* of the body so as to substantially completely cover the latter, and so that the third wall **136** formed by such wound cord or the like is a substantially continuous wall. The cord **134** or the like may, after such winding, then be bonded so as to make it a more unitary structure and to avoid any possibility of unraveling.

The third form of bat **112***b* has been shown for illustrative purposes as having substantially straight sides **122***b*, **124***b*, and **136,** and it will be apparent that the differences in accuracy are accordingly caused primarily by the differences in width of the striking surfaces rather than configuration thereof. The narrowest side **122***b* has greater reactivity than the intermediate side **124***b* because it is a considerably more rigid structure due to its narrowness and the fact that it is backed up by what is in effect the long flange of the side **124***b*. In contrast, the side **124***b* is much wider than the side **122***b*, and hence is much more resilient or giving than the side **122***b*, and the flange effect of the side **122***b* on the side **124***b* is a much lesser effect than the flange effect that was applied to the side **122***b*. A similar relationship is present between the sides **122** and **124** of the bat **112.**

It will be apparent that a variety of different baseball type games can be played with the apparatus of the present invention. For example, the apparatus can be employed without bases or base running, and thereby be particularly adaptable for restricted indoor areas. In such case, scoring may be based upon which of the modules **12, 14,** or **16** a ball is struck into, and may also be based upon how many of the targets **54** are struck. A satisfactory game may be played with an individual batter being allotted five baseballs which he may continue to hit into the modular target or fielding apparatus **10** until all five of the balls are entrapped in the ball return trough **42.** Suitable scoring for such game may be as follows. A ball struck into the first module **12** will produce no score, and this ball will fall into the trap, trough **42,** and be considered as a "strike." A ball struck into the second module **14** but not hitting the target **54** therein will likewise be captured in the trap **42** and be considered a strike; while a ball struck into the second module **14** and knocking over the target **54** may produce a scoring point or "run" (similar to driving a runner in), while nevertheless the ball will be entrapped in trough **42** to produce another "strike." A ball reaching the third module **14** will be returned through the trough **58** to the batter so that he can use the ball again, so it does not produce a "strike"; and any of the targets **54** that are knocked off in the third module **16** will produce a scoring point or "run." Return of the ball of course gives the batter another chance to score. Five strikes would be an "out."

Another baseball type game which may be played by the present apparatus with more space available, as for example outdoors, in a gymnasium, or the like, may involve teams. For example, each of two teams may include two men. One of the batting team will bat a ball into the modular target or fielding apparatus **10,** and if the ball reaches only the first module **12** or second module **14,** it will be entrapped in the trough **42** for a "strike." However, if the ball reaches the third module **16** and is returned through the return trough **58,** then a member of the opposite or fielding team must "field" the ball which is ejected from the apparatus through the trough **58** and throw it to the other "fielding" team member at a "base" that may be disposed at a substantial distance from the batting station. When the batter strikes the ball, he immediately runs toward such base, and it is then a matter of whether or not the batter can reach the base before the ball is fielded at the base to

determine whether the batter is out or has produced a run. Other variations of the game involving fielding may, of course, involve additional players, additional bases, or the like.

The foregoing suggestions for games are given by way of illustration only, and not of limitation, and there has been no attempt herein to go into detail regarding games which can be played with the apparatus or a variety of rules which might be applied to such games.

It will be apparent from the foregoing that the modular target or fielding apparatus **10** may be employed either with a conventional baseball bat or with the novel bats of the present invention, although the modular apparatus **10** may be more effectively utilized as aforesaid with the novel game instruments or bats of the present invention. Conversely, the novel game instruments or bats of the present invention may be utilized independently of the modular apparatus **10**, as for example in playing conventional baseball, to add more versatility and a new element of surprise into the game. Additionally, baseball type games may be played, with or without the present modular fielding apparatus **10**, wherein the novel game instruments or bats of the present invention are played against conventional baseball bats.

While the instant invention has been shown and described herein in what are conceived to be the most practical and preferred embodiments, it is recognized that departures may be made therefrom without the scope of the invention.

I claim:

1. A game instrument which comprises an elongated, generally rigid body having handle means proximate one end thereof and elongated ball striking means proximate the other end thereof, said striking means comprising a plurality of different elongated batting surfaces of successively increasing ball controllability but respectively of successively decreasing ball reactivity, said striking means comprising a channel-shaped portion of said body defining at least one of said striking surfaces, and bridging means extending between the edges of said channel-shaped body portion defining another of said striking surfaces, said channel shaped portion of the body and said bridging means being composed of different materials, and the material of said channel-shaped portion being substantially more rigid than the material of said bridging means.

2. A game instrument as defined in claim **1**, wherein said bridging means is comprised of resilient material.

3. A game instrument as defined in claim **2**, wherein said bridging means is composed of foam elastomeric material.

4. A game instrument as defined in claim **1**, wherein said channel-shaped portion is generally arcuate in cross section.

5. A game instrument as defined in claim **1**, wherein said channel-shaped portion is composed of metal.

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