Dec. 6, 1949 A. P. RIPPENBEIN 2,490,092

GAME DEVICE

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Fig. 1.

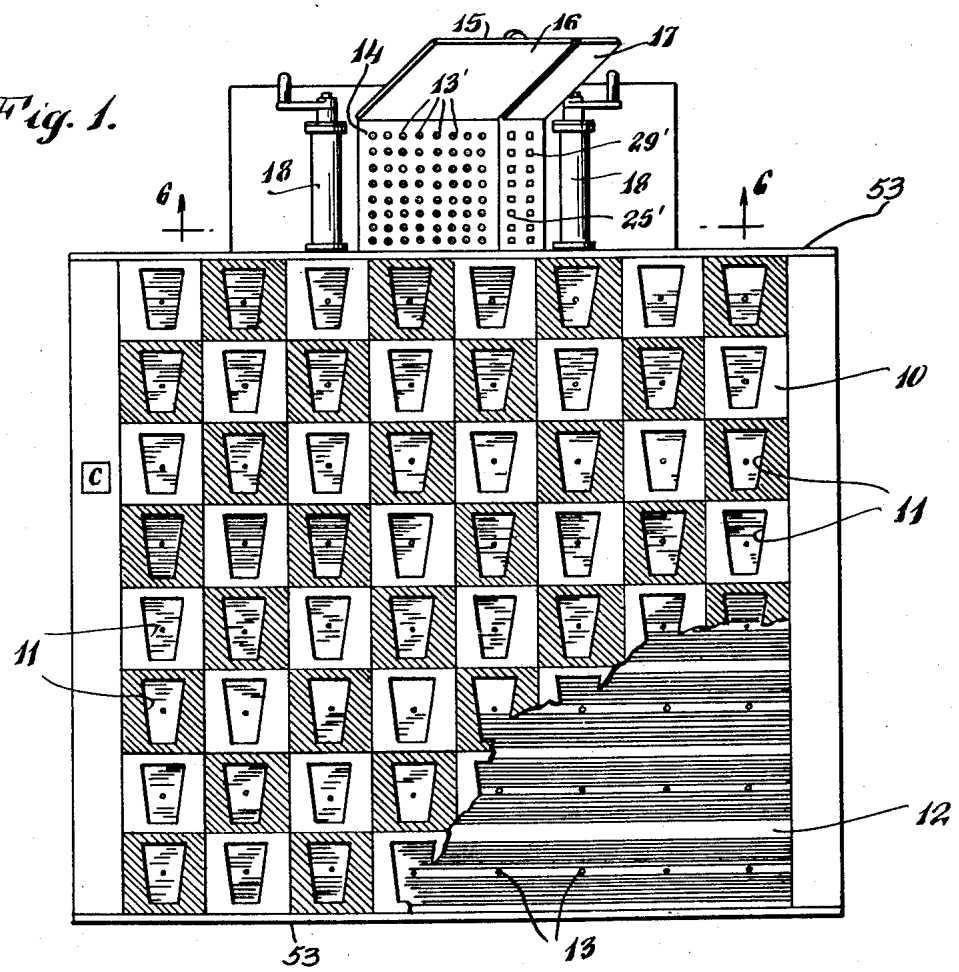


Fig. 4.

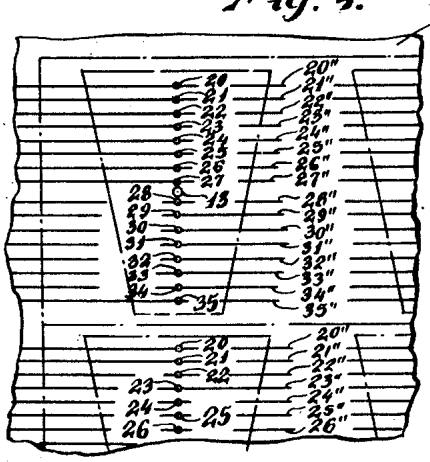


Fig. 3.

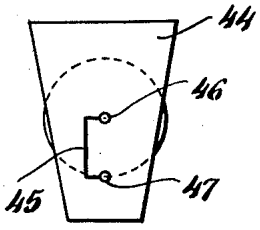
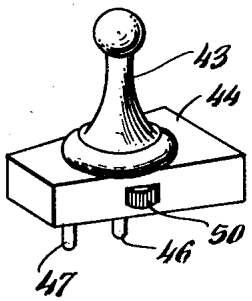


Fig. 2.



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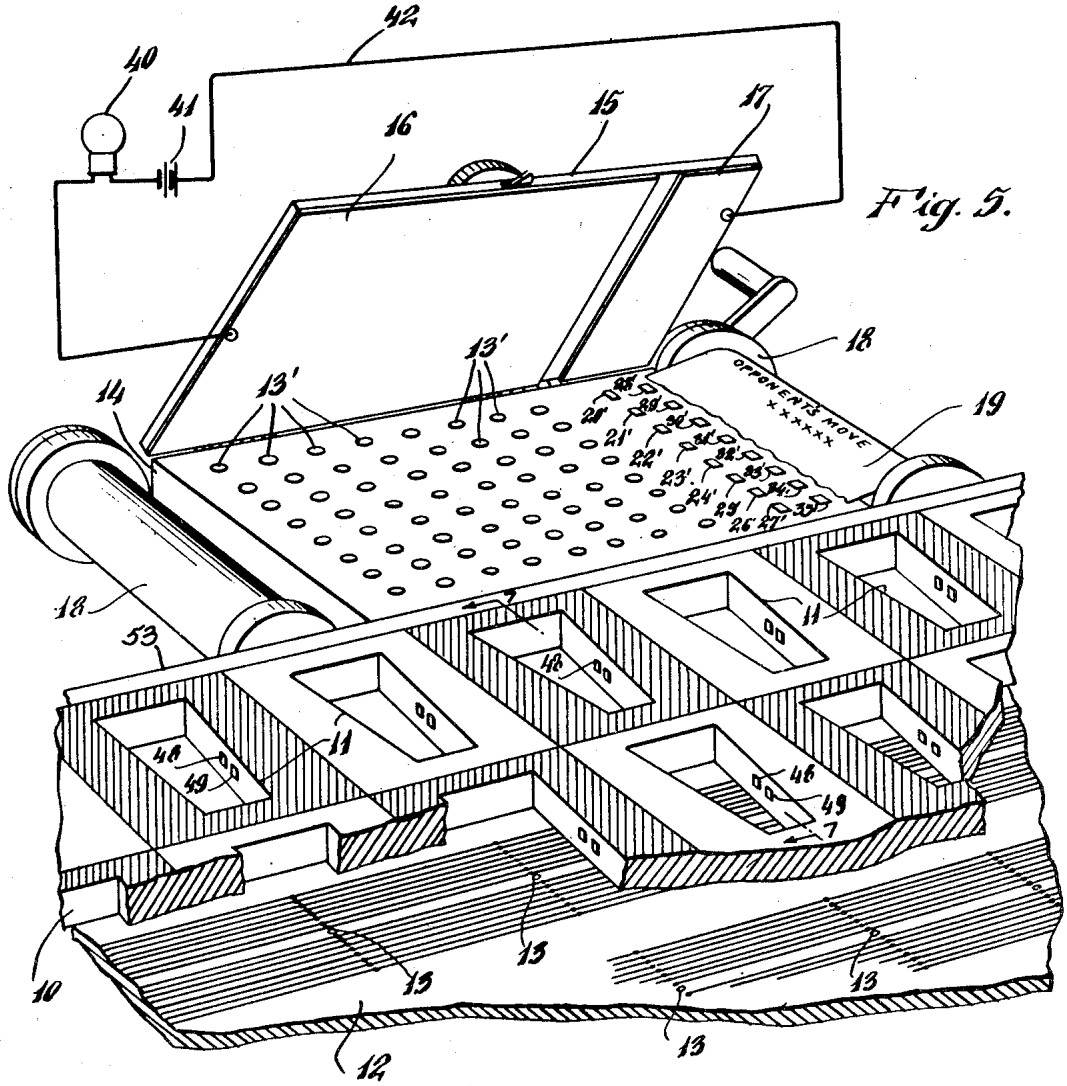

Fig. 5.

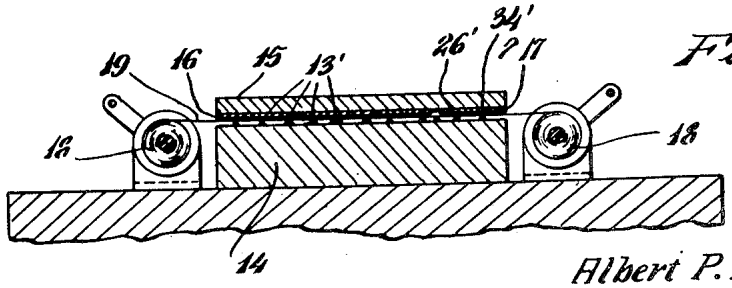

Fig. 6.

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Fig. 7.

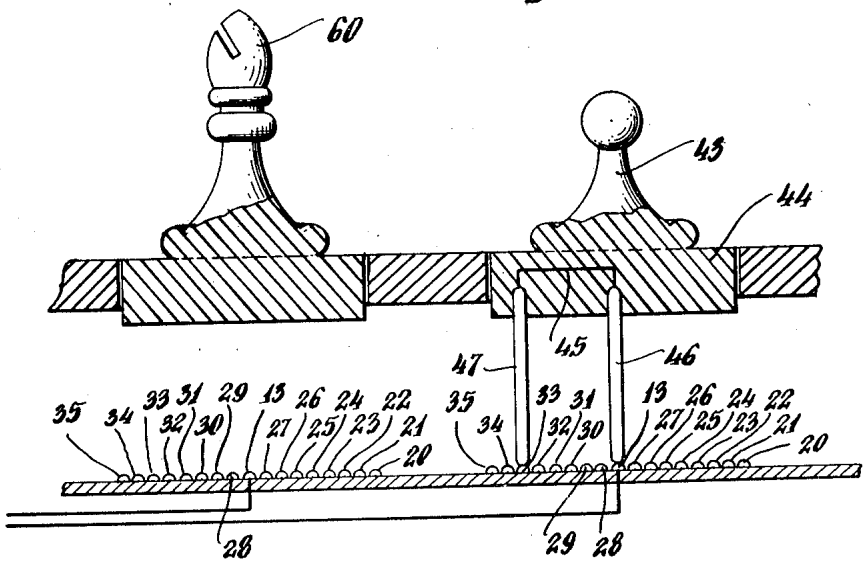
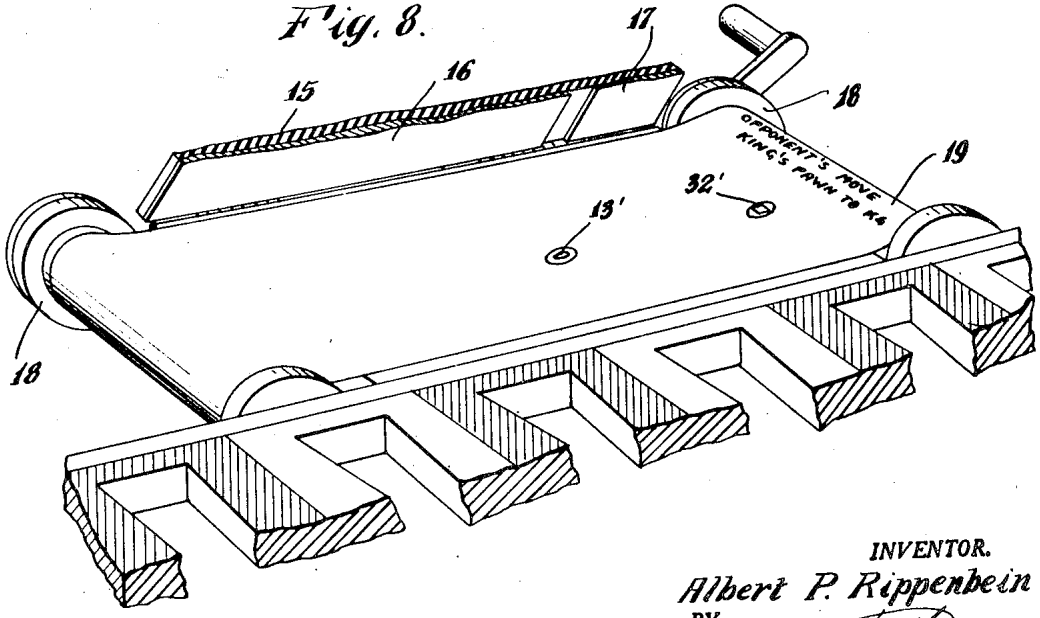


Fig. 8.



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UNITED STATES PATENT OFFICE

2,490,092

GAME DEVICE

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Application August 17, 1945, Serial No. 610,903

8 Claims. (Cl. 35—8)

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This invention relates to a game device of the general type in which play thereof comprises the moving of playing pieces of more than one class to established positions. Specifically the invention is directed to a game device by the use of which a single player may test his skill, or acquire skill, in those games of this type which are normally played by two or more players.

There are a number of widely played games which depend upon the skilful maneuvering of playing pieces of more than one class to one of a number of fixed or predesignated playing positions. Common examples of such games are chess, in which each player is provided with playing pieces of more than one class, and checkers, in which each player maneuvers a single class of playing pieces, the playing pieces assigned to each player being of a different class in the sense of this invention in that they are identified with that player as distinguished from playing pieces identified with his actual or simulated opponent. Other examples of such games are games of naval maneuver, which are representative of a large number of games less frequently played than chess or checkers and in which the success of a player depends upon his skill in maneuvering the playing pieces from one position to another. Most of such games are not adapted for play by a single player, and therefore those who would improve their skill, or wish amusement at such games, must await times when an opponent is available. Moreover, the novice is often deprived of occasion to play against the experienced player.

The object of this invention is to provide a device by which games of this general type may be played by a single player under such circumstances that during play the skill of the player is tested against the predetermined game of a theoretical opponent. To this end the game device of this invention, which is for use where playing pieces of more than one class are employed, comprises means defining a number of playing stations disposed in a playing area, a selecting station at which are located terminals of a plurality of circuits, means operable at each playing station to there connect at least two of said circuits when a piece is played at that station, and means operable at the selecting station to periodically connect selected circuits in accordance with a predetermined pattern, which pattern represents the game which should be played or is best played against the known game of the absent or theoretical opponent.

For the purpose of more specifically describ-

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ing the invention, its objects, features and advantages, I have chosen as an example of a game which may be played on a game device embodying this invention the widely played game of chess, and the accompanying drawings illustrate an embodiment of the invention adapted for the play of chess by a single player against the predetermined and recorded game of an absent opponent.

In the drawings:

Fig. 1 is a top view of a chessboard and portions of the equipment auxiliary thereto forming a device embodying the principles of this invention, the top surface of the board being cut away in part to show underlying details;

Fig. 2 is a side elevational view of a chess piece adapted for play at the board shown in Fig. 1;

Fig. 3 is a bottom view of the chess piece shown in Fig. 2;

Fig. 4 is an enlarged view of a part of the underlying portion of the chessboard;

Fig. 5 is an enlarged view, in perspective, of a portion of the device shown in Fig. 1;

Fig. 6 is a cross-sectional view taken at the section line 6—6 as indicated on Fig. 1;

Fig. 7 is a cross-sectional view taken along a line 7—7 in Fig. 6 with chess pieces in position; and

Fig. 8 is a perspective view of the selecting film.

Referring to these drawings, in which like numbers designate like parts, the playing area is defined by the surface 10, which has the general appearance of a chess or checker board, except that in each square or playing station there is provided an opening 11 to receive the specially constructed base of a playing piece. Under the playing surface 10 is the board base 12. Side pieces such as 53 connect surface 10 and board base 12 to form a box-like structure thereby providing a space between the surface and the board base and likewise lending a finished appearance to the device.

Located on board base 12 and in registry with each opening 11 is a series of terminal points, the point 13, which serves at each playing station as a terminal for a circuit characteristic of that station, and the sixteen points, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 and 35, each of which serves as a terminal for a circuit characteristic of one of the sixteen standard chess playing pieces which are to be used by the player (see Fig. 4).

The selecting station may take various forms but, as here shown, consists of a base 14 attached to the box-like chessboard structure and con-

structed to hold in one plane the terminals 13', of which there are sixty-four each representing a terminal of a circuit characteristic of one of the sixty-four playing squares on the surface 10, and the terminals 20', 21', 22', 23', 24', 25', 25', 27' 28', 29', 30', 31', 32', 33', 34' and 35', each of which is a terminal on one of the sixteen circuits which are characteristic of the sixteen playing pieces to be used by the player. The base 14 is so constructed that each terminal held therein is electrically insulated from every other terminal. Each selecting station terminal 13' is connected to a playing station terminal 13, thus forming a circuit characteristic of a playing station, which circuit terminates at that station and at the selecting station. Each of the selecting station terminals 20' through 35', inclusive, is one terminal on a circuit which terminates at or as a terminal point located at each playing station. Thus the terminal point 20 at each playing station is connected by circuit 20'' (see Fig. 4) to selecting station terminal 20', terminal point 21 at each playing station is connected by circuit 21'' to selecting station terminal 21', etc. The sixteen circuits 21'' through 35'', inclusive, thus serve in the device shown to connect the sixteen terminals at the selecting station (i. e., terminals 21' through 35', inclusive) with the corresponding terminals at each playing station, each of these circuits passing through all playing stations, thus obviating the necessity for sixteen circuits separately passing from the sixteen playing piece terminals at each playing station to the sixteen playing piece terminals at the selecting station.

Also located at the selecting station is the hinged contact plate 15 which carries the separate metallic contact surfaces 16 and 17, each of which is insulated from the other. This plate 15 is so constructed that when it is lowered and latched in the position shown in Fig. 6, the surface 16 will make contact with all of the terminal points 13' unless some of such points are insulated against such contact, while the surface 17 will make contact with all of the terminal points 20' through 35', inclusive, unless some of these points are insulated against such contact.

An electrical connection 42 connects surface 16 to surface 17 (see Fig. 5), and included in the open circuit, consisting of the surface 16, the wire 42 and the surface 17, is a sensory signal 40 and source of power 41. A selecting mechanism adapted to selectively insulate predetermined terminal points from contact with the surface 16 and the surface 17 consists, in the form here shown, of a roll of paper or other insulating film 19 (see Figs. 5, 6 and 8) which is adapted to be initially mounted on one of the cylinders 18 and, during the course of play, rolled to the other cylinder 18. The cylinders 18 are rotatably mounted on either side of the base 14 and are so positioned that the roll of film passing from one cylinder to another will lie in a plane immediately above the terminal points located in the base 14.

The chess pieces used by the player are constructed as shown in Figs. 2, 3 and 7. Each chess piece 43, in the illustrated instance one of the pawns, is mounted on a base 44 shaped to fit into any of the playing surface openings 11. The base 44 and the opening 11 are so shaped that it is impossible to insert the piece except in one position, thus insuring that the terminal pins 46 and 47, which depend from the base of the piece, will make proper contact with the terminal points. These terminal pins 46 and 47 are electrically connected as by the wire 45. Terminal pin 46 is of

such length and is so located on the base 44 as to contact a terminal 13 whenever the piece is inserted in the playing opening 11. Terminal pin 47 is of such length and is so located as to contact that terminal (of the terminals 20 through 35, inclusive) at the playing station which is a part of the circuit characteristic of the playing piece of which terminal 47 is a part. Thus, if the illustrated pawn is represented by the characteristic circuit which includes playing station terminal 33, connection 33'' and selecting station terminal 33', the terminal pin 47 will contact playing station terminal 33 whenever the playing piece of which it is a part is played at any of the sixty-four playing stations.

The opponent's playing pieces 60 are similar in construction to the pieces of the player except that the terminal pins 46, 47 are eliminated (as shown in Fig. 7) or the connection 45 therebetween is eliminated so as to avoid closing a circuit between any two terminals when the piece is played at a playing station.

It is the purpose of this device to test the skill of a player against the game of a theoretical opponent, the skill of the player being measured by a comparison of the player's moves with the moves of a preplayed game against said theoretical opponent. Thus the function of the pre-prepared roll of insulating film 19 is to select at the selecting station the moves which should be made by the player, and the function of the remainder of the device is to inform the player when his move corresponds with the move that has been indicated at the selecting station by the pre-prepared selecting film 19. For convenience, each roll of film 19 may be divided by visual markings into separate frames, each frame representing, by means of openings punched in the film (see Fig. 8), the playing station and the playing piece to be played at that station. Thus in the game described, as each frame of the roll 19 is brought into registry with the base 14 of the selecting device, it will insulate from the surfaces 16 and 17 on the plate 15 all of the terminal points except one of the terminal points 13' and one of the terminal points 20' through 35', inclusive. It is also convenient, in order to advise the player as to the moves which are to be made by his theoretical opponent, to mark the outer surface of the film 19 so that as the player brings a frame of the film into registry with the selecting station, a mark on the outer surface of the film appears at a convenient point, such as over one of the cylinders 18 (see Fig. 5), to advise the player as to the next move of his theoretical opponent.

At the start of the game the player sets the chess pieces, his own and those of his opponent, in starting position. He then partially closes the plate 15 so that he has no view of the surface of the film 19, and then rotates the cylinders 18 to bring the first frame of the film 19 into registry with the selecting station. He then latches the plate 15 in closed position (Fig. 6), thereby causing contact of surfaces 16 and 17 with such of the selecting station terminals as are not insulated from such contact by the film. The player then observes from the inscription on the outer surface of the film the first move of his theoretical opponent. The player then moves one of the opponent's pieces to the playing station indicated and is then ready to make his first move. As above mentioned, the frame of the film 19, which is now between the plate 15 and the terminals on the selecting station, is provided with two openings, one allowing a contact

between terminal 13' and surface 16 and the other allowing contact between surface 17 and one of the terminals 20' through 35', inclusive. Thus, for example, if the proper answering move of the player to his theoretical opponent's move is the king's pawn to the king's pawn square (4), then the film 19 is provided with openings which allow contact of the terminal 13' which represents king's pawn square (4) with surface 16 and contact with the terminal of the circuit which represents the king's pawn with surface 17. This results in establishing a circuit which includes terminal 13 and king's pawn square (4), thence through the connection to the corresponding terminal 13' at the selecting station, thence through surface 16, wire 42, surface 17 to terminal 33', which represents the king's pawn, and thence through connection 33'' to terminal 33 located at king's pawn square (4). It will be apparent that if at this time the player should select his proper move and play the king's pawn at king's pawn square (4), the result will be that the circuit is completed by contact of the interconnected terminal pins 46 and 47 with terminals 13 and 33, respectively, at that square, and the sensory signal 40 will indicate that the player has made the proper move. If, however, the player fails to make the proper move and, instead, moves the same chess piece to another square or a different chess piece to the same square, he will fail to contact the terminals of the same circuits which are contacted at the selecting station by the surfaces 16 and 17 and, consequently, the signal circuit will remain open, and the lack of sensory signal will indicate to the player that he has made a wrong move.

After each move has been finally properly executed, the player breaks the signal circuit by unlatching the plate 15 and then moves the next frame of film 19 into registry with the selecting station, whereupon the player again latches the plate 15, observes and makes the indicated move of his opponent's piece and again attempts to make a proper move in response to the opponent's move until the signal again indicates the correctness of the play and the success of the player.

It will be observed that a device such as that illustrated and described as exemplary of this invention may be adapted to any game of maneuver involving a selection of predetermined stations to which playing pieces are moved and may be subjected to many refinements in physical form without departing from the principles of this invention.

A device embodying the invention may be accompanied by auxiliary devices which may add to the entertainment or convenience of the player, such as, for instance, a counter device for electrically indicating the total number of moves made by the player in his attempt to play a perfect game against the predetermined game of his theoretical opponent. Thus, referring to Figs. 1 and 5, a standard counter device C adapted to be operated by electrical impulses may be mounted on the edge of the playing surface and connected in a circuit which presents the terminals 48 and 49 on one side of each playing opening 11. In such case a metal insert 50 is positioned on the side of the base 44 of each of the player's playing pieces (see Fig. 2) to contact terminals 48 and 49, thereby closing the circuit and actuating the counter whenever a player's piece is played at any playing station and regardless of whether or not the player has made the proper play which at that point has already been selected by the selecting device.

Having thus described my invention, and one embodiment thereof, I claim:

1. In a game device for use with playing pieces of more than one class, in combination, means defining a number of playing stations disposed in a playing area, a plurality of circuits terminating at each playing station and including a circuit characteristic of said station and a circuit characteristic of each class of playing piece permissibly moved to said station in the course of play, a selecting station at which each of said circuits terminates, means operable at said selecting station to selectively connect at least one circuit characteristic of a playing position with at least one circuit characteristic of a class of playing piece and means adapted to operate at a chosen playing station to selectively connect at said station the circuit characteristic of the station with the circuit characteristic of the class of piece selected for movement to said station, and a sensory signal actuated by the connection of said circuits.

2. In a game device for use with playing pieces of more than one class, in combination, means defining a number of playing stations disposed in a playing area, a plurality of circuits terminating at each playing station and including a circuit characteristic of said station and a circuit characteristic of each class of playing piece permissibly moved to said station in the course of play, a selecting station at which each of said circuits terminates, means operable at said selecting station to selectively connect at least one circuit characteristic of a playing position with at least one circuit characteristic of the class of playing piece and a signal device associated with said circuits and operable to indicate the connection at at least one playing station of the circuits selectively connected at said selecting station.

3. In a checkerboard game for use by a single player, in combination, a playing surface defining playing stations, playing pieces of more than one class, a circuit characteristic of each station and terminating at one end at said station and at the other end in a station selecting area, circuits characteristic of each class of playing piece terminating at one end at each of said stations and terminating at the other end in a piece selecting area and selecting means operable in said selecting areas to selectively connect a circuit terminal in one area with a circuit terminal in the other area, said playing pieces being adapted when moved to any station to there connect the terminal of the circuit characteristic of said station with the terminal of the circuit characteristic of said piece, and an electrical sensory signal adapted to be actuated when a playing piece connects the selected circuits.

4. In a checkerboard game for use by a single player, in combination, a playing surface defining playing stations, playing pieces of more than one class, a circuit characteristic of each station and terminating at one end at said station and at the other end in a station selecting area, circuits characteristic of each class of playing piece terminating at one end at each of said stations and terminating at the other end in a piece selecting area and selecting means operable in said selecting areas to selectively connect a circuit terminal in one area with a circuit terminal in the other area, said playing pieces being adapted when moved to any station to there connect the

terminal of the circuit characteristic of said station with the terminal of the circuit characteristic of said piece, and a signal device operable when the terminals connected at a playing station are the same circuits connected at the selecting areas.

5. In a game device typified by a playing surface defining a number of stations and playing pieces of more than one class adapted for movement to said stations, in combination, a separate circuit characteristic of each station and comprising a terminal disposed at said station and a terminal disposed in a station selecting area, separate circuits characteristic of each class of playing piece each of such circuits comprising a terminal disposed at each playing station to which said piece may be moved and a terminal disposed at a piece selecting area, a selecting means operating in said areas to select at least one terminal in one area for electrical connection with at least one terminal in another area, means for electrically connecting the selected terminals, playing pieces adapted to be positioned at said playing stations and to there connect the terminal characteristic of the class of said piece, and a sensory signal operable when the circuits connected by a playing piece correspond to the circuits connected at the selecting areas.

6. In a game device adapted for use by a single player, in combination, a number of playing stations, playing pieces of more than one class adapted to be placed at said stations, a selecting station comprising the terminals of a plurality of circuits more than one of which also terminates at each of said playing stations, means operable at each playing station to connect at least two of said circuits when a piece is played at said station, and means prepared in accordance with a predetermined pattern operable at the selecting station to connect selected circuits and signal means electrically operable by a combination of said circuits to indicate that the same circuits connected at the selecting stations have been connected by the player's choice of a playing station whereby the skill of said player is compared with said predetermined pattern.

7. In a chess game device adapted for play by a single player, in combination, a chess board defining chess positions, circuits characteristic of each position, each such circuit terminating at one of said positions and at a circuit selecting position, circuits characteristic of each type of chess piece each such circuit terminating at each of said chess positions and likewise terminating at the circuit selecting position, means operable at said selecting position to selectively connect one

circuit characteristic of a chess position with a circuit characteristic of a type of chess piece, means operable by the player at each chess position to there connect the terminal of the circuit characteristic of that position with the terminal of the circuit characteristic of the type of piece moved to that position, and a sensory signal adapted to be operated when the player connects at a playing position the same circuits selectively connected at the selecting position.

8. A chess game device adapted to test the skill of a single player, in combination, a chess board defining conventional playing positions, a set of player's pieces for moves by said player, a set of opponent's pieces for movement by said player, means to inform said player as to the movement of the opponent's pieces for each succeeding play, a circuit characteristic of each playing position terminating at said position and likewise terminating at a circuit selecting position, circuits characteristic of each type of the player's pieces terminating at each playing position and likewise terminating at the circuit selecting position, means operable at the circuit selecting position to connect selected circuits and circuit selecting means adapted to be operated at the circuit selecting position to select a circuit characteristic of a predetermined playing position and a circuit characteristic of a predetermined type of player's piece to be played at said playing position, means associated with each of the player's pieces to connect, at a playing position selected by said player, the circuit characteristic of that position with the circuit characteristic of the type of piece moved thereto, and a signal device electrically operable to inform the player when the player's piece has connected the same circuits at the playing position which were previously selectively connected at the selecting station.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
529,913	Howell	Nov. 27, 1894
927,583	Nelson	July 13, 1909
1,043,318	Jackson	Nov. 5, 1912
1,221,493	Whitaker	Apr. 3, 1917
1,564,138	Rowland	Dec. 1, 1925
1,647,276	Ortiz	Nov. 1, 1927
1,688,935	McChesney	Oct. 23, 1928
1,730,640	Brownell	Oct. 8, 1929
2,298,456	Benko	Oct. 13, 1942