May 10, 1938. C. CONOVER 2,117,080

GAME APPARATUS

Filed July 10, 1935 3 Sheets-Sheet 1

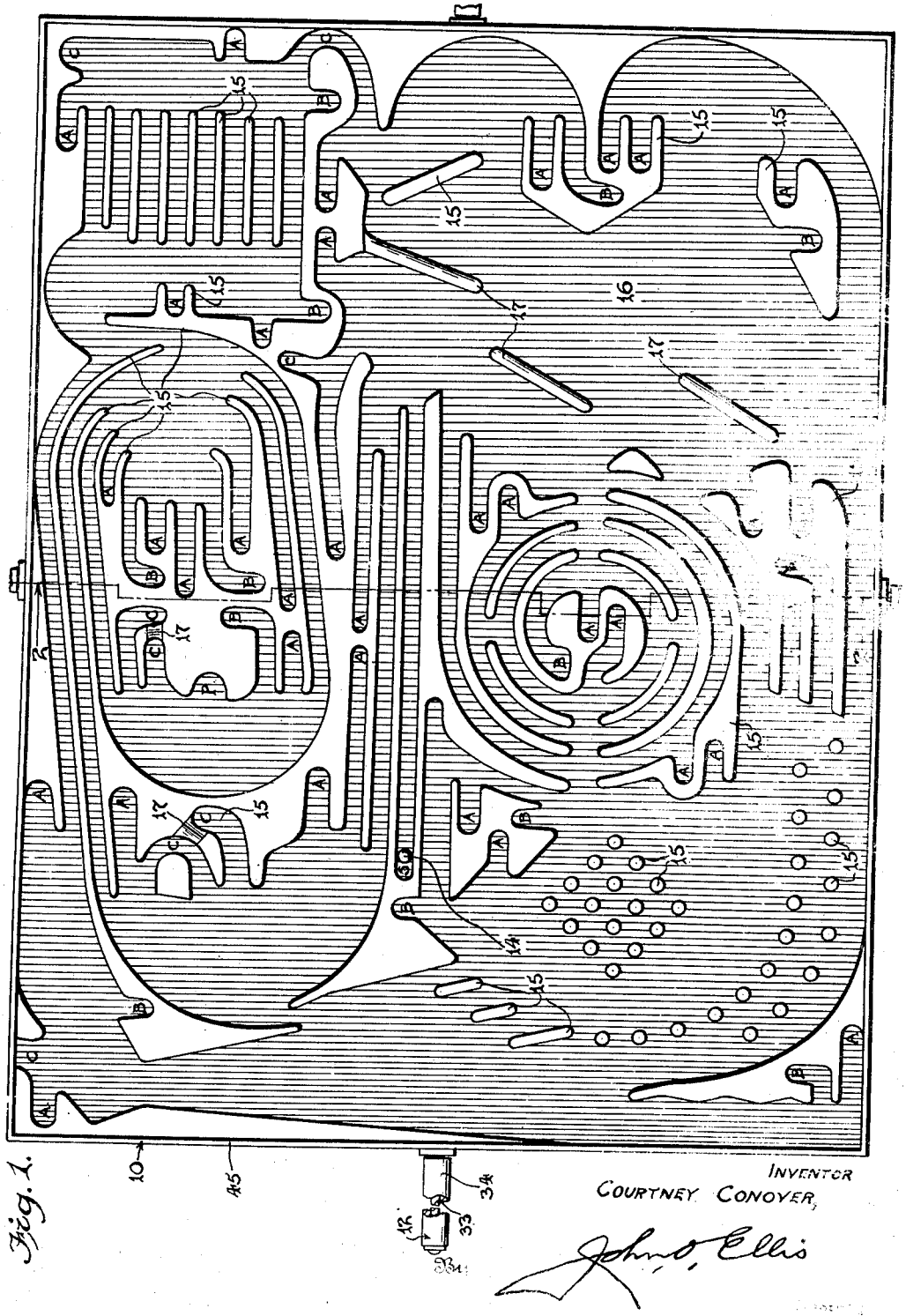


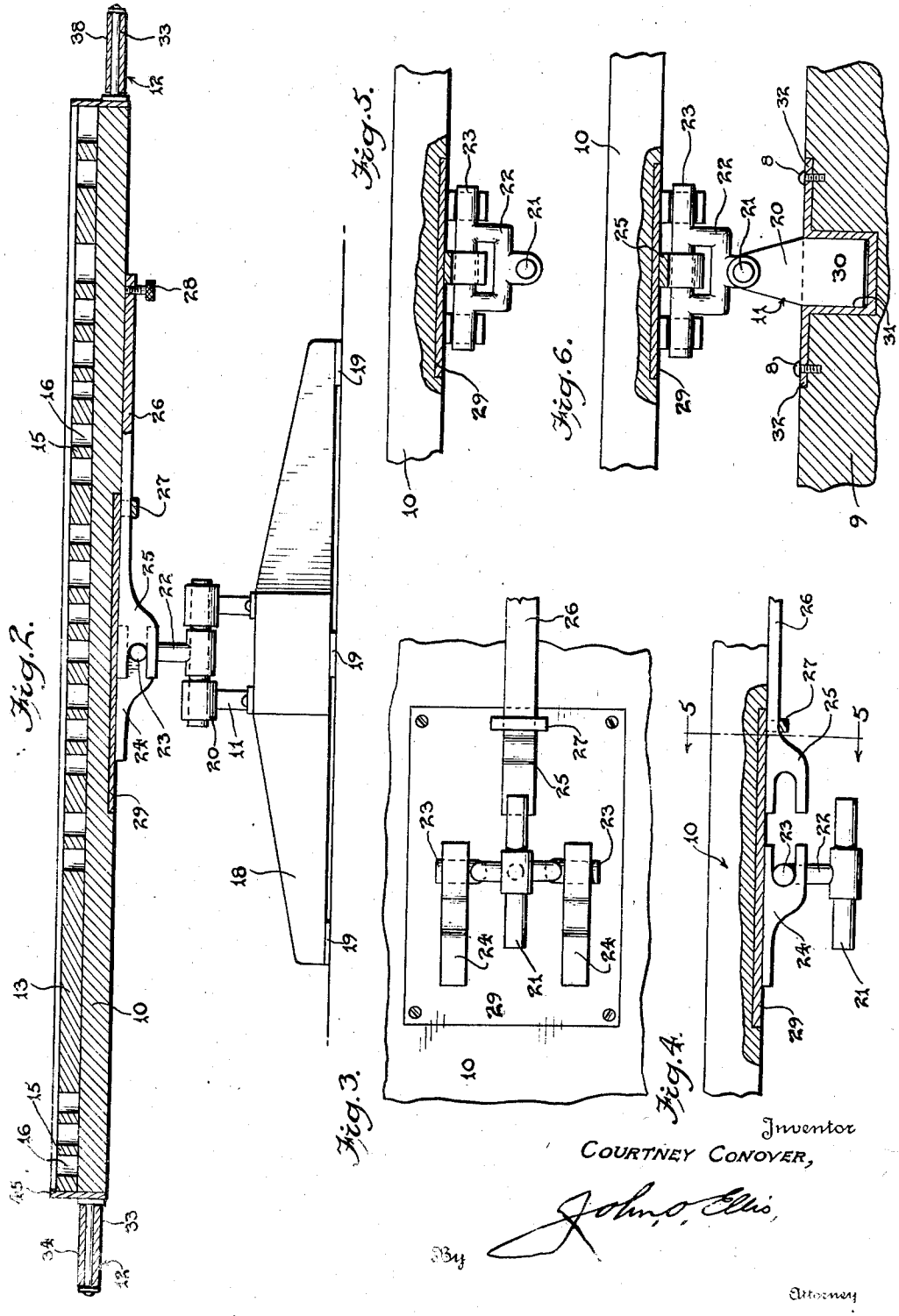
Fig. 1.

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May 10, 1938. C. CONOVER 2,117,080

GAME APPARATUS

Filed July 10, 1935 3 Sheets-Sheet 2



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May 10, 1938. C. CONOVER 2,117,080

GAME APPARATUS

Filed July 10, 1935 3 Sheets-Sheet 3

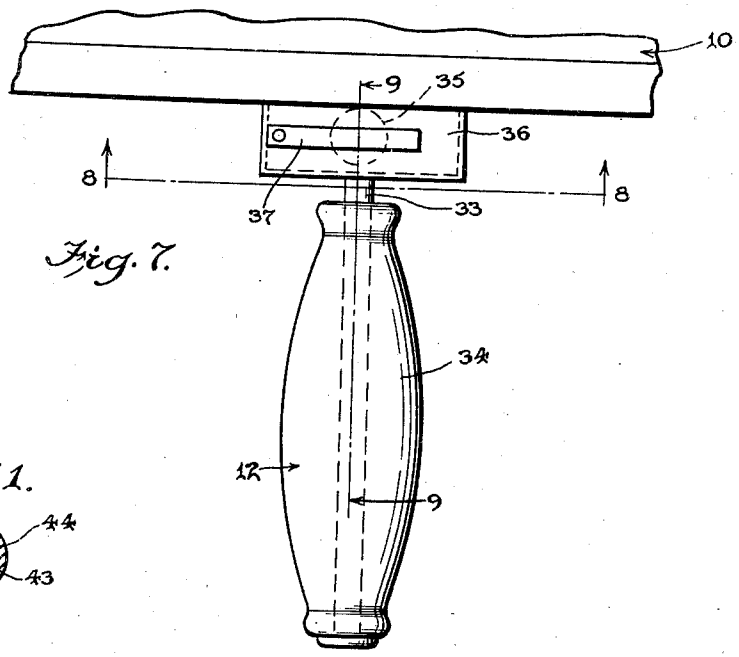


Fig. 7.

Fig. 11.

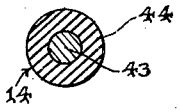


Fig. 8.

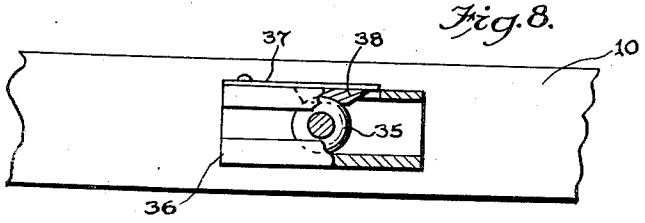


Fig. 9.

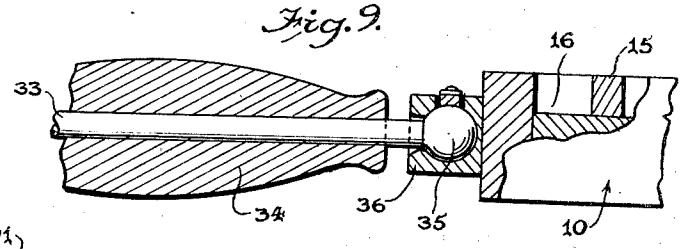
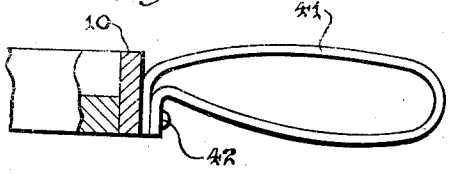


Fig. 10.



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UNITED STATES PATENT OFFICE

2,117,080

GAME APPARATUS

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Application July 10, 1935, Serial No. 30,684

3 Claims. (Cl. 273—110)

This invention relates to game apparatus and it has particular relation to an apparatus of the type wherein movement of an object, such as a ball upon the uneven upper surface of a game board is controlled by tilting of the board by two or more persons or groups of persons.

An object of the invention is to provide a game apparatus of the tilting board variety which renders possible the simultaneous play of opposing players.

Another object of the invention is the provision of a game board having an uneven upper surface peculiarly formed to bring about predetermined movements of one or more game pieces thereon upon tilting of the board around one or more axes by the players.

Another object of the invention is to provide means in a game board whereby each player may cause tilting of the board around only one axis.

Another object of the invention is to provide a novel mounting for a game of the tilting board type whereby independent tilting of the board around a plurality of angularly displaced substantially horizontal axes may be simultaneously effected.

With these and other objects in view, as will become apparent as the description proceeds, the invention consists of the novel features of construction, combinations of elements and arrangements of parts hereinafter to be fully described and pointed out in the claims.

For a better understanding of the invention reference may now be had to the accompanying drawings, forming a part of the disclosure, wherein:

Figure 1 is a plan view of a game board embodying certain features of the invention;

Figure 2 is a side elevational view of one form of mounting for the game board, the latter being shown in vertical cross section taken substantially along line 2—2 of Figure 1;

Figure 3 is a fragmentary view in bottom plan of the central portion of the game board illustrating one form of means for detachably connecting the game board to the mounting;

Figure 4 is a fragmentary view in elevation of the parts shown in Figure 3 in different relative positions, portions being broken away and other portions being shown in section;

Figure 5 is a vertical sectional view taken substantially on line 5—5 of Figure 4;

Figure 6 is a view similar to Figure 5 illustrating a modified form of pedestal;

Figure 7 is a plan view of a modified form of handle and means for detachably connecting it to the game board;

Figure 8 is a vertical sectional view taken substantially along the line 8—8 of Figure 7, parts being broken away and other parts being shown in section;

Figure 9 is a fragmentary view partially in section and partially in elevation illustrating the ball and socket connection of the handle with the game board, taken substantially along line 9—9 of Figure 7;

Figure 10 is a fragmentary view of a modified form of handle; and

Figure 11 is a central sectional view of the preferred form of game piece.

In the embodiments of the invention shown in the accompanying drawings, for illustrative purposes only, a game board 10 is so mounted upon a pedestal 11 that it may be tilted by means of handles 12 at opposite sides of the board, the handles moving in a plurality of angularly related substantially vertical planes.

The upper surface 13 of the board 10 is rendered uneven to provide a labyrinth path for travel of one or more game pieces 14. The pattern of the raised and depressed portions 15 and 16 respectively of the board surface may be of infinite variety but the pattern, best shown by Figures 1 and 2 of the drawings, selected is especially designed to permit control of movement of the game piece by tilting of the board by two or more opposing players. The raised portions or ridges 15 have vertical sides and most of these sides or edges are either at an angle to the axes of the board or are curved. The depressed portion 16 is preferably all at the same level and constitutes the greater portion of the surface 13. Portions 17, intermediate as to height and having upwardly curved surfaces, are provided to act as banks for the game piece and may be utilized by any player by proper tilting of the board.

Preferably, and as shown in Figures 2, 3, 4, and 5, the mounting for the game board 10 comprises a relatively heavy base 18 provided with cushioning members 19 in order that it may be placed on any polished surface without damage thereto. Upstanding from and secured to the base 18 are two bearing members 20 in which is journaled a short shaft 21 having integral therewith a support 22 which carries at its upper end a shaft 23, transverse to the shaft 21, which has bearing in two stationary bearing members 24 fast to the under side of the board 10 and an adjustable bearing member 25 movably car-

ried by the board. As shown, the member 25 includes an extension 26 which is retained for sliding movement by a U-shaped strap 27 and may be secured in any desired position by means of a set screw 28. A metal plate 29 may be imbedded in the lower side of the board 10 to facilitate attachment of the support to the board. This is particularly desirable when the board is composed of a molded composition.

As shown in Figure 6 of the drawings, in lieu of the heavy base 18, the bearing members 20 may be integral with or rigidly attached to a relatively heavy rectangular metal shaft or post 30 which may in turn be closely fitted into a deep recess 31 in a thick metal plate or the like 32 fixed in a low table 9 by means of machine screws 8. This upright shaft need not be fastened in the recess but, if desired, a spring, thumb screw, eccentric on a thumb lever or any other conventional securing device, not shown, may be employed.

It is essential that the handles 12 be of such design that they facilitate tilting of the board 10 but cannot be rotated to cause twisting of the board. This feature is very important as it enables two opposing players each to control tilting of the board around one axis but to have no control over the tilting controlled by the other player. As shown in Figure 1 of the drawings, the handles 12 are provided on all four sides of the board 10 and comprise rods 33 secured to the board and having mounted thereon freely rotatable grips 34. Obviously a single rod 33 extending across the board 10 and carrying a rotatable grip 34 on each of its ends may be used in lieu of either pair of opposite handles 12.

As shown in Figures 7, 8, and 9 of the drawings, the handles 12 may be detachably connected to the board 10. In this form the rod 33 is formed at its inner end with a ball 35 which is movable laterally in a box-like casing 36 fast to the board. A spring 37, secured at one of its ends to the casing 36 and carrying adjacent its other end a ball-fitting element 38 which projects into the casing, serves to detachably connect the handle to the board. In lieu of the handles described above a flexible strap 41, of leather or the like, secured to the game board 10 at its ends, as indicated at 42, serves the same purpose. By reason of the flexibility of the strap controlled twisting of the board is impossible but tilting of the board is facilitated by moving the strap 41 in a plane at right angles to the edge of the board to which it is attached.

The game piece 14 may be made in many ways but the preferred form is constructed of a spherical core 43 of suitable heavy metal encased in a relatively thick layer of semi-hard rubber, the whole being somewhat less in diameter than the width of the narrowest groove separating the adjacent ridges 15 on the board 10. A border 45 slightly higher than the ridges 15 is provided surrounding the board 10 to overcome any tendency of the game piece 14 to leave the surface of the board during play of the game. At certain places on the game board 10 the game piece 14 can be held substantially immobile by one of the players. Thus a piece can be held by the player controlling the endwise tip of the board in any pocket marked on the drawings with an A; it can be held in any of the pockets marked with a B by the player controlling the sidewise tip of the board. In still other places, as indicated at C on the drawings, one player may be able by chance or by skill to acquire complete control of the game piece. The pocket marked S on the drawings is a convenient starting place for the piece 14 in one type of game which may be played on the board 10.

In one type of game which is played with a single game piece 14 the player controlling the endwise tip of the board takes the offensive and, in general, scores when he succeeds in putting the piece into one of the pockets from which it cannot be dislodged by the player controlling the sidewise tip of the board. The score for a pocket is, in general, higher as the pockets are more difficult of entrance to the player causing the piece to enter it. The player controlling the endwise tip of the board will be hereinafter designated as the scoring player.

The scoring player in attempts to place the piece in a scoring pocket may take advantage of curved or slanting edges of the raised portions of the board to move the piece to his right or left, or he may cause the piece to strike and rebound from various edges for the same purpose. He may cause the piece to rebound from the low ridges 17 of the board, or he may cause the piece to ride over these low curved-topped ridges and strike an edge beyond at a different angle. He may take advantage of the English imparted to the piece by rolling along various edges.

The defensive player, the player controlling the sidewise tip of the board in the embodiments of the invention shown, tries to keep the scoring player from scoring and also tries to place the piece in a pocket from which the scoring player cannot dislodge it. In attempting this the defensive player may resort to all of the arts capable of use, as described above, by the scoring player, but, in general, the arrangement of the board gives the advantage to the scoring player as will be apparent from an examination of Figures 1 and 2 of the drawings. While the piece is in certain channels at a slight angle to the lengthwise axis of the board the defensive player has the power to accelerate or retard the motion of the piece by his exclusive control of the sidewise tip of the board. It may be made a rule of the game that when the defensive player succeeds in putting the piece in a pocket from which the scoring player cannot dislodge it the scoring player is out and the defensive player, or one of his team, takes up the scoring play.

From the foregoing detailed description of the game apparatus and of one of the many games that may be played thereon it is apparent that a game of the tilting board type has been provided which permits simultaneous play by opposing players or teams of players.

Although only certain forms of the invention have been illustrated and those forms have been described in detail, it will be apparent to those skilled in the art that the invention is not so limited but that various minor modifications may be made therein without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. A game board whose movement is limited to independent tilting about two major axes at right angles to each other, said board having a plurality of pockets from which a game piece can be dislodged only by tilting the game board about one of said axes and having a plurality of other pockets from which a game piece can be dislodged only by tilting the game board about the other

axis, said board having means operable by one player to tilt the board about one axis and one axis only and means operable by another player to tilt the board about the other axis and the other axis only.

2. A game apparatus comprising a game board whose movement is limited to independent tilting about two major axes at right angles to each other, said board having a plurality of pockets disposed parallel to one of said axes, and a plurality of other pockets disposed parallel to the other axis, whereby a player controlling the tilting of the board about one of said axes can prevent dislodgment of a game piece from any one of the pockets parallel to the other axis, said board having means operable by one player to tilt the board about one axis and one axis only and means operable by another player to tilt the board about the other axis and the other axis only.

3. A game apparatus comprising a game board whose movement is limited to independent tilting about two major axes at right angles to each other, said board having a plurality of pockets disposed parallel to one of said axes, and a plurality of other pockets disposed parallel to the other axis, whereby a player controlling the tilting of the board about one of said axes can prevent dislodgment of a game piece from any one of the pockets parallel to the other axis, said board also having a plurality of angularly disposed low ridges, said board having means operable by one player to tilt the board about one axis and one axis only and means operable by another player to tilt the board about the other axis and the other axis only.

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