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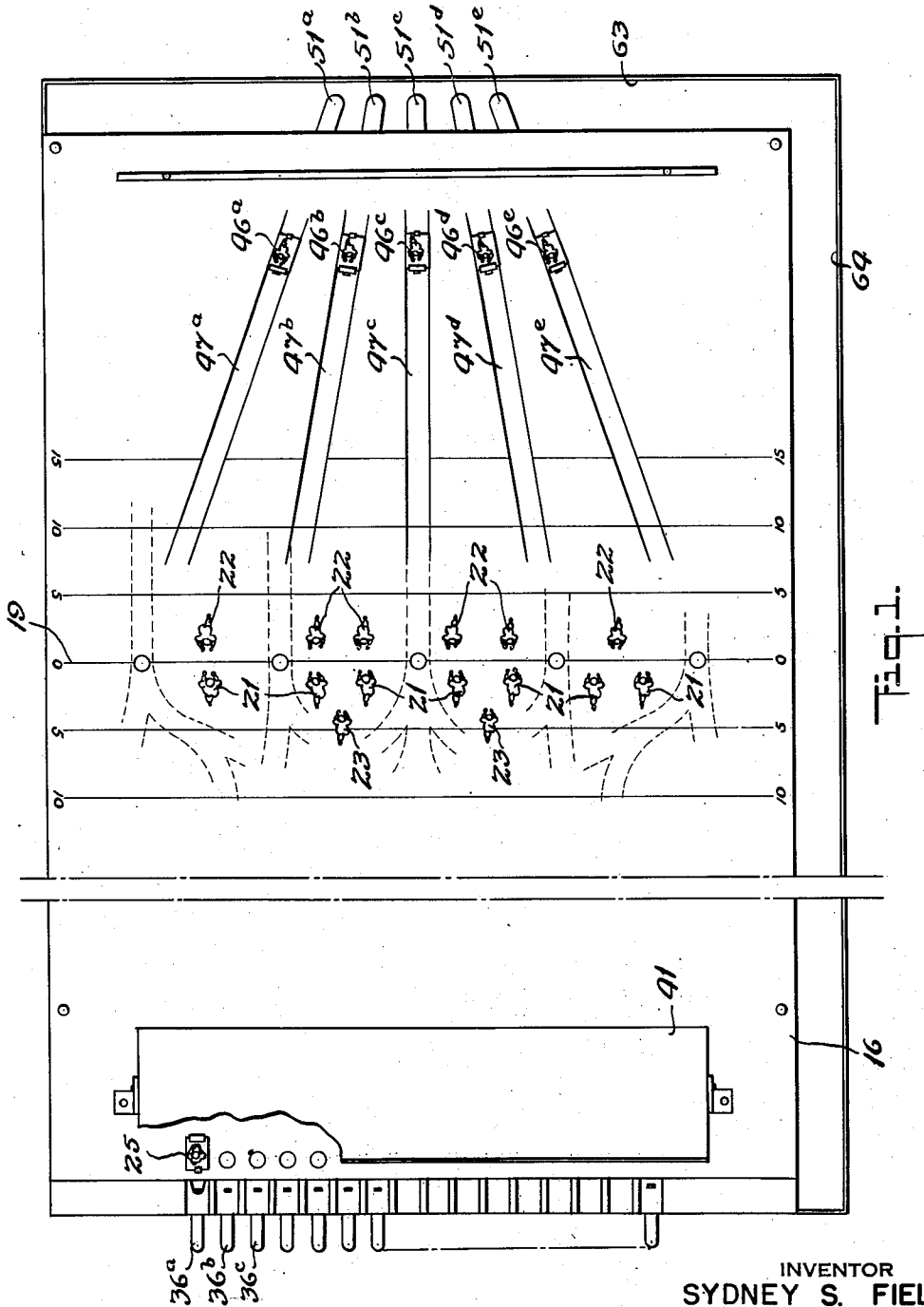
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APPARATUS FOR SIMULATING A GAME OF FOOTBALL

Filed June 24, 1949

3 Sheets-Sheet 1



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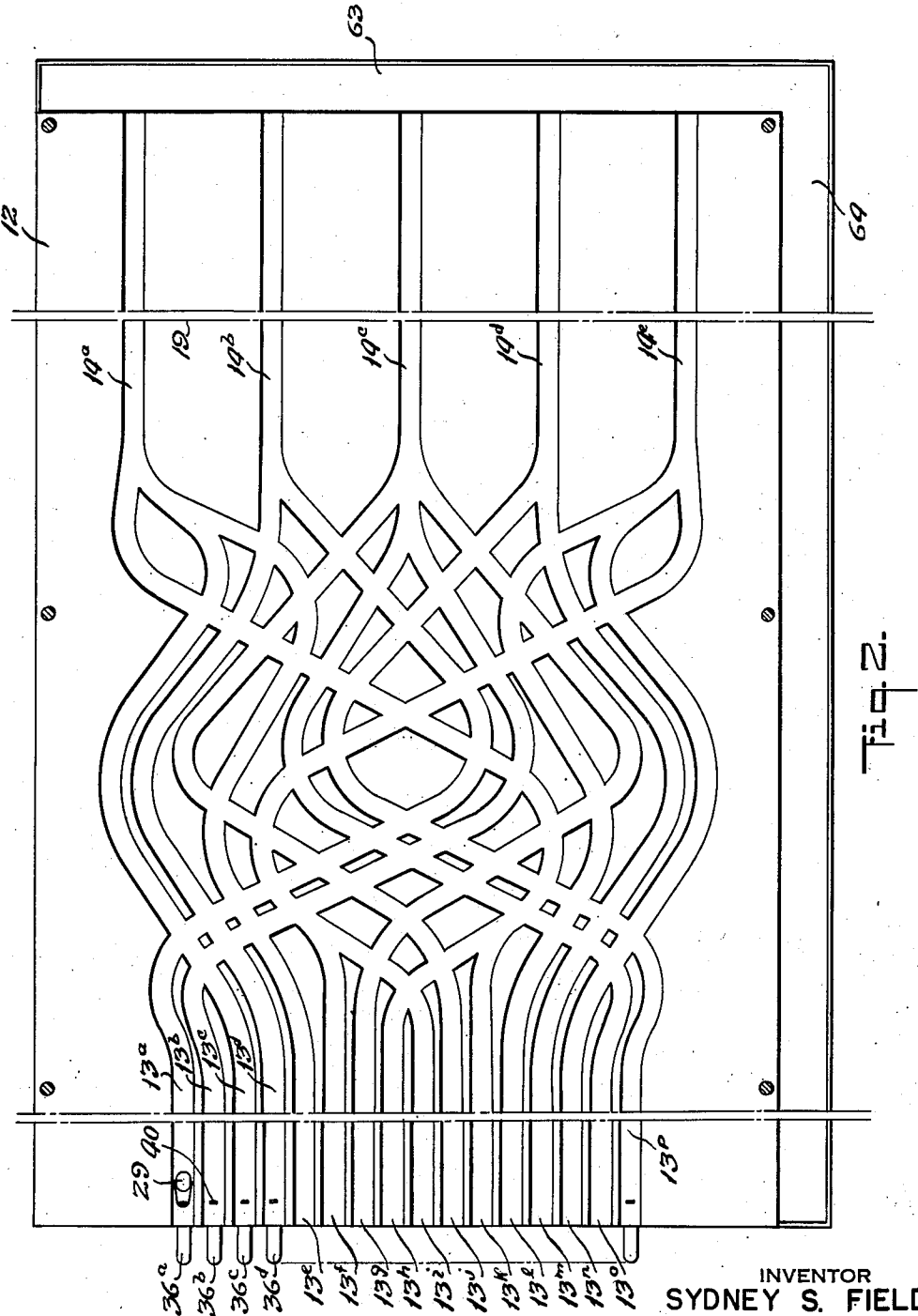


Fig. 2.

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APPARATUS FOR SIMULATING A GAME
OF FOOTBALL

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The present invention relates to the art including games simulating football and is especially directed toward such games which give an effective impression of the actual playing of the real game.

In most football games now known or being sold there is little simulation of the activity normally occurring in the real game, especially with respect to the movement of the players forming the team. Thus most such games involve the use of playing cards or the throwing of dice or the spinning of a pointer to determine the advancement of game pieces representing the teams. Such games lack visual impression and the thrill and excitement of the true game itself, mainly because of their static nature.

It is an object of the present invention to simulate more accurately the true game of football and to provide to a much greater degree during the use of the present invention the same type of interest, thrills and excitement which characterize the true game.

According to the present invention this is done by providing mobile game pieces simulating the football players of the respective teams, which game pieces are arranged and moved under the control of the participants in the game in a manner similar to the movement of the actual players during the real game of football. By the present invention an accurate simulation is given of football players moving across a football field and carrying a ball, of lateral passes between players, of tackling and blocking, and similar events which occur on the actual football field.

According to the present invention a simulated football field is provided having portions sloping downward toward a simulated line of scrimmage. The offensive team manipulator has under his control two or more mobile game pieces simulating backfield men which under his control can course down the sloping football field along preselected paths simulating the actual path which a backfield player would take in carrying the ball or blocking for a ball carrier. All these paths lead up to the scrimmage line between stationary game pieces representing the football linemen and if unopposed such mobile backfield pieces go through the line of scrimmage for distances corresponding to their momentum which may differ for different paths followed by such mobile game pieces.

The defensive team manipulator has under his control some five game pieces representing defensive backfield players which can be caused to follow courses along the other sloping portion

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of the simulated football field to intercept the courses of the offensive team pieces. The collision between an offensive team piece and a defensive team piece represents a tackle. One of the offensive team pieces is adapted to carry a simulated football and upon being tackled may lose the football thereby causing a fumble, which may be recovered by either a defensive team piece or an offensive team piece. Other provision is made, as will be described hereinbelow, for effecting blocking and lateral passing.

In this way, by virtue of the actual movement of game pieces in a manner accurately simulating what really happens on a true football field and by more accurate simulation of passing, tackling and blocking, heightened excitement and interest are obtained over what has been previously known.

These and other objects and advantages of the present invention will become more apparent from consideration of the following description of preferred embodiments of the invention taken in conjunction with the appended drawings in which—

Figure 1 represents a plan view of the simulated football field of the present invention;

Figure 2 is a plan view of the channelled member determining the courses to be followed by the mobile game pieces;

Figure 3 is a vertical elevational view in cross section of the device of Figures 1 and 2;

Figure 4 is a fragmentary enlarged view of a portion of Figure 3 showing a mobile game piece and roller producing movement thereof;

Figure 5 is a front view of the game piece of Figure 4;

Figure 6 is a longitudinal cross-sectional view of a simulated football piece;

Figure 7 is a longitudinal cross-sectional view of the magnetic roller which produces movement of the mobile game pieces;

Figure 8 is a longitudinal cross-sectional view of a modified form of the invention; and

Figure 9 is a perspective view of a modified form of magnetic roller.

Referring to these drawings, in which in the various figures like elements are given the same reference characters, there is shown a game device having a base 11 on which is mounted in any suitable fashion a simulated playing field 16 having two oppositely and downwardly sloping portions 17, 18 converging along a line 19 which is taken to be the line of scrimmage. As will be seen more clearly hereinbelow, portion 17 corresponds to the playing field behind the

line of scrimmage, while portion 13 represents the field ahead of the line of scrimmage.

A channelled member 12, shown in plan view in Fig. 2, is mounted beneath the playing field 16, which is opaque and conceals the channelled member 12 from the view of the players. Channelled member 12 slopes uniformly for its entire length substantially parallel to playing field portion 17. This channelled member 12, has formed therein a plurality of sinuous channels of grooves 13a, 13b, 13c, etc. illustrated as sixteen in number (although it will be understood that any desired number may be utilized which cover the channelled member 12, in different paths while converging into a lesser number of straight outlet channels 14a, 14b, etc. The channels 13a, 13b, etc. lie under the sloping field portion 17 and as shown in Figures 2 and 3 converge into the outlet channels 14a, 14b, etc. just slightly to the left of the scrimmage line 19.

Mounted on the playing field 16 at the line of scrimmage 19 are two rows of stationary game pieces 21 and 22 respectively representing the linesmen for the offensive and defensive teams. These game pieces are carved or molded to represent realistically actual football players in crouching line position. The offensive team also has stationary game pieces 23 representing backfield football players "backing up" the line.

Each of the outlet channels 14 is located immediately under the playing field surface 16 at a location corresponding to a normal opening in the football line, such as "off tackle," "through center," or "around the end." In addition, the offense has mobile pieces representing backfield runners who may be blockers or ball carriers. Such a mobile backfield piece 25 is shown in Figure 4, and is provided in the form of a miniature football player mounted on a carriage 27 having one or two rear wheels or rollers 24 and a front roller 26. Roller 26 is made of magnetic material such as iron or steel. If desired, it may be permanently magnetized, although this is not necessary. Alternatively, carriage 27 may carry a piece of magnetic material, such as soft iron, preferably of elongated shape extending transversely of the directions of movement of said carriage.

Piece 25 is caused to move over playing field along a desired path, by means of a magnetized courser 29 shown in Fig. 7. This courser 29 has a roller 28 formed as a portion of a sphere having flattened parallel and symmetrical sides 27a with its magnetic axis horizontal. Roller 28 is magnetized, and is especially adapted to roll down the channels 13 and 14. During its travel along the sinuous channel as will be seen, it is important that the roller 28 remain with its magnetic axis horizontal. For this purpose the magnetic axis of the roller 28 is formed to coincide with its diameter perpendicular to the faces 27a and a wire drag 31 is provided having inwardly turned tips 33 seated in pivot recesses 32 formed in the roller faces 27a. It has been found that the use of this wire drag 31 effectively stabilizes the roller 28 against tipping and maintains its magnetic axis horizontal as desired. This is an important feature of the present invention.

In operation, the roller 28 with its wire drag 31 is placed at the left end of a selected one of the channels 13. A retaining and releasing member 35 shown in Figure 3 is provided in the form of a pivot lever 36 having an upwardly extending latch portion 37 extending through a suitable

aperture 40 in the bottom of the selected channel and adapted to engage the end 38 of the wire drag 31. It will be apparent that, by upward movement of the left end of release lever 36 its latch portion 37 will release the wire drag 31 and permit the roller 28 to roll down the incline toward the right in the figure, along the serpentine course corresponding to the particular channel 13 selected.

The spacing between the channelled member 12 and the playing field 16 is made as small as possible while still providing clearance for the roller 28 so that the magnetic influence of the magnetized roller will extend above the playing field surface 16. The backfield runner game piece 25 is initially placed on the playing field 16 just above the courser 29, while courser 29 is held by latch member 37. The magnetized courser roller 28 then holds the magnetic game piece roller 26 and keeps piece 25 from rolling down the playing field 16.

Upon release of the courser 29, its magnetized roller 28 exerts its magnetic attraction upon the piece 25 and both roll down their respective inclines, courser 29 being guided along the selected sinuous channel 13, and pulling the game piece along a corresponding path over the surface of the playing field 16, so that the backfield piece 25 appears to run along a sinuous path on the upper surface of the playing field member 16. The particular course followed by this backfield piece 25 is chosen at will by the offense player by his choosing a particular one of the channels 13a to 13p within which to place and release the courser 29.

A screen 41 is mounted at the offense end of the playing field 16, and spaced sufficiently thereabove to permit the backfield game piece 25 to pass thereunder but serving nevertheless to shield the ends of the channels 13 from the view of the defense player who during play is located at the opposite end of the playing field member 16. Therefore, the defense cannot know what course the backfield piece will follow until after the backfield piece has appeared in front of screen 41.

The outlet channels 14 are located between pairs of the linesmen pieces so that as the courser 29 proceeds down its path, the backfield game piece 25 will eventually pass across the line of scrimmage 19 between the stationary linesmen. Since the different channels 13 follow different courses down the playing field 16 each terminating eventually in one of the five line gaps, it will be seen that the offense player can, by selecting a particular one of the channels 13, cause the backfield game piece 25 after following a desired course to pass through a preselected gap in the scrimmage line. Since the shield 41 conceals from the view of the "Defense" player which of the channels 13 has been selected by the "offense" the first inkling that the "Defense" has as to the course being followed by the backfield game piece 25 is as such piece passes from under the screen 41 in its path down the field. The "Defense" must analyze the particular "play" which he believes was selected by the "offense" and put into action his own defense.

This defense is provided by a set of movable defensive backfield game pieces 46a, 46b, etc., illustrated as five in number although any desired number may be utilized or provided. Each of these defensive backfield game pieces 46 is adapted to roll down the opposite inclined field portion 18 along a predetermined path such as 47a, 47b, etc. These paths may be formed as

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channels in the sloping playing field surface 18 itself (since they need not be concealed from the "offense") and are directed toward the same line gaps through which the offensive backfield game pieces 25 must pass. Thus the "Defense" judges which of the line gaps the offensive piece representing the ball carrier will pass through, and then must release his defensive backfield piece 46 at the proper time and in the proper channel to intercept the ball carrier. The release of the defensive backfield game pieces is effected by release members 51 pivoted at 52 and having latches 53 passing through suitable apertures in the playing field surface 18. Release member 51 is retained by a leaf spring 54 in the position preventing the defensive backfield piece 46 from rolling down the playing field slope 18. However, by lifting the end of the release member 51, the game piece 46 is released and may roll along its course 47 as desired.

It will be understood that not only is good judgment required of the "Defense" but also a good sense of timing, since if he released his backfield piece or pieces too soon, he will have a simulation of the "mousetrap" play in which the defensive backfield piece prematurely passes through the scrimmage line, permitting the ball carrier piece to go through the same gap thereafter. On the other hand, if the release of a defensive backfield piece is too late, the ball carrier piece passes through the gap for a substantial gain. The amount of gain may be determined by the maximum forward travel of the ball carrier piece either before being tackled (if a successful tackle takes place) or before coming to a halt of its own accord due the slope 18 which it is attempting to climb.

Preferably two or more offensive backfield pieces are provided, which may be released individually by the "offense" player in any desired order or timing, thereby permitting deceptive plays by faking which is the ball carrier.

Each of the offensive mobile game pieces is formed as shown in Fig. 5, with arms adapted to hold an actual mobile football piece 60 shown in Figure 6. This football piece carries within it a small but strong magnet 61 coaxial with the axis of the piece 60. One of the offensive game pieces, designated as the "pass receiver" and shown in Figure 5, has imbedded in his body a magnet 55. The "ball carrier" or "passer" piece need not have such a magnet although, if desired it may also be provided therewith.

In this way the "offense" player may start both the "ball carrier" piece (carrying the magnetic football 60) and the "pass receiver" piece along two different channels 13 which approach one another closely. Examples of this are channels 13c and 13d, 13g and 13m, etc. By properly timing the release of these two game pieces they will pass side by side at some instant of their respective courses. The magnetized football 60 will then be attracted by the magnet 51 in the body of the "pass receiver" piece and will actually jump from the "ball carrier" piece to the "pass receiver" piece thereby performing a lateral pass and suddenly switching the particular scrimmage line gap through which the piece carrying the ball ultimately proceeds. Various combinations of fake "passes" and true "passes" can be accomplished by selecting the position of the magnetized football 60 in the arms of the ball carrier piece so that in one position it is magnetically attracted by the pass receiver piece while in an-

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other position by reversing magnetic polarity it may be magnetically repelled.

The defensive backfield pieces may also be provided with magnets within their body so that, upon a successful tackle of the offensive piece carrying the ball, under some circumstances the ball may be thrown down and attracted to the defensive piece magnet, simulating accurately a fumble and recovery by the defensive team.

This game is played according to all of the standard rules of football, each play being initiated by release of one or more offensive pieces and terminated by a tackle or other halt to the forward movement of the ball. A score of the successive plays may be retained in the form of a chart simulating the football field and laid off in a grid of lines nominally five yards apart. A ball marker may then be moved after each play, corresponding to the amount of yards gained or lost by that play. As is usual, if ten yards are not gained within four plays or "downs," the players interchange defensive and offensive positions. A special bonus yardage might be added for successful completion of a pass play. Also, each time a play goes to one side of the scrimmage line, the marker may be moved ten yards sideways toward that side of the field. The rules would then prohibit a play to that side when the game piece is within ten yards of the sideline.

Also provided on the channelled member 12 is a courser return formed by a channel 63 slanting from top to bottom of Figure 2 and a further channel 64 slanting from right to left in Figure 3. As each courser proceeds through channels 13 and 14, it enters the channel 63, rolling downward in Figure 2 and then along the slope of the sloping channel 64 back to the "offense" position, thereby automatically returning the courser after each play. Preferably the channelled member 12 and the return channels 63 and 64 are made of non-magnetic material, such as wood, plastic, or aluminum.

A simplified version of this game is shown in Figure 8 in which the channelled member 112 is similar to member 12, having a slanting portion 113 similar to that under the slanting playing field portion 17 of Figure 3 and bearing the same sinuous channels, and also having an oppositely slanting portion 114 bearing channels corresponding to channels 47 of Figure 1. This channel member 112 is made transparent and suitable light sources indicated schematically at 115 are placed therebelow. The football playing surface 116 is now horizontal and is translucent but need not support game pieces. However, representations of such game pieces may be permanently positioned on the surface of 116.

The game is then played by rolling balls, such as spherical ball bearings or the like, indicated at 117, along the channels in the slanting portion 112 and 113 in the same manner that the courser 29 and the defensive pieces 46 are handled in Figure 3. Each ball 117 causes a shadow on the translucent playing surface 116, so that the representation of movement is obtained with great simplification in actual construction. Suitable ball return channels located along the line of scrimmage may also be provided.

While in the above description, the game piece roller 26 has been described as magnetized or of magnetic material under some conditions it may be desirable to make this roller of non-magnetic material (or replace it by non-magnetic

wheels) and to form the carriage body of magnetized or magnetic material, or affix a piece of magnetized or magnetic material to the carriage, preferably extending in a direction perpendicular to the path which the carriage follows, although other directions may also be used.

Figure 9 shows still another form of courser 150, here in the form of a cylinder 151 having a raised ridge 152 extending centrally therearound. Courser 150 is either formed of permanently magnetized material, such as Alnico V, or else contains a permanent magnet therewithin, arranged with its magnetic axis along the axis of cylinder 151.

In this form of the invention, the grooves 13 of the channeled member 12 are made only slightly wider than the axial extent of the ridge 152, which thereby provides a guide for the courser 150 in following the sinuous channels 13. The use of the ridge 152 and its cooperating narrow grooves has been found to provide a reliable means for accurately guiding the courser 150 around the curves and over the crossovers of the channels 13, without requiring the drag 31 of Figure 4.

Thus, by the present invention there is provided a game simulating the interest and excitement of a real-life football game, including the thrills associated with the actual movement of the football players, and running, blocking, tackling, and passing.

It will be understood that the above description is merely illustrative of the apparently widely varying forms the invention may take, and it is intended that the scope of the invention is to be limited only as in the appended claims.

What is claimed is:

1. A game simulating football comprising a playing-field-simulating member sloping downwardly from both ends toward a line simulating a line of scrimmage, a course-determining member extending below and parallel to one sloping portion of said field-simulating member and defining a plurality of different sinuous channels, a magnetic courser movable freely on said course-determining member and beneath said field-simulating member along any selected one of said channels under the influence of gravity, and a game piece simulating a football player, said game piece being movable freely on said field-simulating member, and having a portion magnetically attractable to said courser whereby said game piece may be caused to follow a path on said field-simulating member corresponding to said selected channel by being magnetically dragged along said path by movement of said courser along said selected channel.

2. A game as in claim 1, wherein said plurality of channels merge into a lesser number of outlet channels, and wherein the other of said field-simulating-member portions includes means for guiding further mobile game pieces to positions at said scrimmage line directly above where said channels pass below said scrimmage line.

3. A game as in claim 1, wherein said plurality of channels merge into a lesser number of outlet channels substantially at said scrimmage line, said game further including means defining a number of courses on the other portion of said field-simulating member equal in number to said outlet channels and for guiding further mobile game pieces to positions at said scrimmage line above the points where said outlet channels pass below said scrimmage line.

4. A game simulating football, comprising a playing-field-simulating member, a plurality of mobile game pieces movable over said member, means defining a plurality of serpentine paths for said pieces, a least two of which paths come close together at one point, one of said game pieces having means for carrying a football game piece enclosing a magnetic substance, and the other of said game pieces bearing a magnet adapted to attract said football game piece, whereby upon motion of said two mobile game pieces respectively along said two paths so as to arrive substantially simultaneously at said one point, said football game piece is attracted to said magnet, thereby effecting a simulated lateral pass.

5. A game simulating football, comprising a playing-field-simulating member having a line simulating a line of scrimmage, a plurality of game pieces simulating offensive football players, each movable over said field-simulating member, means defining a plurality of predetermined paths for said pieces crossing said line, and a plurality of game pieces simulating defensive players, each movable over said field-simulating member, means defining predetermined paths for said latter pieces intersecting said first named paths at said line, whereby a tackle is simulated by collision between a selected one of said offensive game pieces representing the ball carrier and one of said defensive game pieces.

6. A magnetic courser adapted to provide mobility for a game piece having a portion of magnetic material, comprising a roller formed in the shape of a sphere flattened at two diametrically opposed portions, and having pivot recesses in the center of said flattened portions, said roller being magnetized along an axis joining said recesses, and a wire drag generally in the shape of a U and having inwardly turned tips rotatably engaged in said recesses, whereby as said roller moves said wire drag tends to retain said axis horizontal.

7. A magnetic courser adapted to provide mobility for a magnetic mobile game piece, comprising a roller having pivot recesses formed at opposite sides thereof, said roller being magnetized along an axis joining said recesses, and a drag formed of a bent wire having its tips positioned in and freely rotatable in said recesses, whereby said drag tends to retain said axis horizontal.

8. A game simulating football comprising a playing-field-simulating member sloping downwardly toward a line simulating the line of scrimmage, a course-determining member extending below and substantially parallel to said field-simulating member and defining a plurality of different channels, a magnetic courser freely movable on said course-determining member beneath said field-simulating member along any selected one of said channels under the influence of gravity, and a game piece simulating a football player, said game piece being freely movable on said field-simulating member and having a portion magnetically attractable to said courser, whereby said game piece may be caused to follow a path on said field-simulating member corresponding to said selected channel by being magnetically dragged along said path by movement of said courser along said selected channel.

9. A game as in claim 8, wherein said course-determining member contains grooves defining said different channels.

10. A game as in claim 9, wherein said magnetic courser comprises a cylindrical element hav-

ing an annular rib extending circumferentially there around at the center thereof and containing an axially symmetrically positioned permanent magnet, said annular rib being engageable in said groove whereby said groove guides the course of said courser on said course-determining member.

11. A game simulating football comprising a playing-field-simulating member having a line simulating a line of scrimmage, a game piece simulating an offensive football player and movable over said field-simulating member, means defining a plurality of predetermined paths for said game piece, each of said paths crossing said line, gravity actuated means for causing said game piece to move over said field-simulating member along one of said predetermined paths, a game piece simulating a defensive player freely movable over said field-simulating member, means defining a plurality of predetermined paths for said defensive game piece, intersecting said first named paths at said line, and gravity actu-

ated means for causing said defensive game piece to move along one of said latter paths, whereby a collision between said offensive game piece and said defensive game piece simulates a football tackle.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,495,983	Bowers	June 3, 1924
1,571,469	Fredette	Feb. 2, 1926
1,686,124	Brower	Oct. 2, 1928
2,086,327	Hameetman	July 6, 1937
2,263,115	Winter	Nov. 18, 1941
2,330,951	Burmeister	Oct. 5, 1943
2,486,273	Gibson	Oct. 25, 1949
2,494,929	Colaluca	Jan. 17, 1950
2,528,938	Wolf	Nov. 7, 1950