June 7, 1966 J. J. MEHELICH 3,254,892

ENCLOSED AERIAL PROJECTILE GAME

Filed Feb. 4, 1963 3 Sheets-Sheet 1

Fig. 1

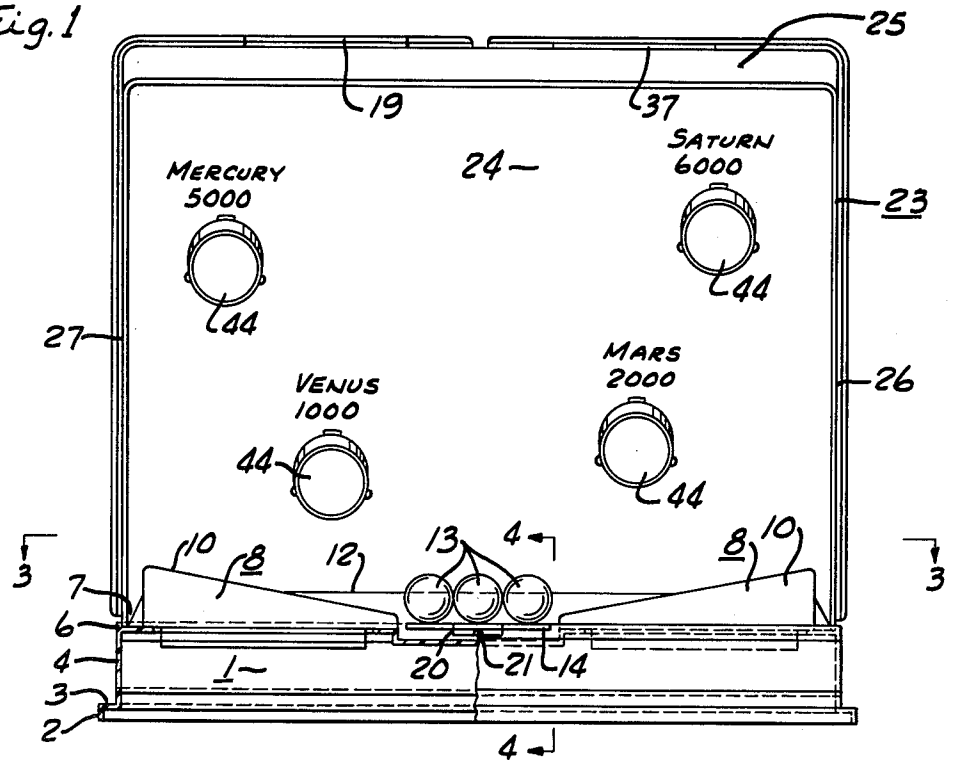
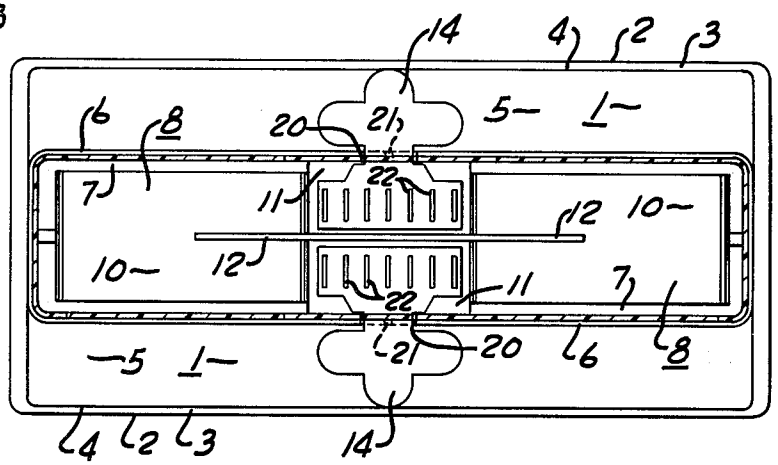


Fig. 3



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Filed Feb. 4, 1963 3 Sheets-Sheet 2

Fig. 2

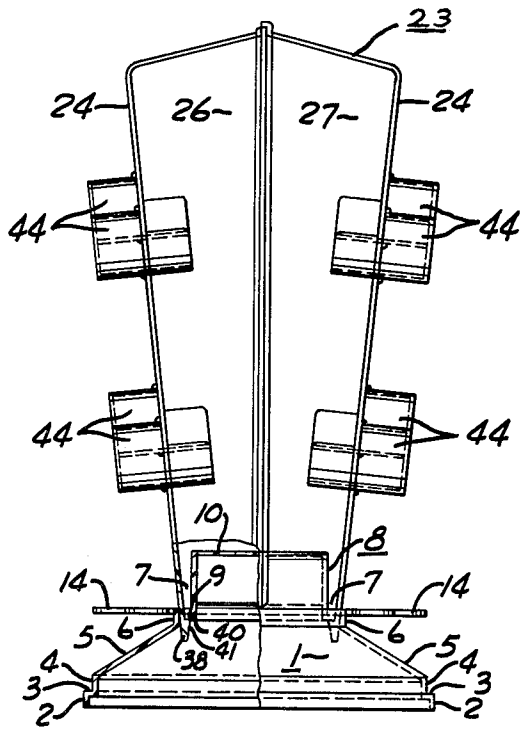


Fig. 4

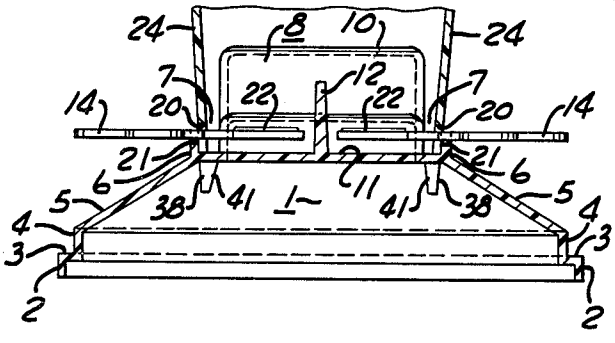
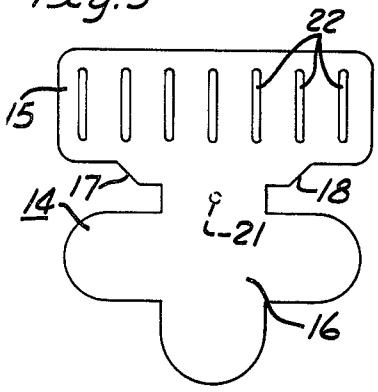


Fig. 5



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June 7, 1966 J. J. MEHELICH 3,254,892

ENCLOSED AERIAL PROJECTILE GAME

Filed Feb. 4, 1963 3 Sheets-Sheet 3

Fig. 8

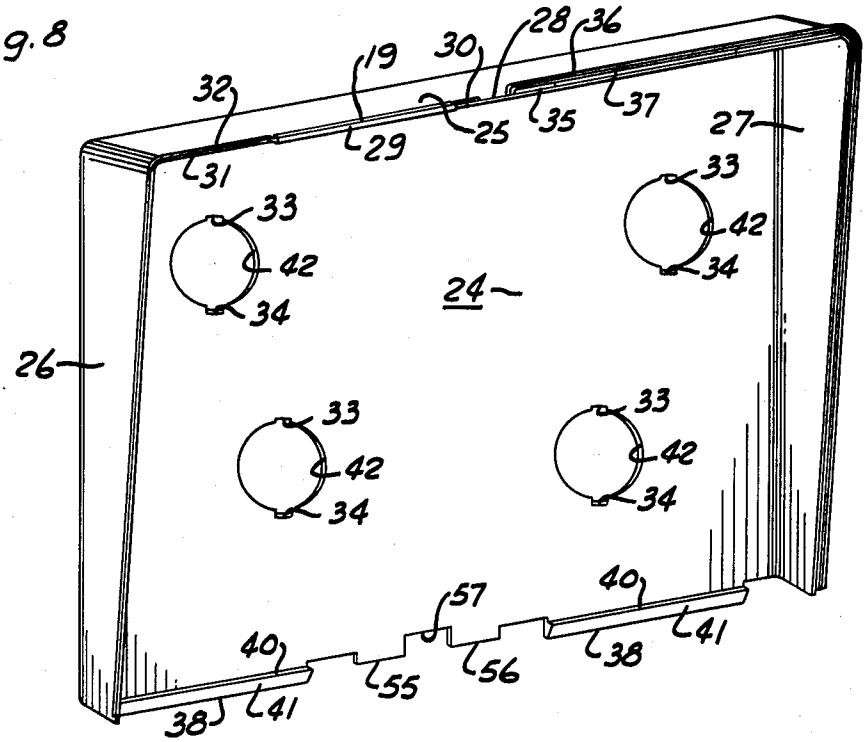


Fig. 7

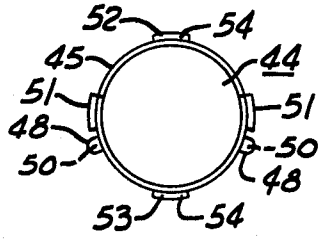
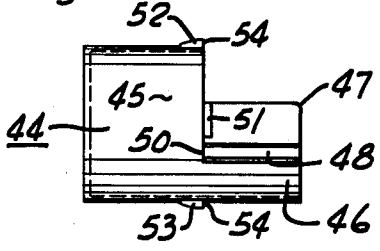


Fig. 6



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United States Patent Office

3,254,892

Patented June 7, 1966

3,254,892

ENCLOSED AERIAL PROJECTILE GAME

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Filed Feb. 4, 1963, Ser. No. 255,929
7 Claims. (Cl. 273—101)

This invention relates generally to toys and more particularly to an enclosed, dual operating, self-contained ball shooting game with a plurality of scoring baskets.

The principal object of this invention is an enclosed self-contained game having a chamber with a rectangular base, the top surface of which has oppositely disposed inclined surfaces that slope toward each other and are connected by a centrally disposed longitudinal ridge dividing into two independent playing areas with wells containing independent ball propelling devices and upwardly open ball receiving baskets in the chamber and having different score ratings.

This toy is thus enclosed and self-contained yet two players may operate the game simultaneously which materially changes the game from one of skill to one of chance which is an important object of this invention.

The game itself has many structural advantages that provide improved objects of this invention. The base having the single ridge connecting the oppositely disposed inclined surfaces not only forms a dual player's game for simultaneous competition but it adds strength to the structure. It provides a well on each side for the independent ball propelling device.

The propelling device provides another important object of this invention. The feature in this novel structure is the use of a point pivot supporting an overweighted paddle that may be depressed on the center or on either side and at ranging positions therebetween from the center to vary the degree of throw and direction and thus control the score if there is no interference and impingement with another free ball.

Another object is the provision of the novel manner in which the game closure is assembled. The two transparent side walls with their perimetral flanges are greatest along the top and decrease in width from the top to the base to provide an outward pitch in the wall face so that the upper scoring baskets are further removed from the vertical center than the lower scoring baskets. Again the top perimetral flanges interlock with tongue and slot. The side walls are actually the same piece and when one is turned to face the other they interlock with each other and are provided with depending flanges with abutments which when they pass through slots in the base securely fasten the walls together and the whole transparent chamber to the base. One has to break the toy to take them apart. The outwardly sloping walls accentuate this interlocked effect as the outward slope accentuates the abutment locking and the angle of the sloping side forces the abutment into light interlocked engagement against the under edge of the slot. Thus by properly reinforcing the base and the slots a very tight assembly is made without any additional means such as fasteners or glue.

Another object is the provision of a base having a slot to receive the opposite flanges depending from the sides wherein one side of each slot is faced by a vertical wall extending from above to below said slot and the other side is a short horizontal ledge surface. This provides strength for locking an abutment on the flange. On this type interlocking the assembly needs no cement or glue and when the abutment is wedge-shaped on one side and there is just enough clearance to position the wedge and when locked on the horizontal ledge then there is no play but the parts are held tight. To open this joint requires destruction of the walls, flanges or base.

Another object is the provision of a novel two-part propelling device. This is a simple flat stiff member with one part having a longitudinal paddle with ball seats formed by transverse ribs to hold the balls. The other part is an operating side of this flat propulsion member which is a finger tap which may be semicircular or at least like a three leaf clover having a narrow neck connecting the two parts. This narrow neck is long enough to provide ample room to operate in a notch in the side walls of the enclosed game. The bottom under this neck has a single upward projection acting as a pivot point fulcrum permitting the propulsion plate to pivot thereon with its ball seat horizontal or titled in any direction. This structure with ample clearance in the neck slot provides a loose propulsion plate and permits the operator to direct the ball at varying angles. Again the ball may be held on the up or down sloping side of the paddle face. This also changes the reaction and thus the trajectory of the ball.

Another object is the provision of upwardly open baskets formed by a cylindrical member closed on their outer ends and inserted through openings in the side wall. Because of the slope of the side walls these cylindrical baskets slope downwardly and outwardly. Each cylindrical basket has a pair of lateral abutments on opposite sides of the cylinder the radial faces of which engage the inside surface of the side walls. A top and bottom abutment on these cylindrical baskets have a radical face to engage the outer surface of the side wall and the opposite sides of these abutments are wedge shaped. The opposed radial faces of these abutments are spaced the thickness of the side walls. To mount them the cylindrical basket is tilted to pass the bottom abutment through the side wall hole with the lateral abutments engaging the inner wall surface. This is permissible because the lateral abutments are on one side of the great diameter of the cylindrical basket. The top abutment when shoved through the opening snaps in place to hold them solidly mounted.

The fact that two persons play simultaneously results in the fact that balls from both sides interfere with any developed skill making it more of a game of chance as to scoring in the cylindrical baskets.

Other objects and advantages of this invention appear hereinafter in the following description and claims.

The accompanying drawings show for the purpose of exemplification without limiting this invention or the claims thereto certain practical embodiments illustrating the principles of this invention wherein:

FIG. 1 is a view in side elevation with parts in section.

FIG. 2 is a view in end elevation with parts in section.

FIG. 3 is a view in horizontal section taken on the line 3—3 of FIG. 1.

FIG. 4 is an enlarged view in vertical section taken on the line 4—4 of FIG. 1 with parts broken away.

FIG. 5 is a full size plan view of the propelling lever.

FIG. 6 is a full size view in side elevation of a scoring basket.

FIG. 7 is an end view of the scoring basket.

FIG. 8 is a perspective view of a single side.

Referring to the drawings the base **1** is a molded plastic structure substantially rectangular in shape and is provided with the double stiffening flanges **2** and **3** on the bottom of the vertical wall **4**, which is high at the ends and is short on the sides to provide for the side sloping surfaces **5** the top of which terminates in vertical side walls **6** that join the vertical walls **4** at the ends of the base. These walls **4** and **6** form a perimetral top wall or fence of uniform height and providing an annular groove **7** on the inside of the fence, the other edge of the groove being defined by the horizontal flange **9**.

Inwardly of the fence **6** and groove **7** the ends of the top **8** are provided with bunkers or inclined planes

10 high adjacent the ends of the base 1 and sloping downwardly toward each other to form a low portion or valley on the base but divided into the wells 11 formed by the ridge 12 extending from the center of one incline to the center of the other incline. The top edge of the ridge 12 is rounded so that it will not support a ball 13 thereon of which there may be six in the game and of different colors such as three reds and three blues that can be designated to represent different values. The wells 11 are preferably deeper than the annular groove 7 and the ridge 12 is formed integral with the well bottom that extends between the bottom of the vertical side walls 6. The depth of the wells 11 is just about twice the depth of the annular grooves 7 that actually bound the ends and sides of the inclined bunkers.

The ball propelling device is a flat plastic member 14 as shown in FIG. 5 and has a ball paddle member 15 on one side and a coextensive hand striking member 16 on its other side with a neck 17 connecting these parts. The paddle is made somewhat heavier to outweigh the striking member. This may be done by adding the shoulders 18 on opposite sides of the neck and integral with the paddle. The edges of these shoulders are beveled to allow their top edge to engage the inside of the cover. Again the striking member may be tightened by notching the same to provide three sections in the form of a three leaf clover.

This simplified object propulsion device is mounted in the cutout 20 in the fence 6 and rests on the centered button 21 or pivot point fulcrum. This fulcrum supports the propelling device from the center of the neck and since the paddle side is heavier it remains in the well 11 so that any balls rolling or dropping down to the well will alight on the paddle. The paddle has a series of spaced transverse ridges 22 that form pockets for the balls 13. These pockets together with the force and direction that the clover leaf striking member is hit determines the trajectory of the ball. This provides a very accurate control when one or two balls are on the paddle. Four or more balls make a haphazard scoring that is merely by chance. Thus one may tap the striking member selectively for accurate control but when two persons operate the separate striking members simultaneously the balls frequently interfere with each other and change skill into chance. The balls not only strike the top of the enclosure but also strike the underside of the scoring baskets as well as bouncing off the side walls. Thus anything struck by the ball deflects it and contributes to the interest as a game of chance.

The closure member 23 is made of a transparent sheet plastic molded to form the top, side, and end walls. This closure is preferably made in two parts and each of these two parts are identical. Thus with two molds a three-part closure is possible and this closure may be used for this or other types of games. It makes an excellent display closure where you wish the public to see the item but not handle it. The shape of the base and sides may change but the manner of forming and connecting the two parts for the closure and the manner of attaching this closure to the base is novel and forms an important part of this invention.

The two part closure member 23 is made of duplicate side wall parts or sections 24 from a single die. Each part 24 has a top 25 and two ends 26 and 27. Sufficient batter is made in the top and ends so that they may be readily molded and removed. In the closure 23 for this game it is desirable for the walls 24 to slope outwardly. To get this effect the ends 26 and 27 are tapered in width from the top to the bottom to position the side outwardly and provide materially more game room area at the top than at the base, but as previously stated this is because of this game. The top and ends of the sides 24 have a stepped flange that starts at the middle 28 of the top 25 and extends toward opposite ends and down the adjacent ends 26 and 27. Viewing the side 24 with the top and ends extending toward the viewer, as in FIG. 8, the flange 30 extends laterally as at 31 and then forwardly as at 32. A section of the flange 32 projects further as indicated at 29 to form an interlocking. This is actually a tongue and has its upper edge provided with a small rearwardly facing abutment 19. The short flanges 31 and 32 extend from 28 in FIG. 8 along the top 25 to the left and down the end 26 stopping short from the bottom edge of the side 24.

The right side has a similar lateral flange 35 to that of flange 31 but sufficiently wide to include flanges 31 and 32. Whereas the flanges 31 and 35 are lateral flanges, the outward or forward flanges 32 and 36 are, of course, substantially the same thickness as the material. The flange 32 is turned outwardly or forwardly so as to be in the plane just above the top surface of the top 25. In the larger flange 35 a slot member 37 slightly longer than the tongue member 29 is formed on the right side of the member 24 as shown in FIG. 8 to receive the tongue 29. Its upper edge is the flange 36 and the outer face thereof engages the abutement face 19 to hold the same in place. The whole of the flanges 31 and 32 then fit within the flanges 35 and 36 and thus hold the two parts together. Thus the bordering flanges hold the two closure parts together and the tongues 29 and their abutments 19 aid in performing this feature in cooperation with the slots 37. Thus two identical parts form a box. One could be the lid and the other the bottom, which is an important feature of this invention as the bottom could take the shape of the top to form a box. Thus the same or duplicate pieces from the same mold may be brought together to make a closure.

The bottom edge of these sides 24 have two downwardly projecting tongues or flanges 38 each of which have the upwardly facing abutments 40 which taper to their bottom edge as at 41. This abutment edge engages under the flange 9 that defines the slot 7. The fact that the slot 7 is backed up by the long flat transverse wall that forms the inner face of the fence 6 the abutment surface 40 cannot be released because the slot 7 is just about as wide as the thickness of the material. Once the halves 24 are fitted together and the spaced tongues 38 of each side are inserted in their corresponding slots and locked by the abutments one cannot open this enclosure without smashing the walls or bottom. The manner of forming the slots 7 provides strength in these joints.

Each of these upwardly and outwardly sloping sides 24 has a series of circular openings 42 with top and bottom notches 33 and 34. The exterior face of each notch projects outwardly because the notch is beveled toward the outer face of the side 24. The scoring baskets for these openings 42 are also plastic and are generally cylindrical in shape as indicated at 44 in FIGS. 6 and 7. This cylinder is drawn at its closed end to provide enough batter to readily remove the same from the mold. Like all of the other parts this is plastic. The enclosure and the scoring baskets are transparent and are of the same plastic. The base and operators are opaque and so are the balls.

One half of the scoring basket 44 is a hollow cylinder closed at one end as indicated at 45, the other end 46 is upwardly open being substantially semicylindrical and rounded as at 47. The half cylinder has two longitudinal abutments 48 with their tranverse abutment face 50 facing the closed end. From the abutments 48 to the half section the half cylinder 46 has the abutments 51 which are wedge-shaped on the back. At the top and bottom of the scoring basket 45 the wedge abutments 52 and 53 are provided on the cylindrical sections with their abutment faces 54 facing the open end and arranged to be received in the notches 33 and 34. Each of these abutment faces 54 lies in the same plane which corresponds to the plane of the outer surface of the side 24. The abutments 50 and 51 all lie in a plane corresponding to the inner surface of the sides 24. Thus when the scoring basket is inserted into the hole 42 from the inside its end is tilted upwardly

to position the abutment face **54** of the bottom abutment **53** in position behind the sloping surface. As the scoring basket is rocked forwardly the wedge of the upper abutment passes up the incline of the notch **33** until it also passes to the outer face and thus snaps in place. This wedge fastening holds the baskets tightly in place and the notches **33** and **34** together with their corresponding abutments prevent them from turning.

Thus the complete assembly is made without tools, screws, glue or any parts. The device merely fits and snaps into place which is an important object of this invention.

The lower edge of the sides **24** are provided with two additional depending flanges **55** and **56** that frame the window or opening **57** therebetween. This window cooperates with the opening **20** in the fence **6** in retaining the neck **17** of the object propelling device.

I claim:

1. An enclosed self-contained game consisting of a rectangular base having a longitudinally extending central ridge on the top thereof, identical transparent side walls having their lower ends extending into said base on opposite sides of said ridge, perimetral flange means joining the ends and tops of said side walls and shaped to support each side wall at an angle diverging upwardly and outwardly from a vertical plane passing through said ridge, said base and side walls and said flange means forming a chamber enclosure, a plurality of vertically and horizontally spaced upwardly open scoring baskets on each side wall, a plurality of ball members the diameter of each of which is less than the opening in said baskets and is also less than the distance between said ridge and either side wall, a ball propelling device supported on a fulcrum pivot point on said base on each side of said ridge for propelling said ball members upwardly and laterally within said enclosure to strike the walls and flange means and to enter said scoring baskets, said ridge preventing said ball members from shifting from one side to the other when immobile at the bottom of said game.

2. An enclosed self-contained game for propelling objects consisting of a rectangular base having downwardly sloping top surfaces from the ends thereof leading toward the center thereof and a longitudinally vertically disposed central ridge on the top thereof, identical transparent side walls each forming a chamber half and having their lower ends extending into said base on opposite sides of said ridge, said side walls and said central ridge forming wells in said base, perimetral flange means on each side wall joining the tops of said side walls and shaped to support each side wall at an angle diverging upwardly and outwardly from a vertical plane passing through said central ridge, said base and side walls and said flange means forming a chamber enclosure, a plurality of vertically and horizontally spaced upwardly open scoring baskets on each side wall, a plurality of ball members in said enclosure, ball propelling devices each having a ball paddle member on one side and a substantially coextensive hand striking member on the other side with a neck connecting said paddle member and said striking member, a narrow slot disposed in each side wall adjacent the bottom of said well forming a sill on said bottom to retain said neck with said ball paddle member in said well, said hand striking member on the outside of said enclosure, an upwardly projecting pivot point on the center of said sill to engage the underside of said neck, said pivot points permitting said propelling devices to pivot universally to propel said ball members in a selected upward and lateral path within said enclosure upon hand striking of said striking member.

3. An enclosed self-contained game for propelling objects consisting of a rectangular base having downwardly sloping top surfaces from the ends thereof leading toward the center thereof and a longitudinally vertically disposed central ridge on the top thereof, identical transparent side walls each forming a chamber half and having

their lower ends extending into said base on opposite sides of said ridge, said side walls and said central ridge forming wells in said base, perimetral flange means on each side wall joining the tops of said side walls and shaped to support each side wall at an angle diverging upwardly and outwardly from a vertical plane passing through said central ridge, said base and side walls and said flange means forming a chamber enclosure, a plurality of vertically and horizontally spaced upwardly open scoring baskets on each side wall, a plurality of ball members in said enclosure, ball propelling devices each having a ball paddle member on one side and a substantially coextensive hand striking member on the other side with a neck connecting said paddle member and said striking member, a narrow slot disposed in at least one side wall adjacent the bottom of said well forming a sill on said bottom to retain said neck with said ball paddle member in said well, said hand striking member on the outside of said enclosure, an upwardly projecting pivot point on the center of said sill to engage the underside of said neck, said pivot point permitting each of said propelling devices to pivot universally to propel said ball members in a selected upward and lateral path within said enclosure upon striking of said hand striking member, each of said striking members comprising three tongues, two disposed longitudinally and one disposed outwardly relative to said base, to permit selection of the trajectory of said ball members upon striking selected of said tongues to propel the ball members laterally as well as upwardly within said enclosure for the purpose of scoring in said baskets or interfering with the trajectory of other ball members.

4. The game of claim **3** characterized in that said paddle member has transverse ridges to form pockets to permit selective positioning of said ball members on said paddle member to aid in the selection of a trajectory of said ball members upon striking of said striking member.

5. An enclosed self-contained game consisting of a base containing ball propulsion devices, a closure with upwardly extending side walls enclosing over said base and containing objects to be propelled by said propulsion devices, a plurality of cylindrical scoring baskets each having one end closed and the other end an adjacent bottom semicylindrical wall having its top half open, an abutment on each side of said other end of each of said baskets extending beyond said semicylindrical wall with an abutment face oriented toward said one end of said basket, a top and a bottom abutment on said one end of said basket, each with an abutment face oriented toward said other end and in opposed relationship to the plane of the abutment faces of said side abutments, said opposed abutment faces lying in planes spaced substantially equal to the thickness of said closure wall, said closure wall having an opening to receive each of said cylindrical baskets and notches to tightly receive said top and bottom abutments, at least one of said top and bottom abutments being wedge shaped to forcibly lock both abutment faces on said top and bottom abutments on the opposite side of said closure wall from said side abutments.

6. An enclosed self-contained game consisting of a top closure member having inwardly sloping duplicate side wall sections with each of their lower edges provided with cooperative fastening means, said duplicate wall sections each having perimetral flange edges for mating with one another, each of said wall sections having a tongue member and adjacent slot member in the top of said section at said perimetral flange edge to interlock said duplicate wall sections together to form said top closure member, a base having complementary fastening means to receive said cooperative fastening means on the lower edge of said top closure member to form a chamber enclosure, a plurality of upward extensions on said base adjacent different parts of said side walls and having sloping surfaces that extend toward each other but stopping short to form a central valley in said base at the lower ends of said surfaces, ridge means extending from each sloping

surface and connected together to divide the same to form wells between said ridge means and the ends of said sloping surfaces and said closure member wall to receive the ball members employed in the game, a ball propelling device having a paddle member in each of said wells and a hand striking member coextensive with said paddle member and outside of said chamber enclosure, said ball propelling device supported from said base to pivot universally therefrom within each of said wells to propel said ball members in selected upward and lateral paths within said enclosure upon striking of said hand striking member.

7. A basket mounting consisting of a wall of predetermined thickness, a basket having a cylindrical portion at one end and a partially semicylindrical portion at its other end, two pairs of opposed abutments on said basket with their opposed abutment faces lying in parallel planes spaced substantially equal to the thickness of said wall, a first pair of said abutments on said other end oriented substantially along one major axis, a second pair of said abutments on said one end oriented on another major axis substantially at right angles to said one major axis, said wall having an opening to receive the basket, said opening having notches disposed on said second major axis to cooperate with said second pair of abutments, said notches being beveled in one direction to receive said basket, at least one of said last mentioned abutments being wedge

shaped to tightly fit and express its corresponding notch to snap and forcibly lock all of said abutment faces on opposite sides of said wall.

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