BASEBALL BAT HAVING DIFFERENT STRIKING SURFACES

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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 battered 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
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 pitching foam 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 18a terminating at a horizontal edge 32a defining the lower edge of an aperture 20a that registers with the aperture 40 to provide access for a batted ball into the second module 14. Module 14 also includes rear wall 22a terminating an upper edge 38a defining an aperture 401side walls 24a and 26a; top wall or roof 28a; and floor 30a. The portion of side wall 26a above floor 30a may be of wire mesh for spectator viewing. The floor 30a inclines downwardly in the forward direction and toward the side wall 24a, and is provided with an opening 44a in its lowermost corner which communicates with the trough portion 42 through a trough extension 42a and an opening 48 in front wall 18a which registers with the opening in the rear wall 22 of the front module.

Affixed to the floor 30a 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 30a 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 18b terminating at a horizontal edge 32b defining the lower edge of an aperture 20b that registers with the aperture 40b 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, 20a, and 20b 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 22b which provides a complete rear enclosure; side walls 24b and 26b; top wall or roof 28b; and floor 30b. The portion of side wall 26b above floor 30b 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 28b is preferably also of wire mesh for illumination of the targets in the third module 16.

Floor 30b inclines downwardly in the forward direction and toward the side wall 24b, and is provided with an opening 44b 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 26a 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 30b 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
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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 30b, 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 30b 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 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 30b at the opening 44b 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 trough 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 closest 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 there-through. 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 there-from. 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 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 in line generally in line with the series of access apertures or windows 20, 20a, and 20b 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-
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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 38a combine with the relatively lower lower 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 controlability 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 controlability 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 controlability 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 head 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 112a 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 112a includes a handle 114a terminating at its free end in security head or flange 116a, 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 118a of the bat which is considerably shorter than the comparable portion 118 of bat 112. The striking portion 118a is spaced from the handle 114a by intermediate shank portion 120a. As will be apparent from FIG. 15, the bat 112a 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 112a 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 118a of the elongated striking portion of the bat 112a may be arcuate in cross section, preferably substantially semicylindrical, whereby the arcuate body 118a of the striking portion itself forms a first side of the striking portion of the bat which is the side of greater accuracy but of greater reactivity with the ball. The second side of the striking portion of the bat 112a, which is the side of greater accuracy but of lesser reactivity, is then formed by a pad 126a 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 118a, bridging the gap therebetween. The pad 126a may have notches 132 therein so that the pads seat down partially within the arc 118a for better bonding. Some structural support may be given to the pad 126a by resilient backup member 128a similar to backup member 128, which may be an elongated cylindrical segment of rubber hose or the like. Leather covering 130a is shown arranged as a protective covering for the pad 126a, overlapping somewhat on the edges of the arc 118a.

It is to be noted that the difference in controllability between the sides 118a and 126a of the bat 112a 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 118a and 126a, the curvature of the side 118a 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 126a.

FIG. 16 illustrates the striking portion only of a third form of bat 112b which is a three-sided form of bat. In this case, the body 118b 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 124b 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 118b 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 112b has been shown for illustrative purposes as having substantially straight sides 122b, 124b, 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 122b has greater reactivity than the intermediate side 124b 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 124b. In contrast, the side 124b is much wider than the side 122b, and hence is much more resilient or giving than the side 122b, and the flange effect of the side 122b on the side 124b is a much lesser effect than the flange effect that was applied to the side 122b. A similar relationship is present between the sides 122d and 124d of the bat 112d.

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 modulars 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 teams 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 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.

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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