May 5, 1925.

H. McNALL

1,536,513

MECHANICAL BASEBALL GAME

Filed July 17, 1922

7 Sheets-Sheet 1

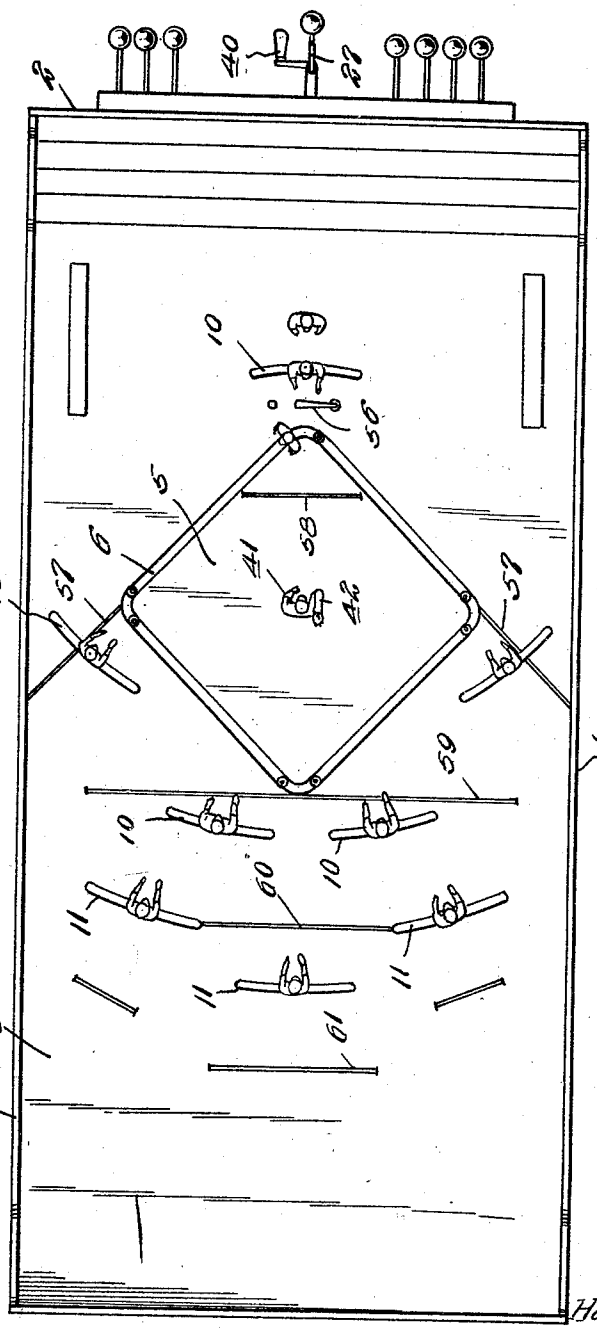


Fig. 1.

Witnesses:
F. L. Fox.
N. Berman

Inventor
Harry McNall

By Clarence A. O'Brien

Attorney

May 5, 1925.

1,536,513

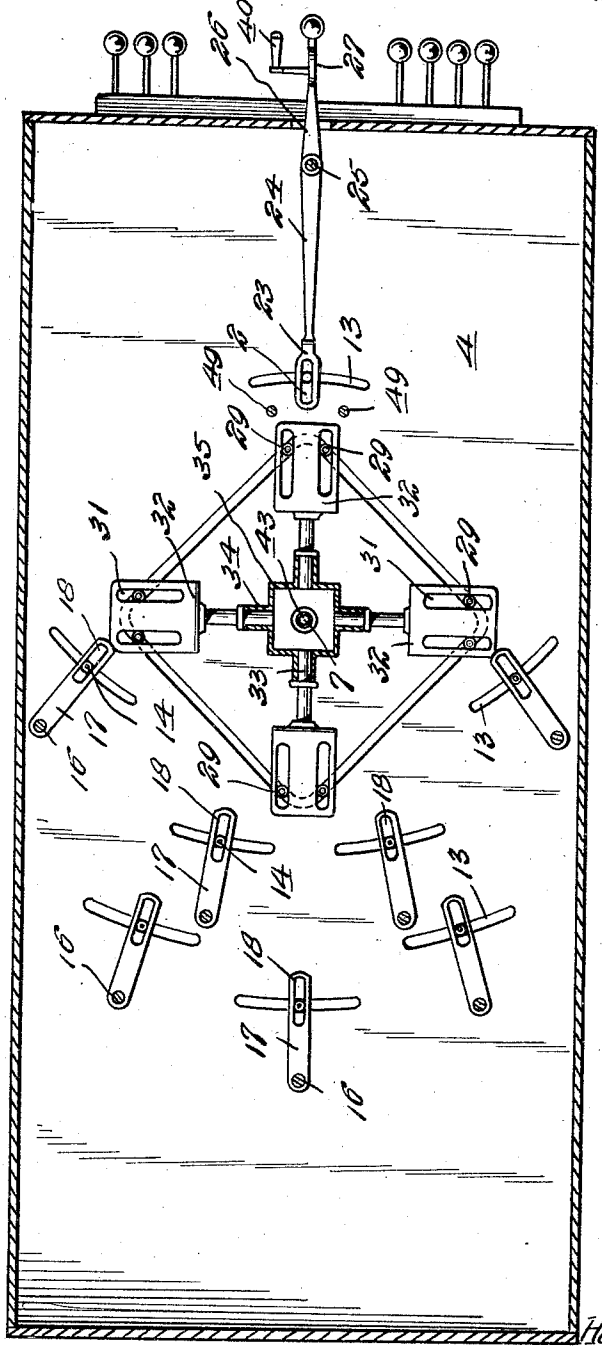
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MECHANICAL BASEBALL GAME

Filed July 17, 1922

7 Sheets-Sheet 2

Fig. 2.



Witnesses:
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May 5, 1925.

1,536,513

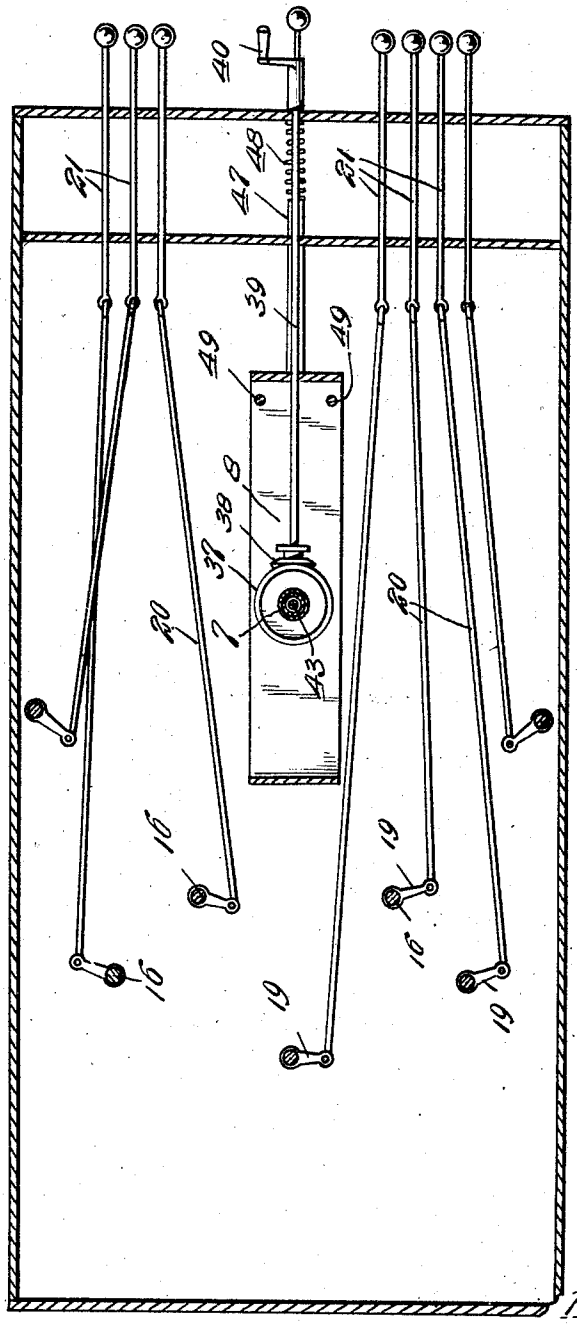
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MECHANICAL BASEBALL GAME

Filed July 17, 1922

7 Sheets-Sheet 3

Fig. 3.



Witnesses:
J. L. Fox.
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May 5, 1925. 1,536,513

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MECHANICAL BASEBALL GAME

Filed July 17, 1922 7 Sheets-Sheet 4

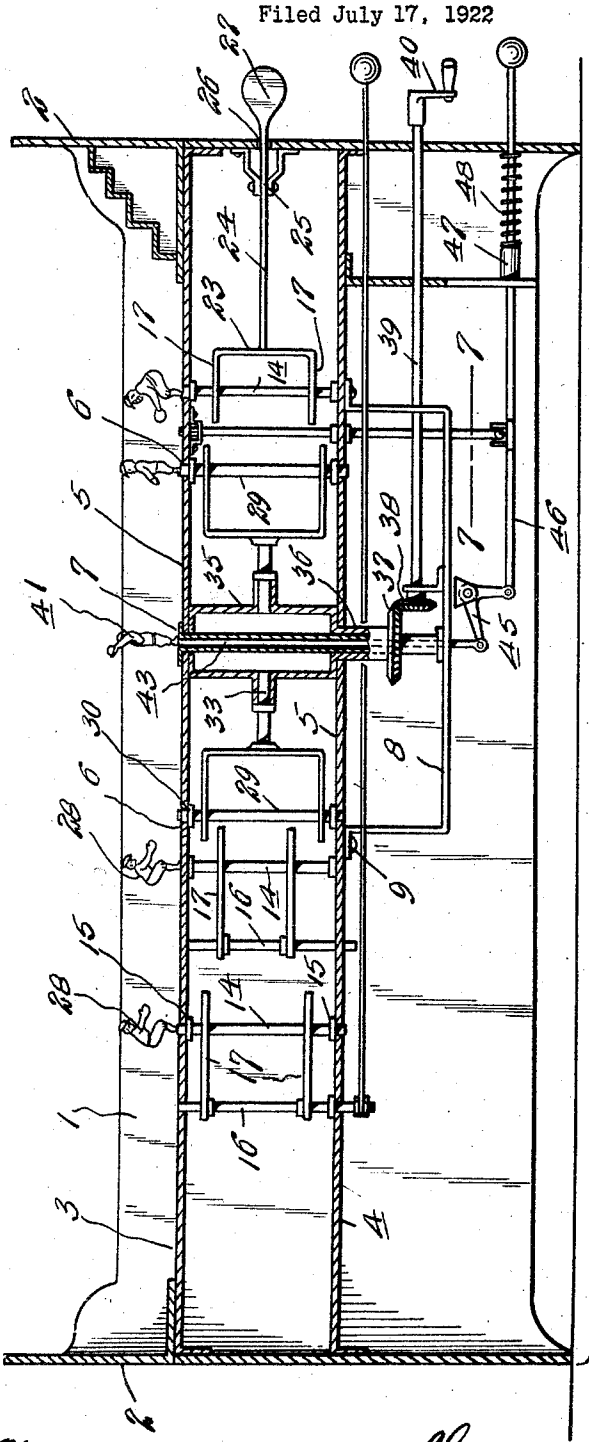


Fig. 4.

Witnesses:
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H. Berman

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May 5, 1925. 1,536,513

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MECHANICAL BASEBALL GAME

Filed July 17, 1922 7 Sheets-Sheet 5

Fig. 6.

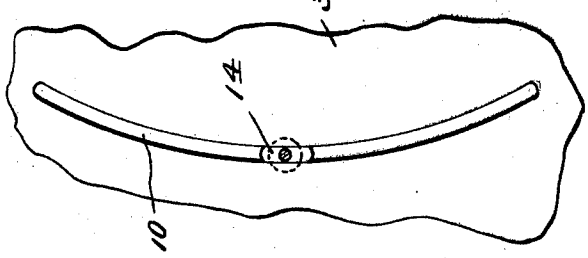


Fig. 7.

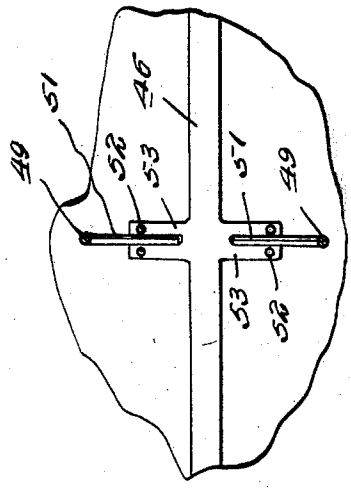
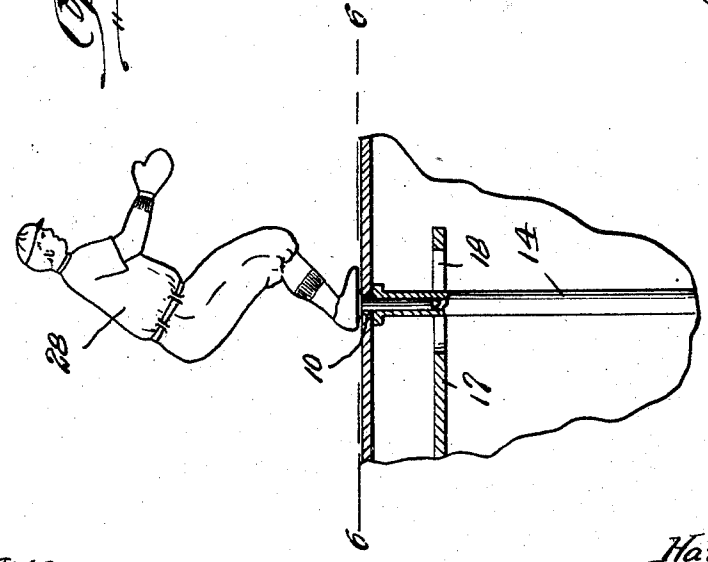


Fig. 5.



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May 5, 1925. 1,536,513

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MECHANICAL BASEBALL GAME

Filed July 17, 1922 7 Sheets-Sheet 6

Fig. 9.

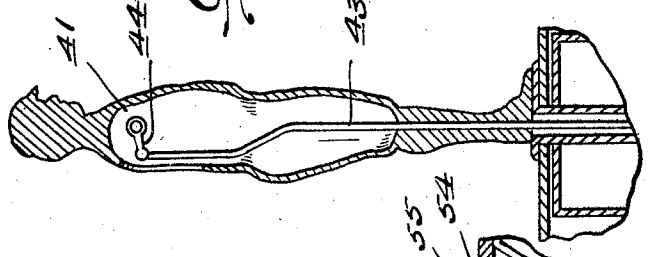
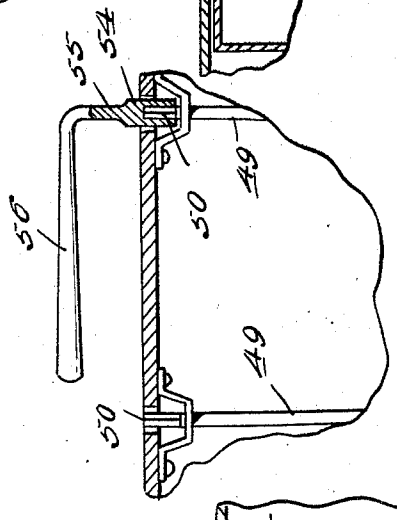


Fig. 10.



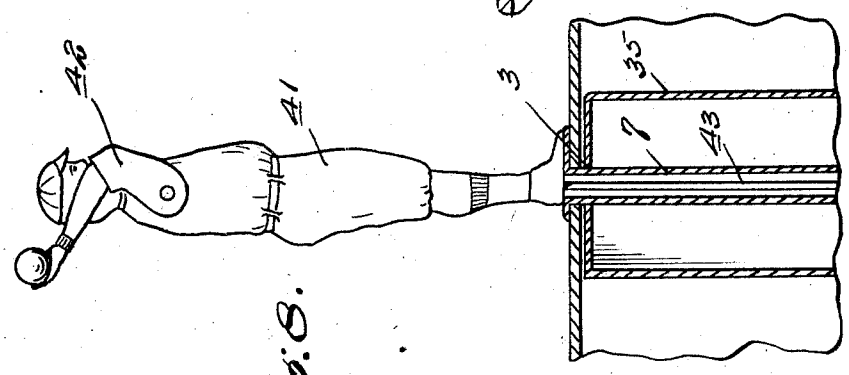


Fig. 8.

Witnesses:
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A. Berman

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MECHANICAL BASEBALL GAME

Filed July 17, 1922 7 Sheets-Sheet 7

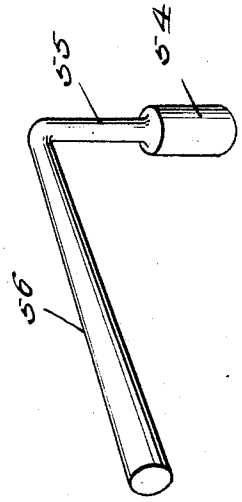


Fig. 12.

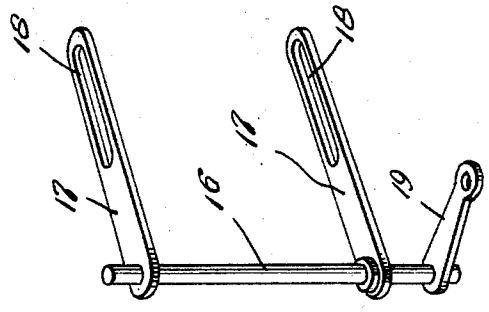


Fig. 13.

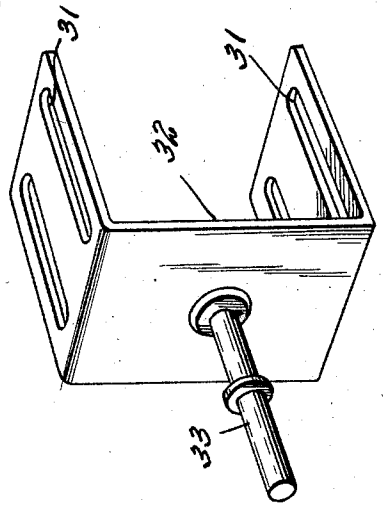


Fig. 11.

Witnesses:
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N. Berman

Inventor
Harry McNall.

By Clarence A. O'Brien
Attorney

Patented May 5, 1925. 1,536,513

UNITED STATES PATENT OFFICE.

HARRY McNALL, OF PITTSBURGH, PENNSYLVANIA.

MECHANICAL BASEBALL GAME.

Application filed July 17, 1922. Serial No. 575,442.

To all whom it may concern:

Be it known that I, HARRY McNALL, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Mechanical Baseball Games, of which the following is a specification.

In carrying out the present invention it is my purpose to provide a mechanical baseball game wherein the figures on the game board upon which the baseball field is depicted may be caused to move, so as to simulate baseball players in action, and wherein the figure representing the "pitcher" may be operated to throw the ball toward the figure representing the "batter" and the bat operated to swing toward the ball with a view to hitting the same, so that the ball may be hit into the "infield" or "outfield" depicted upon the board.

It is also my purpose to provide a mechanical baseball game which will embrace the desired features of simplicity, efficiency and durability, which may be readily and conveniently operated by those playing the game and which will embody comparatively few parts, and these so arranged and correlated as to reduce the possibility of derangement to a minimum.

A further object of my invention is to provide a mechanical baseball game which may be manufactured and marketed at comparatively small cost and which will afford amusement as well as instruction in the fundamental principles of the game of baseball to those playing the game.

With the above recited objects in view, and others of a similar nature, the invention resides in the construction, combination and arrangement of parts set forth in and falling within the scope of the appended claims.

In the accompanying drawings:

Figure 1 is a top plan view of my improved baseball game.

Figure 2 is a horizontal sectional view through the same.

Figure 3 is a similar view taken on a plane below Figure 2.

Figure 4 is a vertical longitudinal sectional view through my apparatus.

Figure 5 is a fragmentary sectional view showing the mounting of one of the figures representing a player.

Figure 6 is a horizontal sectional view on the line 6—6 of Figure 5.

Figure 7 is a sectional view on the line 7—7 of Figure 4.

Figure 8 is an enlarged sectional view partly in elevation showing the mounting of the figure representing the "pitcher."

Figure 9 is a vertical sectional view through Figure 8.

Figure 10 is a sectional view showing the mounting for the bat.

Figure 11 is a perspective view of one of the carriers employed for supporting the "base runners."

Figure 12 is a perspective of the bat.

Figure 13 is a perspective view of one of the elements for moving the fielders.

Referring now to the drawings in detail, 1—1 designate vertical side walls spaced apart in parallelism, while 2—2 indicate end walls connecting the side walls 1—1 to each other and holding the same in proper spaced relation. Arranged within the space defined by the side and end walls and suitably secured to such walls is a horizontal platform or board 3, and arranged below the platform or board 3 is a horizontal board 4 spaced apart from the board 3 and secured to the side and end walls 1 and 2.

In accordance with my invention the boards 3 and 4 adjacent to one of the end walls 2 are formed with alining diamond-shaped openings, and within these openings respectively, are diamond-shaped plates 5 of less dimensions than the dimensions of the openings and having the edges thereof spaced apart from the walls of the openings to provide runways or slots 6. The plates 5 are connected to each other by means of a vertical tube 7 that extends through openings formed in the center of the plates. This tube is suitably fastened to the plates 5—5 in order to maintain the latter in proper relative positions and within the respective diamond-shaped openings in the boards. The lower end of the tube 7 is mounted upon and fastened to the inter-connecting member of the U-shaped bracket 8 and the upper ends of the legs of the bracket 8 are fastened to the lower side of the board 4, as at 9, as clearly illustrated in Figure 4 of the drawings.

The diamond-shaped slot or runway 6 in the board 3 defines the "infield" of the baseball field depicted on the upper surface of

the board 3, as illustrated in Figure 1 of the drawings, and the board 3 is formed adjacent to the positions indicative of "first base," "second base," "third base" and "short stop," and behind the positions to be taken by the "batter" with curved slots 10, respectively, while the "outfield" depicted upon the upper surface of the board 3 at the position indicative of "left field," "center field" and "right field" is formed with slots 11, respectively. These slots 10 and 11 are curved slightly, as illustrated in Figure 1 of the drawing, and aline respectively with similar slots 13 formed in the lower board 4.

Arranged between the boards 3 and 4 in line with the respective pairs of alining slots are vertical tubes 14 having their outer ends mounted in the respective slots arranged in the corresponding slots in the board 4, as clearly illustrated in Figure 4 of the drawings. These tubes 14 are equipped with collars 15 adjacent to the respective ends thereof, which bear against the confronting surfaces of the boards 3 and 4 so that the tube will be maintained in proper position within the slots.

Journaled in the confronting faces of the boards 3 and 4 behind the respective pairs of alining slots are shafts 16 and fastened to each shaft 16 are arms 17 suitably spaced apart and formed with alining slots 18 that receive the adjacent tube 14. On the lower end of each vertical shaft 16 is a crank arm 19 and connected to the crank arm 19 are rods 20 which extend toward one end wall 2 and are connected with operating rods 21 slidably mounted within the said end wall 2, as clearly illustrated in Figure 2 of the drawing.

The tube 14 in line with the slots at the "catcher's" position extends through vertically alining slots 22 formed in the arms of a yoke 23. This yoke 23 is connected to one end of a lever 24 that is pivoted between its ends upon a bracket 25 carried by the adjacent end wall 2 and the lever extends through a slot 26 in the end wall and terminates in a finger piece 27.

In the present instance, the tubes 14, the shafts 16, arms 17 and the rods 20 and 21 constitute an operating mechanism for the "out fielders," the "first," "second" and "third basemen" and the "short stop," while the tube 14, yoke 23 and lever 24 constitute an operating mechanism for the "catcher," so that the "infielders," "outfielders" and "catcher" may be moved from side to side within the confines of the slots in the boards to simulate the movements of players. It is conceivable, however, that other operating mechanism may be employed for moving the players.

Detachably mounted in the upper end of each tube 14 is a figure 28 simulating a player, and owing to the arrangement of the slots it will be seen that these figures are properly positioned with respect to the "infield" and "outfield" positions on the board 3.

By pulling the rods 21 motion is imparted through the connecting rods 20 and crank arms 19 to the shafts 16, thereby rocking the shafts, and in this rocking of the shafts motion is imparted to the tubes 14 through the arms 17, thereby moving the tubes within the alining slots in the boards 3 and 4 to cause the figures to move about the playing field within the confines of the slots.

Arranged within the alining diamond-shaped slots 6 adjacent to each "base" position and adjacent to the "home plate" position is a pair of tubes 29 having their ends arranged within the respective diamond-shaped slots and formed with collars 30 at the inner sides of the boards 3 and 4, in order to hold the tubes within the alining diamond-shaped slots. Each pair of tubes 29 extends through alining slots 31 formed in U-shaped carriers 32 that are clearly illustrated in Figure 11 of the drawings. These U-shaped carriers 32 have their inter-connecting portions formed with shanks 33. These shanks fit into socket members 34 that are formed in the respective sides of a vertical sleeve 35 that surrounds the tube 7 and is arranged axially of such tube. This sleeve 35 is formed with a depending axial hollow shaft 36 that extends below the board 4 and encircles the tube 7. On the lower end of the hollow shaft 36 is a beveled gear 37 that meshes with a pinion 38 fixed upon one end of a horizontal shaft 39 journaled in suitable bearings below the board 4 and extending through the end wall 2 through which the rods 21 project. On the other end of the shaft 39 is a crank 40 by means of which the shaft 39 may be rotated, and in the rotation of the shaft 39 motion is transmitted through the pinions 38 and gear 37 to the sleeve 35, thereby revolving the sleeve 35 and carrying the U-shaped carriers 32 around with the sleeve 35. These carriers 32 are spaced equal distances around the sleeve 35, so as to maintain the pairs of tubes 29 spaced apart equal distances and in the rotation of the carriers as just described the tubes 29 travel around the diamond-shaped slots 6, so that the tubes may be advanced from one "base" to another. The upper ends of the tubes 29 are formed in such manner as to detachably receive studs on the lower ends of figures representing "base runners," and owing to the slots 31 in the carriers 32 it will be seen that as the carriers rotate about the axis of the sleeve 35 the tubes may travel properly within the diamond-shaped slots. My purpose in employing two tubes at each position is to enable the player to place the fig-

ure representing the "batter" in a position to represent a left-handed hitter or a right-handed hitter, as may be desired. It will be seen that as the crank 40 is turned to revolve the shaft 39 the carriers will be rotated to advance a player from the "home plate" to "first base," and from "first base" to "second base" and so on until the circuit of the infield is completed by the "runner."

At the center of the "infield" depicted on the board 3 is a figure 41 that represents a "pitcher." This figure is mounted on the upper end of the vertical tube 7 and is constructed to provide a throwing arm 42, clearly illustrated in Figure 8 of the drawings. This throwing arm 42 is adapted for swinging movement and extending through the vertical tube 7 and into the body of the Figure 41 is a rod 43. The upper end of the rod 43 is connected with a crank arm 44 that is fastened to the throwing arm 42 of the figure, while the lower end of the rod 43 is connected with one end of a bell crank lever 45 arranged below the U-shaped bracket 8 and pivoted at its bight to such bracket 8. The upper end of the bell crank lever 45 is connected to one end of a horizontal rod 46 that extends through the end wall 2 through which the shaft 39 and rods 21 project. Fixed to the rod 46 is a collar 47, and encircling the rod between the collar and the adjacent end wall is a spring 48 that acts to hold the rod 46 in normal position and to restore the same to such position after the rod has been operated. When the rod 46 is pulled against the action of the spring 48 a pull is exerted upon the rod 43 through the medium of the bell crank lever 45, and in this movement of the rod 43 the arm 42 is swung rearwardly, as shown in Figure 8 of the drawings, so that a miniature baseball may be placed in the hands of the "pitcher." Upon the release of the rod 46 the spring 48 reacts and swings the arm 42, so that the arm 42 may throw the ball toward the "catcher."

Arranged behind the "home plate" position and in front of the "catcher" are vertical shafts 49 having their upper ends angular in cross section and arranged in openings 50 formed in the board 3. The lower ends of these shafts 49 terminate in inwardly extending arms 51—51 clearly illustrated in Figure 7 of the drawings, and these arms 51—51 fit between the pins 52 carried by lateral extensions 53 on the rod 46. Interchangeably associated with the upper ends of the shafts 49 is a socket 54 formed with an upstanding shank 55 and on the upper end of the shank 55 and at right angles thereto is a "bat" 56. The socket 54 may be connected to either shaft 49 depending upon whether the player wants the figure representing the "batter" to assume a left hand batting position or a right hand batting position. As the lower ends of the shafts 49 are connected with the rod 46 these shafts will be operated simultaneously with the rod and upon the pull of the rod against the action of the spring 48 the bat is thrown rearwardly, while when the rod is released and the spring reacts the bat swings forwardly to intercept the ball on its way to the "catcher" and so hit the ball toward one of the "fielders."

If desired, the top of the board 3 representing the playing field may be marked off to indicate foul lines, as at 57, and may also be formed with cross markings 58, 59, 60 and 61 to indicate, respectively, a "bunt," "out," "two base hit" and "home run."

The rules governing the playing of the game may be made up between the players and the markings on the field may be used to indicate any desired values in "base hits," "put outs," etc.

From the foregoing description, taken in connection with the accompanying drawings, it will be seen that I have provided a mechanical baseball game wherein the ball may be thrown toward the bat and the bat operated simultaneously with the release of the ball by the figure representing the "pitcher" to intercept the ball, and so hit the same toward one of the "fielders." It is conceivable, of course, that in the practice of my invention the construction of the bat operating mechanism, the throwing mechanism and the mechanism for shifting the positions of the figures representing the players may be modified or changed within the scope of the claims.

I have entered into a detailed description of the construction and relative arrangement of parts embraced in the present and preferred embodiment of my invention with a view to imparting a full, clear and exact understanding of the said embodiment. I do not desire, however, to be understood as confining myself to the said specific construction and relative arrangement of parts, inasmuch as in the future practice of my invention such changes or modifications may be made as fairly fall within the scope of my invention as defined by my appended claims.

Having thus described the invention, what is claimed as new, is:—

1. A game apparatus including a pair of parallel spaced boards having registering slots provided therein, a tube passing through the slots and provided with collars bearing against the affronting faces of the board to prevent the tubes from moving transversely through the slots, and means for moving the tubes longitudinally of the slots, a figure, a base pin on the figure adapted to be inserted in one end of the tube for movement on one of the boards.

2. A game apparatus including a pair of parallel spaced boards having registering

slots provided therein, a shaft journaled between the boards, means connected with the shaft for turning the same, slotted arms connected with the shaft and disposed transversely with relation to the slots in the boards, a tube passing through the slots in in the arms and having its ends projected through the slots in the boards, collars on the tubes engaging the affronting faces of the boards, and a figure having a base pin disposed in one end of the tube.

3. A game apparatus including a board, a figure on the board, an arm rotatable on the figure, a second arm within the figure for operation of the first arm, a pitman rod connected with the second arm and extending through the figure and through the board, a bell crank lever mounted below the board and connected with the pitman, and means for actuating the bell crank lever for operation of the first mentioned arm, said first mentioned arm being provided with a hand for receiving a ball to be thrown upon operation thereof.

In testimony whereof I affix my signature.

HARRY McNALL.