Nov. 10, 1953 J. C. ELDER 2,658,757

GAME PIECE MOVING MEANS

Filed Nov. 12, 1949 4 Sheets-Sheet 1

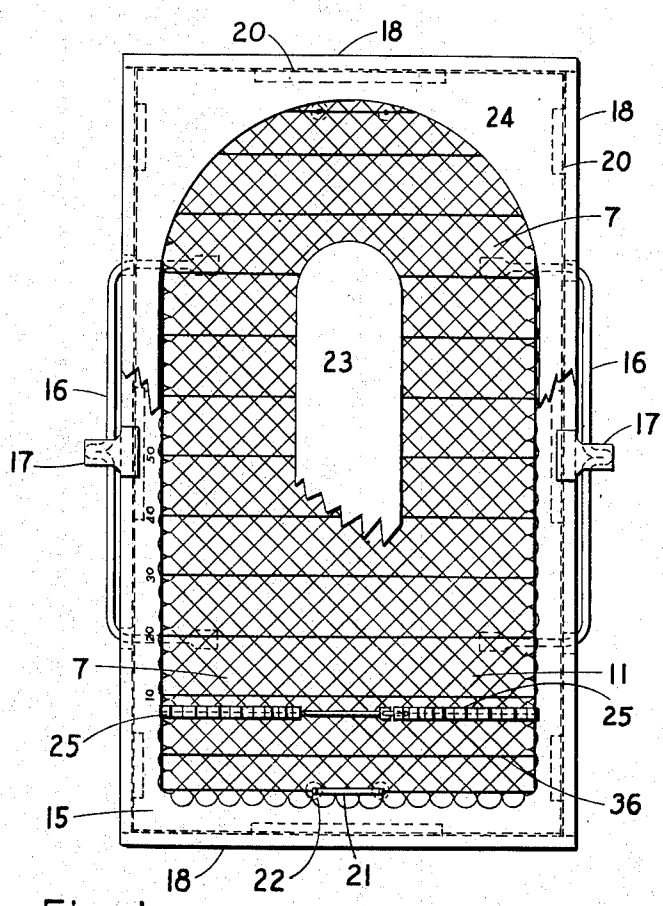


Fig. 1

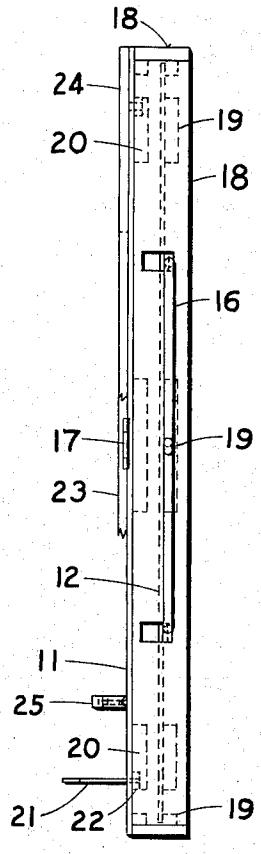


Fig. 3

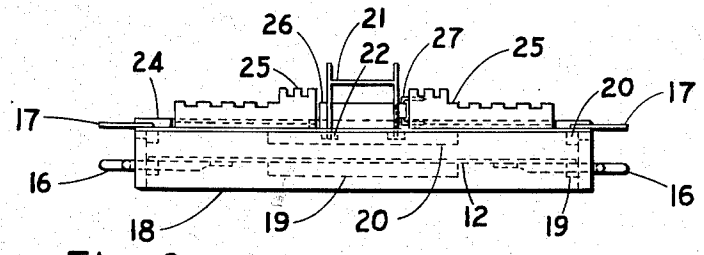


Fig. 2

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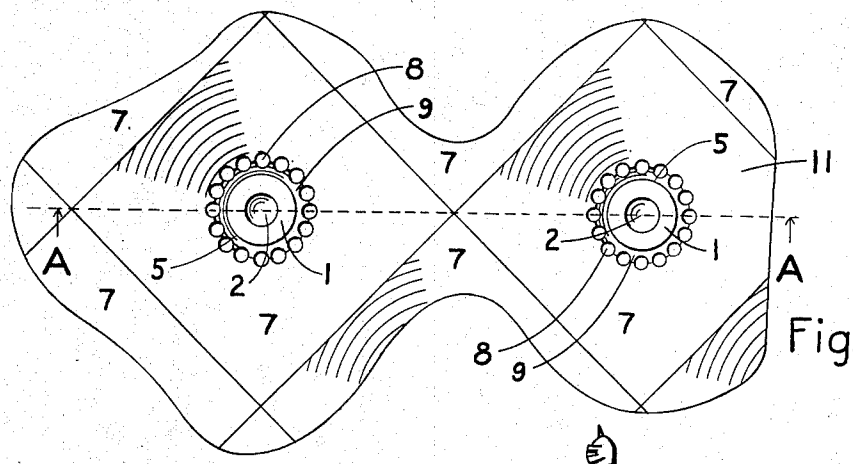


Fig. 4

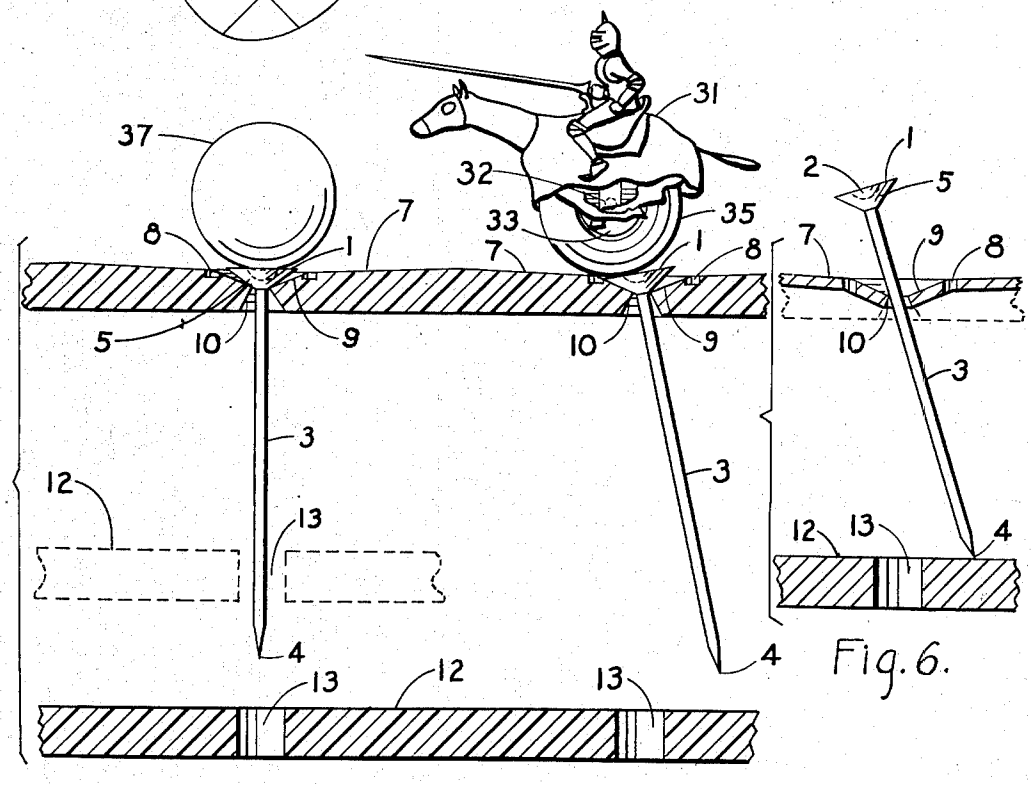


Fig. 5. SECTION AA

Fig. 6.

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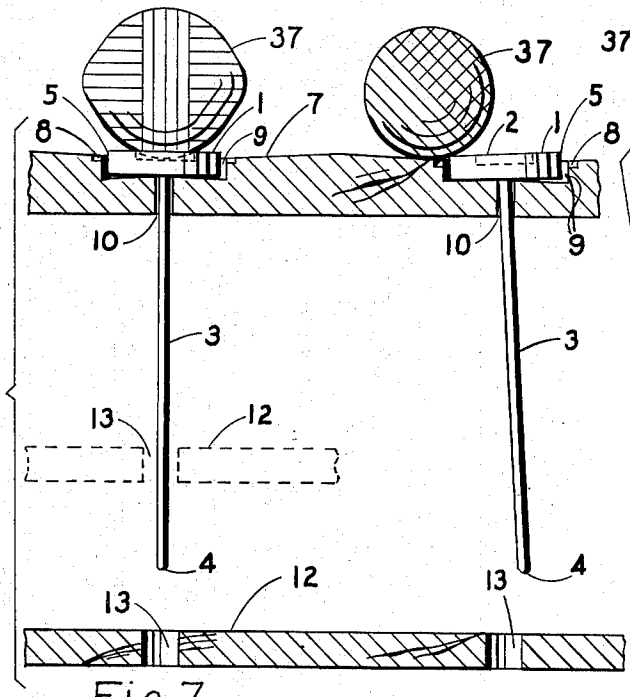


Fig. 7

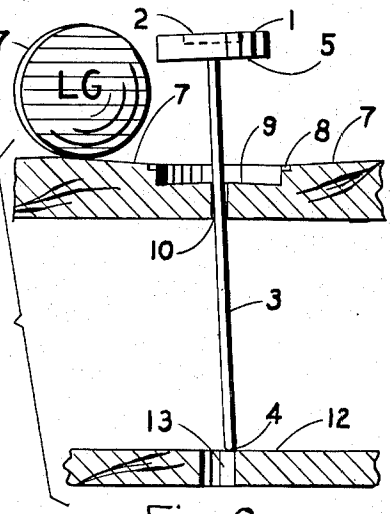


Fig. 8.

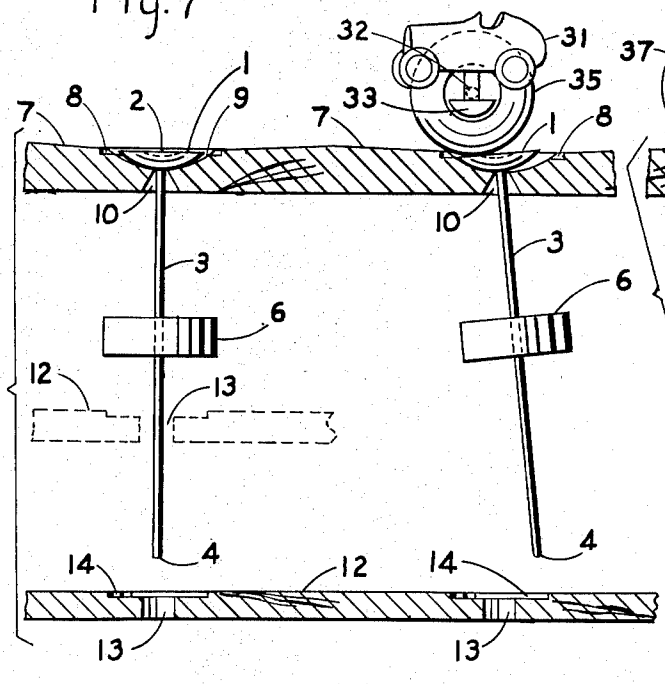


Fig. 9.

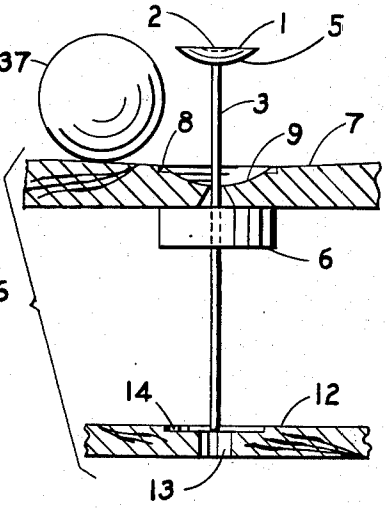


Fig. 10.

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GAME PIECE-MOVING MEANS

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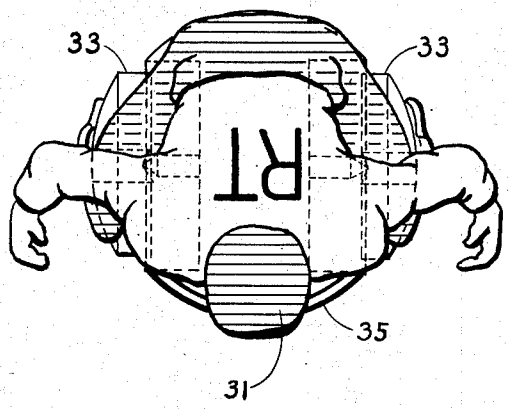
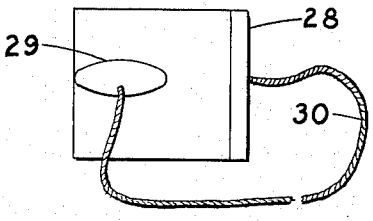


Fig. 12

Fig. 14



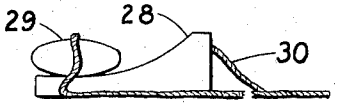


Fig. 15

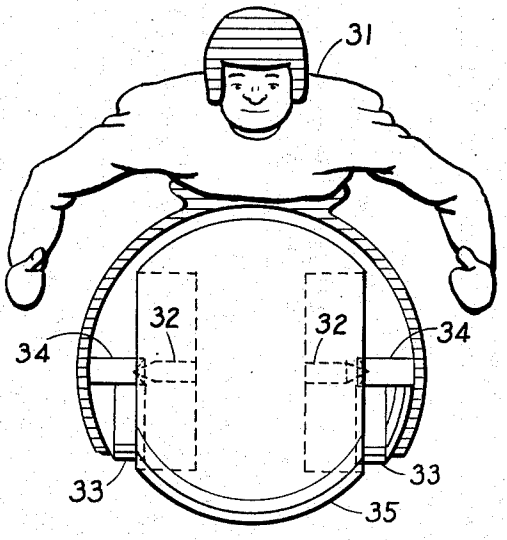


Fig. 11

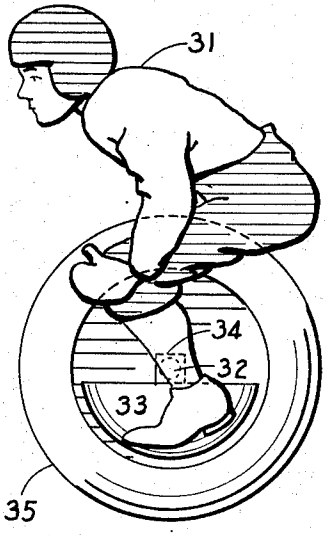


Fig. 13

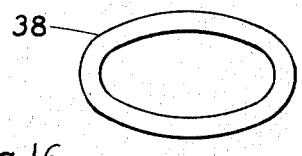


Fig. 16



Fig. 17

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UNITED STATES PATENT OFFICE

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GAME PIECE MOVING MEANS

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Application November 12, 1949, Serial No. 126,753

3 Claims. (Cl. 273—86)

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The object of this invention is to furnish a novel means for simultaneously moving a plurality of rounded objects upon the floor of an indoor game. The rounded objects are pieces, or wheel members of composite pieces collectively for play on the floor. The pieces represent individual participants in games simulating sporting activities, or conflicts. The invention provides for simultaneous movement of pieces upon the floor of the invention, and means for a succession of such to the conclusion of the game played. The invention further provides for placement of each individual piece, by the players, for movement in the direction desired in every simultaneous movement of pieces. A further object of the invention is provision for withholding pieces fixed in position during a simultaneous movement of other pieces. A variance in the distance over the floor the various pieces may move in each simultaneous movement of pieces is provided to furnish a novel means for competitive movement of pieces in games toward a goal or position in the games. Following each simultaneous movement, the pieces gravitate to new positions which the players may study prior to directing each piece individually for advantage in a following simultaneous movement.

The invention basically provides for intimate and animated simulation of the game of football. Cutouts of flat material, as well as, barriers with gates may be superimposed upon the playing surface of the invention to limit the playing surface into patterns, or sections suitable for playing other games.

In the accompanying drawings the details of the game invention are illustrated. In all drawings the same numbers refer to the same parts. Figures 1, 2, and 3 are top, end, and side elevations, respectively, of a game board embodying my invention. Figure 4 is a top view of a portion of the floor, showing intersecting recesses with contained plungers. Figure 5 is a longitudinal vertical section on line A—A of Figure 4, with the inclusion of pieces on the floor. Figure 6 illustrates how a plunger of adjacent Figure 5 is actuated by the plunger actuator board. Figures 7 and 8, 9 and 10 are sections similar to Figures 5 and 6, showing interrelated functions of piece, plunger, recesses of the floor, and actuator board. Figures 11, 12, and 13 are front, top, and side elevations, respectively, of a composite game piece comprising a weighted figure mounted on a wheel member. Figures 14 and 15 are top and side elevations, respectively of a kicking platform and attached ball. Figures 16 and 17

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are top and end elevations of an item termed "passing football."

Figures 1, 2, and 3 represent top, end, and side elevations respectively. The floor **11** extends the entire area of the top of the invention, with the exception of a border **15** around all four sides. Heavy lines **36** are yard markers similar to those on football fields. A goal post **21** is shown mounted at one end of the game in guides **22** provided at either end of the game. Cutouts of flat material **23** and **24**, shown in cutaway section, illustrate how the floor is limited to patterns suitable for playing games other than football. These two cutouts limit the floor into a pattern suitable for playing a game of racing in which the exposed playing space suggests a race track. A pair of barriers **25** are shown placed upon the floor. These barriers, one with gate **26** swung on hinge **27**, together with an identical pair of barriers (not shown) placed upon the other end, are used for playing games of conflict. Squares **7** are formed by a plurality of intersecting recesses of slight depth. A plunger actuator **12**, a flat member sustained on rests **19**, extends under the floor and the stem tips of plungers hereinafter described. The plunger actuator is hoisted toward the floor in balanced condition and parallel to the floor plane by bringing together plunger actuator lifts **16** and guides **17**. The upward travel of the plunger actuator is halted by stops **20**, whereupon, it is immediately released to fall to the rests. Sidewalls **18** support the floor and limit the actuator path to this vertical travel through the air space under the floor. Other essentials, plungers, recessed plunger seats located one in each depression, and plunger actuator detail, are deleted from these figures for simplicity, but will be fully described hereinafter and pointed out in the claims.

Figure 4 is a top view of a small portion of the floor and Figure 5 illustrates a cross section of that portion with the inclusion of playing pieces thereon. A plurality of intersecting recesses **7** and plunger tops **1** form the floor **11** of the game invention, each plunger top being nearly flat and normally adjacent to the lowermost encircling elevations of the recess in which it is located. The plungers, consisting of heads **5** and stems **3**, are loosely seated in their respective recesses and hang swingably by their heads in plunger seats **9**. Each plunger stem hangs vertically downward when its associated recess is unoccupied by a playing piece. The plunger heads and plunger stems perpendicular to the nearly flat tops are fixed together.

The left hand plunger and piece 37 of Figure 5 illustrate that the plunger stems remain in their normal, vertical position when a piece is positioned to occupy the circular hollow 2, located centrally in the plunger top, and that the plunger top 1 is sustained as a part of the floor. A piece in this position, although contained within a recess, is not occupying the recess, as in position for movement in play.

In Figure 5 the right hand plunger is contacted by a piece and its stem 3 is forced into a position inclined from the vertical. The weight of the composite piece occupying the recess 7, in position for movement in play, with the wheel member 35 resting both upon the recess 7 and the plunger top 1, is displacing the plunger stem laterally at its lower end. 12 is the plunger actuator board in resting position under the stem tips 4 of the plungers. A plurality of openings 13 in the plunger actuator, one for each plunger stem, are disposed under the plungers so that when the plunger actuator is raised, each plunger stem in vertical position may project through its associated opening.

The plunger actuator 12 is raised upward to cause a simultaneous movement of pieces on the floor. During the upward travel of the plunger actuator, being common to all plungers, it engages the stem tips 4 of all plungers that are associated with a recess occupied by a piece. When a recess is occupied by a piece, the stem 3 of the associated plunger is inclined from the vertical and displaced laterally at its lower end, so that the stem tip 4 comes in contact with a solid portion of the upward rising plunger actuator. As the movement of the actuator board is continued upward, it simultaneously actuates the plungers associated only with the inclined stems, as illustrated in Figure 6. The pieces in contact with and having inclined the stems of the actuated plungers are caused thereby to roll simultaneously in play on the floor, being laterally urged, until friction retards their forward motion. The pieces then gravitate into other recesses and stop usually in position for movement in play.

All plungers having stems in vertical position are not actuated throughout the vertical travel of the plunger actuator, as illustrated by the raised—dotted line drawing—position of the plunger actuator in Figures 5, 7, and 9, and the plunger tops 1 of all normally positioned plungers remain a part of the floor throughout the vertical travel of the plunger actuator, the plunger stems 3 projecting through openings 13, in actuator as it is raised and lowered. It can be seen, therefore, that pieces can be placed in hollows 2 of plungers in normal position and stabilized thereby for no movement in play during a simultaneous movement of other pieces on the floor, caused by the plunger actuator in vertical travel.

Immediately after pieces are forced into motion, the plunger actuator is released to resting position, and all hoisted plungers gravitate to normal position permitting of pieces propelled in that action to roll upon plungers which propelled other pieces in that same action.

Small holes 8 encircle the plunger seats 9 at the lowermost elevation of the depressions 7. These holes are guides for placement of pieces to be moved in the direction desired by the players. The guides serve to sustain and stabilize pieces in position for movement in play, prior to movement, as well as, to provide a selection of positions for movement in play from

which pieces may be caused to roll radially in play from the plungers.

Figures 5, 7, and 9 illustrate plungers of different shapes and with plunger seats suited thereto. The plunger stem tips 4 are at varying elevations above the plunger actuator; the elevation of the plunger tops 1, with respect to that of the most immediate surrounding sections of the depressions 7, in which they are seated vary; the weights of the various plungers vary. These diversities in plunger design effect a difference in distances the various pieces may by chance of location on the floor be caused to roll upon the playing surface with each simultaneous movement of pieces, and this inequality lends a novel means for competitive movement of pieces in games.

The continuity of the floor is broken by open spaces surrounding the plungers and by hollows in the plunger tops. These spaces and hollows are of little magnitude in respect to that of the pieces, such as to offer interference of no consequence to conduct of games.

Interrelated Figures 7 and 8 illustrate a means for releasing hoisted plungers to normal position immediately following an upward movement of the plunger actuator. In Figure 7, an elliptically shaped piece 37 rests upon the plunger for no movement intended and a spherical piece is in position for movement in play from right to left. Tapered plunger hole 10 in which stem 3 passes through the floor section, restricts the incline of the plunger to the angle shown. Plunger stem tip 4 is rounded. Figure 8 illustrates the plunger hoisted, the cylindrically shaped piece having been forced into motion. The plunger stem tip 4 having slid toward the hole 13, in the plunger actuator during the hoisting of the actuator, is now in position to slip through the plunger actuator hole and return the plunger to normal position.

Interrelated Figures 9 and 10 picture plungers with plunger stops 6 fastened to the stems 3. These stops may be desired to hold the plungers in place if the game is turned over in storage. The stops also serve to force the plunger stem tips 4 to move over the surface of the plunger actuator 12, when the stops 6 come in contact with the under side of the floor near the apex of the upward movement of the plunger actuator. As the stops are forced full against the under side of the floor, Figure 10, the stem tips are moved over the holes 13 in the actuator, permitting the plunger to gravitate immediately to normal position. Hole 14 cut partially into the plunger actuator, concentric with and larger than opening 13 serves as a stop to restrain the plunger stem from further incline upon contact with the upward rising plunger actuator.

An actively simulated football game may be played upon the floor of the invention, in which the pieces animatedly simulate the activities of actual football players. Each "play" or "down" of the game is consummated by several consecutive simultaneous movements of the individual pieces, the number of movement required depending upon the circumstances of displacement of pieces in the several movements, and the skill of the players in assigning directions of movement of the various pieces. In each of the movements of a "play" the pieces move a short distance on the floor. Following each simultaneous movement, the new position of the various pieces may be studied by the players prior to positioning the individual pieces for movement in the direction

desired in the next movement of the "play." The players also have the alternative of placing a piece, or pieces, centrally on their adjacent plunger tops for no movement during a simultaneous movement of other pieces. For the several movements of a "down," the player of the advancing team may, therefore, direct his elected "ball carrier" to elude the defensive player's pieces and to continue toward the goal line. Meanwhile, he may also direct the movement of other of his pieces to block the opposing pieces from contacting or intercepting his "ball carrier." It is the problem of the defensive player to direct the movements of his pieces, prior to each of the several movements of the "play," to break up the interference of the blocking pieces, converge upon the "ball carrier," and "down the ball" to end the "play" with a minimum of gained "yardage."

With the first upward movement of the plunger actuator in a "play," the advancing player may elect to start his "ball carrier" around the end of the line of pieces set up for the "play," through the center of the line, or otherwise to his best advantage. For any following one of the movements of a "play," however, the player has the alternative of changing the direction of movement of his "ball carrier" to take advantage of any opening through opposing pieces that may chance to appear.

When opposing pieces chance to come to rest in the same recess, the defensive piece may be considered blocked. As the plunger actuator is raised for a following movement of pieces, either or both pieces may move as circumstances of position with respect to the associated plunger ordain. Two pieces of the same player, in like position, may be positioned with respect to the plunger so that motion will be imparted to one of the pieces by the actuated plunger in the direction desired.

Figures 14 and 15 are top and side elevations of a kicking platform **28**, with an elliptically shaped ball **29** fastened thereto by a length of string **30**. The ball represents a football in the "kicking plays" of the football game. The kicking platform is placed upon the floor immediately behind the "ball carrier" when the player desires to "kick," or "punt" the ball "out of danger." This may be done after any simultaneous movement of pieces in a "play," provided the "ball carrier" has not moved forward. The player "kicking" places the ball upon the kicking platform in the position shown and snaps it forward with his fingers. The upward rising forward portion of the kicking platform elevates the ball into the air. The string restrains the "kicking" distance to a comparable distance on an actual field and causes the ball to fall usually on the floor. The curve of the kicking platform and the restraining string attachment constrain the player to care in the delivery of the ball: The upward curve influences the lateral angle from which the ball departs from the kicking platform. And should the player deliver the ball too fast, the string becomes taut and returns the ball toward the player, resulting in "lost yardage." Following a "kick," the kicking platform is removed to the side margin **15**, and the string is placed for a minimum of interference with the moving pieces. It is the problem of the player "receiving the kick" to strike the ball with a piece through consecutive movements, whereupon that piece becomes the "ball carrier." Meanwhile, in the same sequence of simultaneous movements of pieces, the player "kicking" causes his pieces

to converge upon the new "ball carrier returning the kick," intercept it, and "down the ball." The kicking platform and ball are used in a similar manner for the "kickoff" and "field goal" activities, the actions described above being means for simulation of a kick in an actual football game.

Figures 16 and 17 are elevations of an item used in the football game for a "passing attack." This object is a flat, oval item with a concentric oval hole therein, and is termed, passing football. The player "passing" in the football game does so after any simultaneous movement of pieces in the "play" provided the "ball carrier" has not progressed beyond the "line of scrimmage." The player tosses the passing football from behind the "ball carrier," attempting to ring, or encircle any of his pieces classed as "eligible receivers." Having done so, the piece encircled becomes the "ball carrier" and the "play" progresses. Should the player "passing" inadvertently ring one of his opponent's pieces, that piece becomes the "ball carrier," having intercepted the "pass." It is the problem of the "defensive" player to anticipate such a "play" and attempt to "cover" the eligible "receivers," that is, keep his pieces as close as possible to the "receivers" thereby discouraging the "advancing" player from "passing" lest the "ball be intercepted." Should the "passing" player fail to ring one of his eligible pieces, or one of his opponent's pieces, the "play" is considered an "incomplete pass." In this manner a pass is simulated.

Cutouts are placed upon the floor of the invention to limit the available floor into patterns suitable for playing games other than football. Figures 1, 2, and 3 illustrate, with cutaway portions of cutouts **23** and **24**, how the floor is limited to a pattern suggesting a race track. For clearness in the views, only a cutaway portion of the two cutouts is shown. Actually, the part of each cutout deleted in the views is symmetrical with the portion shown. With these cutouts so placed, several players may play a game of racing their pieces around the "track" thus suggested. The movements of pieces upon the exposed portions of the floor are simultaneous, with each piece being individually directed throughout the sequence of movements required to complete the game.

Barriers, or fences **25** with gates **26** may be placed upon the floor of the invention to divide the available playing space into several portions. The barriers **25**, shown in Figures 1, 2, and 3, are formed with battlements, the embrasures of which suggest a castle of medieval time. Gate **26** resting upon the intersecting elevations of the depressions **7** and swung on hinge **27** may be forced open in either direction by repeated simultaneous movements of pieces against it. Likewise, the gate may be held closed by a counteracting movement of opposing pieces. With such apparatus a game of conflict, or war, may be played upon the floor of the invention, using the above simultaneous movements of pieces actively representing individual participants in conflict.

The principal characteristic of pieces used in plurality with this combination game invention is capability of rolling over the floor composed in part by plunger tops **1** and in part by depressions **7**. Figures 5, 9, and 11 illustrate composite pieces each with a wheel member **35** having a rounded rim, and pivotally bearing a figure **31** upon the axle **32**. Weights **33** are fastened to the lowermost portions of the figures to maintain the poise of the composite pieces in the positions shown, when rested upon a level surface. As the pieces

are moved upon the floor, a forward, backward, and lateral rocking motion of the figure will ensue, contributing to the animation in the games. Figures 11, 12, and 13 are views showing three elevations of a composite piece for the football game. The figure **31**, mounting with bearings **34**, the axle **32** of the wheel member **35** is that of a football player. The extended arms are for the purpose of intercepting the "ball carrier." If desired, simpler pieces may be employed as shown in Figures 7 and 8. These are an ellipsoid, sphere, and cylinder, respectively. The pieces may be variously colored and lettered, as shown, to establish individual identity of pieces.

It can be seen from this description that considerable skill can be acquired in playing games with my combination game invention: Consideration must be given to the direction assigned for pieces to move with regard to subsequent distribution of pieces as a possible threat to advantages desired. Principles of billiards should be kept in mind with regard to angularity of departure of pieces from a point of mutual contact. Intended movements of pieces may be shielded from the opponent by deceptive imovements of other pieces.

It is obvious that my invention is applicable generally to indoor games and is susceptible to modification, the distinguishing feature being a succession of simultaneous movements of pieces for play, with option of direction of movement, with provision for maintaining pieces stationary in a movement of other pieces, and with provision for variance in distances pieces may be moved. When in use, the invention should be placed on a nearly level table or floor, with the players exchanging sides when convenient to equalize conditions. Conventional solenoids, affixed to the plunger actuator lifts and guides, can be used to hoist the plunger actuator, if desired, using a simple electrical circuit. A simple cloth cover, with extended eyelets, may be lashed over the playing surface to keep it clean and to hold plungers in place when the invention is not in use.

Although the present invention has been described with reference to a particular manner for simultaneous movements of pieces in games, it will be understood to those skilled in the art that the invention is capable of a variety of alternative embodiments within the scope of the appended claims.

Having fully described my invention, what I now claim, and desire to secure by Letters Patent, is:

1. In a game comprising a playing floor having a plurality of recesses therein for receiving playing pieces, the combination comprising a plunger loosely seated in each of said recesses and having a stem which hangs vertically downward when the recess is unoccupied by a playing piece, and which stem is displaced laterally at its lower end when the associated recess is occupied by a playing piece, and a plunger actuator which actuates simultaneously only those plungers associated with a recess occupied by a playing piece, comprising a board disposed below said playing floor and constrained to move vertically while in a substantially horizontal plane, said board having openings therein, one for each of said plunger stems, through which said plunger stems may project when the board is raised, provided the stems are vertical, the stems which are not vertical engaging the board whereby the associated plungers and playing pieces are actuated, and means for raising said board.

2. In a game comprising a playing floor having a plurality of recesses therein for receiving playing pieces, the combination comprising a plunger loosely seated in each of said recesses and having a stem which hangs vertically downward when the recess is unoccupied by a playing piece, and which stem is displaced laterally at its lower end when the associated recess is occupied by a playing piece, and a plunger actuator which actuates simultaneously only those plungers associated with a recess occupied by a playing piece, comprising a board disposed below said playing floor and constrained to move vertically while in a substantially horizontal plane, said board having openings therein, one for each of said plunger stems, through which said plunger stems may project when the board is raised, providing the stems are vertical, the stems which are not vertical engaging the board whereby the associated plungers and playing pieces are actuated, and means for manually raising said board, said means comprising a pair of lateral handles attached to said board and projecting beyond the limits of said playing floor.

3. In a game comprising a playing floor having a plurality of recesses therein for receiving playing pieces which are to be moved about on said floor and including a plunger located in each of said recesses for moving a playing piece occupying the recess, means for simultaneously actuating only the plungers associated with recesses which are occupied by playing pieces, comprising a stem associated with each of the plungers, said stem hanging vertically downward when the recess associated therewith is unoccupied, and which stem is inclined from the vertical when the associated recess is occupied, an actuating board disposed beneath said playing floor and constrained for vertical movement in a substantially horizontal position, a plurality of openings in said board disposed so that said stems will pass through the openings in the board when the board is raised only if said stems are in the vertical position and so that the board will engage each of the inclined stems when raised, whereby the plungers associated only with the inclined stems are actuated, and means for raising said board.

J. CALVIN ELDER.

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