

Sept. 4, 1928.

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G. B. MILLS ET AL

GAME APPARATUS

Filed Dec. 8, 1926

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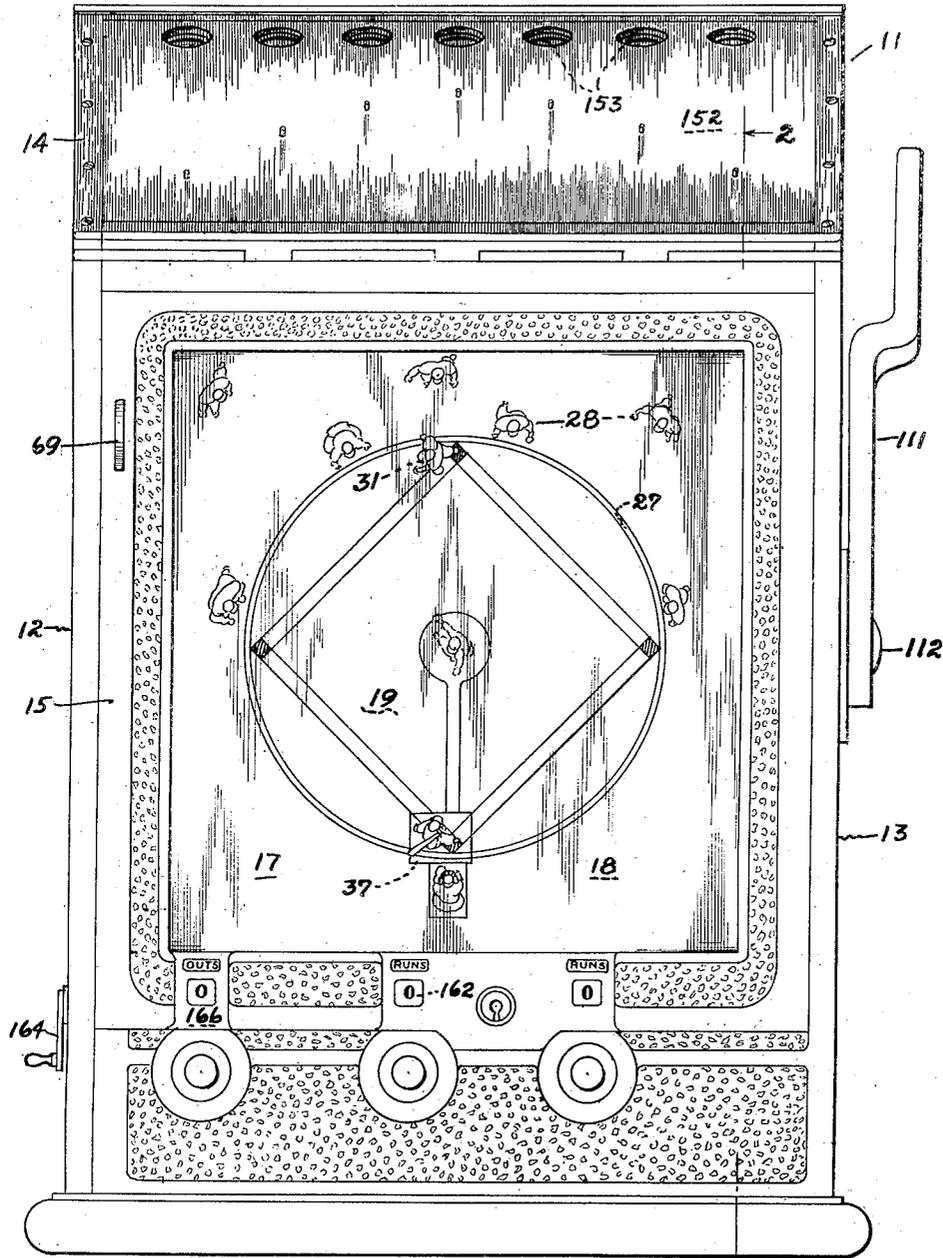


Fig. 1

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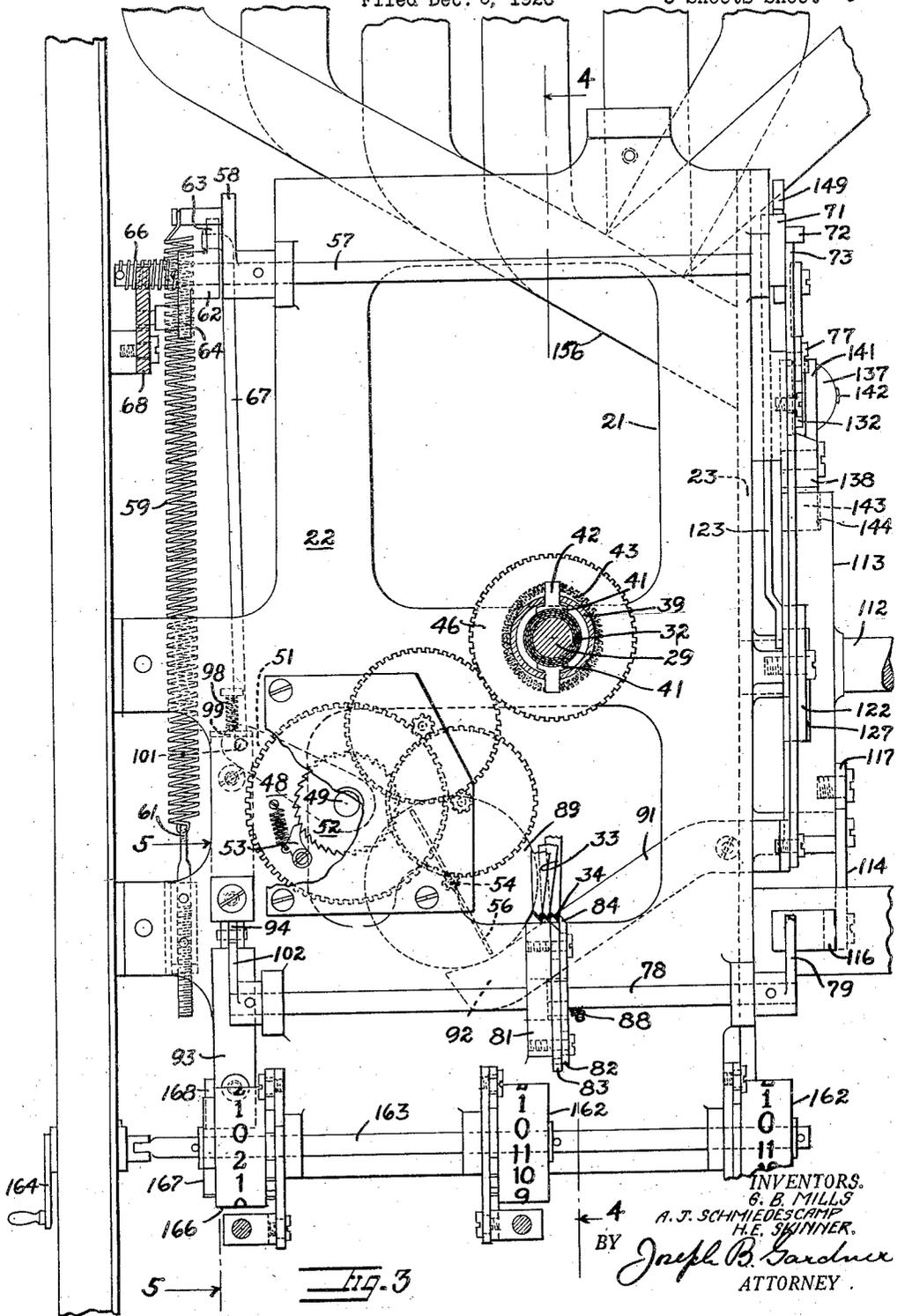
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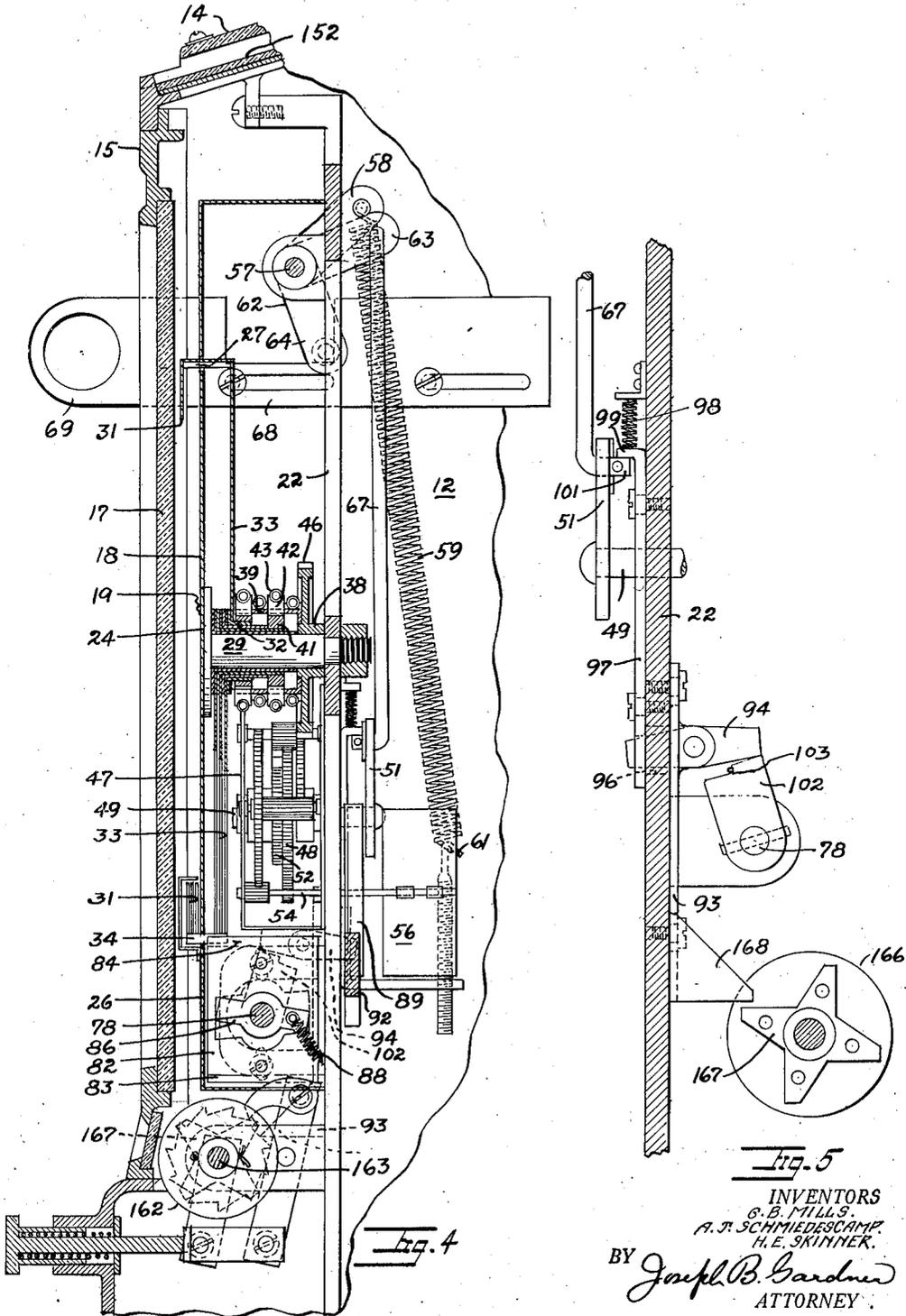


Fig. 5

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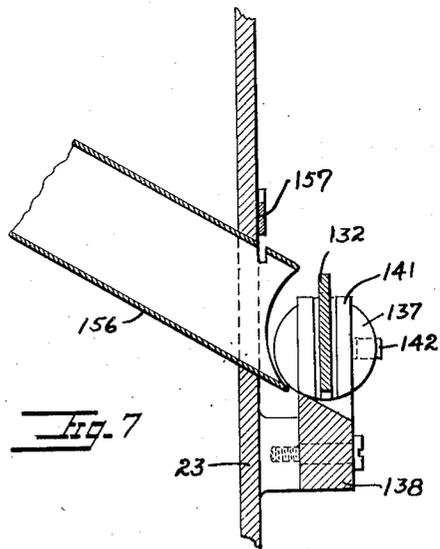
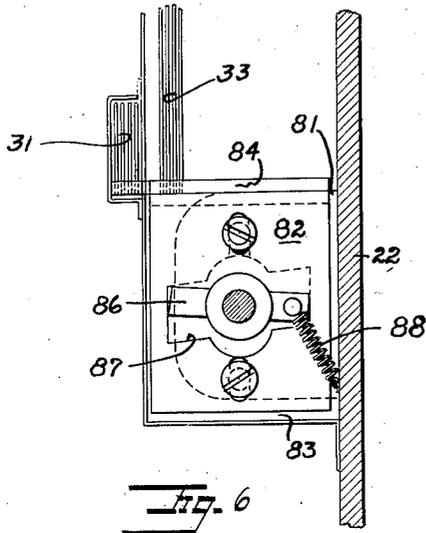
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5 Sheets-Sheet 5



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UNITED STATES PATENT OFFICE.

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GAME APPARATUS.

Application filed December 8, 1926. Serial No. 153,228.

Our invention relates to apparatus for playing a game involving the moving of pieces or men over a playing field:

An object of the invention is to provide a device of the character described in which the moves of the game are effected by the apparatus in accordance with variable and predetermined settings thereof.

Another object of the invention is to provide in the apparatus means by which the different moves of the game are predetermined in accordance with the skill of the operator.

A further object of the invention is to provide apparatus of the class described which is particularly arranged to be operated to simulate the playing of a baseball game.

The invention possesses other objects and features of advantage, some of which, the foregoing, will be set forth in the following description of the preferred form of our invention which is illustrated in the drawings accompanying and forming part of the specification. It is to be understood, however, that we do not limit ourselves to the showing made by the said drawings and description, as we may adopt variations of the preferred form within the scope of our invention as set forth in the claims.

Referring to said drawings,

Figure 1 is a front view of one embodiment of the game apparatus.

Figure 2 is a sectional view taken on the line 2—2 in Figure 1.

Figure 3 is a fragmentary view taken on the line 3—3 in Figure 2.

Figure 4 is a fragmentary view taken substantially on the line 4—4 in Figure 3.

Figure 5 is an enlarged fragmentary view taken substantially on the line 5—5 in Figure 3.

Figure 6 is an enlarged view of a portion of the structure shown in Figure 4.

Figure 7 is an enlarged fragmentary view taken on the line 7—7 in Figure 2.

As herewith particularly illustrated, the apparatus of our invention comprises a rectangular casing 11 having sides 12 and 13, a top 14, and a front wall 15. The front wall 15, it will be noted, is provided with a transparent pane 17 behind which is disposed a member 18 having delineated thereon a playing field 19 for the game. Mounted in the casing behind the member 18 is a supporting member 21 which cooperates with the casing

sides to provide a mounting for the various portions of the apparatus; as here shown, the member 21 comprises a pair of plates 22 and 23, the former of which is disposed behind the member 18 in parallel relation thereto, while the latter extends transversely rearwardly of the former in a vertical plane.

The member 18 which provides the playing field, it will now be noted, is formed with sections 24 and 26, the former of which comprises a circular disc, while the latter is of generally rectangular outline and is provided with a circular opening of slightly greater diameter than the section 24, so that with the section 24 centrally disposed in the opening of section 26, a continuous space or slot of uniform width is provided between the sections. Each of the sections is fixedly and independently mounted on the plate 22, while the playing field 19 jointly provided by the sections is marked off to represent the playing field of the game to be played with the apparatus. As herewith particularly shown, the game to be played is one in simulation of a base-ball game, and, accordingly, a playing field for base-ball including the bases therefor, is laid off on the field, it being noted that the four bases will be equally spaced along the slot 27. As here shown, men 28 are also indicated on the appropriate parts of the playing surface to further carry out the effect.

Mounted on the plate 22 to extend forwardly thereof in coaxial alignment with the inner field section 24 is a fixed stub shaft 29, such shaft providing a mounting for an appropriate number of runner pieces or players 31, and also serving to provide the support for the section 24 at its forward extremity. Mounted on the shaft is a plurality of tubular hubs 32, which hubs are telescopically engaged for relative rotation about the shaft axis and are provided at their outer ends with radially extending arms 33. The inner hub, it will be noted, is axially the longest and the other hubs are successively shorter whereby the arms may be free for movement in different parallel planes and a portion of the inner end of each hub will be exposed. The arms 33, it will now be noted, are each arranged to support a player piece 31 above the playing surface in such manner as to permit the actuation of one or more of the arms to effect a movement of their player pieces

over the field. Accordingly, player support members 34 are provided on the arms, such supports extending from the arms through the slot 27 and each having a player piece 31 mounted thereon. As here shown, each of the player pieces 31 is flat, is disposed parallel to the playing surface, and has delineated thereon the simulation of a runner. In order to permit a close positioning of the player pieces when at the starting base or station 36, the posts 34 are preferably of such length as to position such pieces for movement in different planes; thus, as here shown, the outermost arm 33 positions its piece closest to the playing field, the next arm positions its piece for movement in front of the former piece, and so on. The posts 34 are thus arranged to engage each other so that no player piece may pass another, and yet the piece at either side of a group may be freely displaced. Since at different phases of a game there will be varying numbers of pieces positioned at or near the station 36, a cover 37 for the player pieces positioned thereat is preferably provided, such cover being here shown mounted at the station 36 to overlie the players at such station, and having indicated thereon the base or station and a player in position to bat a ball.

It will now be clear that displacement of one or more of the player pieces to variously position them around the path defined by the slot may be accomplished by effecting a rotation of the appropriate hub, and means are accordingly provided for effecting such rotation. Mounted for free rotation about the stub shaft 29 is a member 38 having extending forwardly therefrom a sleeve 39 which is arranged to overlie the inner and exposed ends of the different hubs 32. Mounted in the sleeve 39 are sets of opposed shoes 41, the shoes of each set being arranged to maintain a frictional engagement with a different hub. As here shown, each shoe is carried on a stem 42 mounted for radial movement in perforations provided in the sleeve, and resilient bands 43 are provided which engage the extremities of the stems of a set whereby the shoes may be resiliently urged inwardly to maintain a fixed degree of frictional engagement with the hub. In this manner, axial rotation of the sleeve 39 will, through the frictional engagement of the shoes and hubs, urge the rotation of the latter, and at the same time permit such rotation even if one or more of the arms be held against displacement, it being obvious that the structure now described is in effect a friction clutch.

Means are provided for effecting varying degrees of rotation of the sleeve 39 whereby the player pieces may be variably shifted. Operatively connected to the rotatable member 38 by means of a gear 46 mounted thereon is a gear train 47, the first gear 48 of which is rotatably carried on a shaft 49 which ex-

tends rearwardly of the plate 22 and is provided at its rearward end with a crank arm 51. Fixed on the shaft 49 adjacent the gear 48 is a ratchet gear 52 while fixed on the gear 48 is a spring pressed pawl 53 arranged to so engage in the teeth of the ratchet gear that rotation of the shaft 49 in one direction will effect a like rotation of the gear 48, while rotation of the shaft 49 in the reverse direction will not rotate the gear 48. The arm 51, it will now be noted, is normally so disposed as to slope upwardly from the shaft and is arranged to be swung downwardly from such position through an angle of less than 180 degrees, while the gear ratio of the train between the gears 46 and 48 is such that the extreme rotation of the former produced by such downward movement of the arm 51 is at least 360 degrees. In this manner, different angular displacements of the arm 51 from its normal position will effect different degrees of rotation of the sleeve 39, while the return movement of the arm will not effect any rotation of such sleeve, a one-way movement of the player pieces over the field being thus provided for. The gear train, it will be noted, is also arranged to effect the rotation of a shaft 54 extending rearwardly of the plate 22 and provided with radial blades 56 which, through their fan action, serve as a governor to limit the speeds of rotation of the various gears.

Journalled at the top of the plate 22 and extending thereacross, is a shaft 57 having extending therefrom an arm 58 to the extremity of which is fixed a tension spring 59 having its other end secured to an adjustably positioned hook 61 mounted on the plate 22. As here shown, the spring 59 and hook 61 are disposed back of the plate 22 and the spring and arm are so related that raising of the arm will be tensionally resisted by the spring. Mounted on the shaft 57 for free rotation thereon is a bell-crank lever member 62 having arms 63 and 64, and arranged to have the arm 63 thereof held against the under side of the arm 58 by means of a spring 66 operatively disposed between the member 62 and the shaft 57. The arm 63, it will now be noted, is connected to the crank arm 51 of the shaft 49 by means of a link 67, so that downward movement of the arm 58 will, through its actuation of arm 63, effect the rotation of sleeve 39 and so move one or more of the player pieces. For clearing the field of players as at the beginning of an inning the bell-crank lever 62 is arranged to be appropriately rotated against the resistance of the spring 66 to effect such movement of the pieces independently of arm 58, and means are accordingly provided for effecting such rotation of the member 62. Mounted on the casing wall 12 for horizontal reciprocation therealong, is a plunger member 68 which is arranged upon a forward movement thereof

to engage the lever arm 64 to rotate the bell-crank lever 62 and thereby effect the movement of the player pieces, a handle 69 provided on the member 68 being arranged to protrude through the front wall 15 of the casing at the side of the pane 17.

It will now be clear that any lowering of the arm 58 from a raised position will effect a movement of player pieces in accordance with the amount of such lowering, and, since it is desired that different amounts of movement be effected, means are provided for controlling such movement. Fixed to the shaft 57 to extend generally rearwardly thereof is an arm 71 having extending from a side thereof a projection or stop pin 72, while mounted on the plate 22 is a stop member 73 arranged to have various portions thereof disposed in the path of movement of the pin 72 during an operative rotation of the shaft under the influence of the spring 59. As here shown, the stop member 73 is pivotally mounted on the plate 22 at a point somewhat below the shaft 57 for adjustable positioning in the plane of movement of the pin 72 and is provided at its top edge with a plurality of seats or stops 74, each of which, when positioned in the path of movement of the pin 72, will permit a different degree of operative rotation of the arm 58, it being noted that the forward seat 74' permits the least movement of such arm, and that successive seats each permit a different and greater movement. The stop member 73, it will be noted, is provided adjacent its seat end with a slot 76 in which the shank of a headed pin 77 mounted in the plate 22 engages, whereby the movement of the member may be limited both as to direction and amount. It will now be obvious that when the arm 58 is raised to its limiting position, the pin 72 will be clear of the stop member 73 whereby the latter may be positioned in any one of its operative positions.

When the apparatus is arranged for simulating the playing of a game of baseball, as is herein particularly disclosed, certain requirements as to the movement of the runner pieces over the stations, or bases, at each play naturally result. Thus, for instance, the runners must advance from base to base at the different plays, all runners already on the bases must advance at the same rate as the runner who leaves the home base (starting station 36), not more than one runner shall be at any base other than the home base, and only one runner must leave the home base at a given play. The first of these requirements is met by so arranging the seats 74 that movement of the pin 72 as from one seat to that following will effect equal degrees of rotation of the sleeve 39, it being noted that the movement involved in the seating of the pin 72 on the seat 74' is so slight as to move none of the runners and thus rep-

resent an "out" in the baseball game. The second requirement is met through the before described action of the clutch shoes carried on the sleeve 39. The two remaining conditions of those mentioned are met by arranging for the release of but one runner from the starting station at a given play whereby two runners will never be simultaneously positioned at any base except the home base; and means are accordingly provided for effecting such control of the runners at the home base.

Journalled at the front and bottom of plate 22 and extending thereacross, is a shaft 78 having provided thereon an operating arm 79 whereby the shaft is arranged to be oscillated in its bearing. Slidably mounted on a bracket 81 provided on the plate 22 for reciprocative displacement in their planes are plates 82 and 83 having provided thereon similar tooth-like projections 84 arranged when the plates are in one limiting position to be disposed ahead of the supports 34 of the runner pieces to prevent a forward movement of the pieces behind them and so serve as stops. Normally, and as particularly shown in Figure 3, the projection 84 of the forward plate 82 is operatively disposed ahead of the most forward of the supports 34 while the projection 84 of the rearward plate 83 is inoperatively disposed in such relation to the second support 34 that its projection would position it to provide a stop for the latter support. Means are provided for operatively disposing the projections 84 alternately, and as here shown, such means comprises a rocker arm 86 mounted on the shaft 78 and engaging in suitable recesses 87 provided in the plates 82 and 83, it being noted that the recesses 87 are of similar shape but are disposed oppositely with respect to the shaft axis whereby movement of the arm to advance one plate will retract the other, and vice versa. Means are preferably provided for resiliently urging the plates to maintain the relation shown, and as here shown such means comprises a spring 88 operatively disposed between the arm 86 and the plate 22. It will now be clear that an appropriate rotation of the shaft 78 will, through the simultaneous action of the arm 86 on the plates 82 and 83, retract the forward plate 82 and advance the plate 83 whereby the leading runner piece will be freed for movement and the following piece will be held. If, during the forward movement of the freed runner piece, a reverse or return rotation of the shaft is permitted, the projections 84 will resume their former relation and the pieces remaining at the home station will, through the operation of the clutch mechanism, be moved forward to position the leading one thereof against the projection 84 of the plate 82 whereby the latter will automatically become properly positioned for release at a following play,

and the shaft is accordingly arranged to be so operated by means to be hereinafter described.

Means are provided for preventing the forward movement of the pieces by means of the member 68 under certain conditions of play. Mounted on the shaft 54 of the gear train is a brake disc 89, while pivotally mounted on the plate 22 is a lever 91 having one arm 92 thereof arranged to frictionally engage the perimeter of the disc 89. The other arm of the lever 91 is arranged to provide the pivotal mounting for the stop member 73, it being noted that the lever arm 92 is preferably heavy enough to insure an upward displacement of the member 73 to bring the lower edge of slot 76 against the pin 77 when the pin 72 is clear of the member and at the same time position it clear of the disc 89. Except at the extreme forward end thereof, the slot 76 is made somewhat wider radially of the stop member 73 than is the thickness of pin 77; in this manner, when the pin 72 engages the forward seat 74, not enough movement of the member 73 will occur to cause a setting of the brake, whereas when the pin 72 engages any other seat 74, the brake will be set. In terms of a base-ball game, it will now be clear that following a "hit" the player pieces are held immovable, while following an "out", the pieces may be shifted by means of the handle 59 to effect repeated operative movements of the plunger member 68 until all the player pieces are held disposed at the station 36, the shifting of all the player pieces which have left the starting station back to such station after a third out being thus provided for. Since the brake does not become set until the pin 72 actually bears on stop member 73 to depress it, the setting of the brake occurs as the runner pieces cease their travel and the brake thus does not interfere with the progress of the men about the field.

Means are provided whereby, following an out play, the forward piece at the starting station may remain released, such means comprising a device operative to prevent the return rotation of the shaft 78 following a release of such piece. Slidably mounted on the front side of plate 22 for a limited vertical movement and normally held in its lower position by gravity, is a plate member 93 having mounted thereon a pawl 94, such pawl being pivoted intermediate its ends for displacement in a vertical plane and being freely disposed through a perforation 96 provided in the plate 22. Slidably mounted on the back of the plate 22 for vertical movement is a member 97, which member is perforated to receive the inner end of the pawl 94. The member 97, it will be noted, is preferably arranged to be held resiliently pressed downwardly by means of a spring 98 and is provided with a rearward extension 99 be-

neath which an extension 101 provided on the arm 51 is arranged to be engaged when the arm is in its raised position whereby the member 97 will be held in its upper position and the forward end of the pawl 94 will thereby become depressed—as here shown the extension 101 comprises the end of the link 67. Mounted on the shaft 78 for rotation therewith is a stop arm 102 providing a notch 103 in which the forward pawl end is arranged to become engaged at the end of the runner releasing movement of the shaft whereby the shaft may be held against a return movement and the runner left free for the next operation of the device. When the arm is withdrawn from beneath the extension 99; as for a play in which runners move, the permitted downward movement of the member 97 disposes the pawl out of operative engagement with the stop arm 102 so that the complete operative cycle of movement of the plates 82 and 83 is allowed. Since, then, an "out" leaves a piece free for movement from the starting station, and movement of such piece around the circuit of the field following the third "out" or to start a new game, is not desirable, means are preferably provided for effecting at such a time a release of the shaft 78 to cause a reengagement of the piece behind the forward projection 84. As here shown, such release is readily effected by lifting the plate member 93 in a suitable manner as will be hereinafter described.

It will now be noted that a cycle of operations of the apparatus hereinbefore described first involves rotating shaft 78 to release the leading piece at the starting station and raising the pin 72 free of the stop member 73, effecting the setting of the member 73, and then permitting the descent of the pin 72 to its new seat on said stop member, the operating arm 79 of the shaft 78 being freed in the meantime for permitting the return of the shaft to its normal position. The foregoing cycle of operations is preferably arranged to be carried out in its proper order by means of the operation of a single member, and as here shown, such member comprises a hand lever 111 fixed on a shaft 112 journaled in the casing side 13 and plate 23. Mounted on the shaft 112 adjacent the plate 23 is a disc shaped member 113 arranged upon a proper oscillatory movement thereof by means of the lever 111 to effect the different steps of the cycle through its various operative connections with the apparatus.

Pivotally fixed to the plate 23 is a lever 114 having pivotally connected to one end a thrust member 116 disposed to have its free end projected against the operating lever 79 of the shaft 78 upon a proper pivotal displacement of the lever. Mounted on the operating member 113 is a thrust member 117 arranged to engage and effect the appropriate

rocking of the lever 114 upon a forward movement of the hand lever 111. As here shown, the thrust member 117 is pivotally secured to the operating member 113 at one end and is arranged to normally rest upon a supporting pin 118 with its outer end 119 disposed to engage the free end 121 of lever 114 upon rotation of the operating member 113, and upon the further rotation of the latter member to be displaced upwardly over the top of the lever end 121 whereby the thrust member 116 may be released to resume its inoperative position and a return rotation of the member 113 will be permitted without again actuating lever 114, and the forward and return movements of the thrust member 116 are effected while the hand lever 114 is being pulled forwardly.

Rotation of the shaft 57 to lift the arm 71 to its upward position is arranged to be effected by means of a lever 122 pivoted on the plate 23 and having one end thereof connected to arm 71 by means of a thrust link 123 operatively connecting the arm and an end 124 of the lever. The other end 126 of lever 122 is arranged, when the operating member 113 is inoperatively disposed, to be freely positionable in a slot 127 provided at the edge of the member 113 whereby the positioning of the pin 72 in any of its seats is permitted. When, however, the hand lever 111 is pulled sufficiently forwardly, the lever arm 126 is arranged to engage the end 128 of slot 127 and so be rocked until it clears such end and slidably engages the edge surface 129 of the operating member 113 whereby the arm 71 is lifted and held in its upward position and is released only when a return movement of the hand lever allows the lever end 126 to again engage in the slot 127 and so permit the lowering of the pin 72 to its appropriate seat on the stop member 73.

It will now be obvious that setting of the stop member 73 in a predetermined one of its operative positions is arranged to be effected while the arm 71 is held raised by means of the action of the operating member 113 as hereinbefore described. As here shown, the stop member 73 is arranged to be resiliently urged to maintain its position with the seat 74 thereof operatively disposed below the pin 72 by means of a spring 131 operatively disposed between the member 73 and plate 23 while a link 132 pivotally fixed to the member 73 is arranged to be projected and held forwardly to position a predetermined one of the other seats 74 in operative relation to the pin 72 against the resistance of the spring 131. As here shown, the free end 133 of the member 132 is slidably carried on a pin 134 projecting from the plate 23 and is provided at such end with a series of generally vertical and downwardly opening slots 136 spaced longitudinally of the arm, said slots being arranged to have re-

movably disposed therein a disc shaped projectile member 137. Slidably mounted below the arm portion 133 for reciprocations in a line substantially parallel to the line of movement of the arm 132 is a support member 138 providing at its upper surface a sloping seat 139 for supporting a projectile 137 in the slot. Projecting upwardly from the support member 138 at the rear end thereof is a pair of extensions 141 disposed on different sides of the arm 132 and arranged upon the forward movement of the member 138 to simultaneously engage a disc in one of the slots at opposite sides of the slot whereby continued movement of the member 138 will thereafter project the arm 132 forwardly. By means of a side extension 142 provided on the support member 138, and extending forwardly to be disposed laterally of various slots when the arm 132 and member 138 are both in retracted position as shown in Figure 2, a projectile disc 137 is arranged to be normally held operatively disposed in its slot. Depending from the support member 138 is a projection 143, which projection is arranged to be disposed in a slot 144 provided in the upper edge portion of the operating member 113 and to be engaged by the ends of the slot at different times. The slot 144 is elongated and is so related to the projection 143 that the rear end 146 thereof will not engage such projection 143 until after the end 126 of lever 122 has become engaged on the surface 129, after which the further rotation of the operating member 113 by a forward movement of the handle 111 will project the support member 138 forwardly for the balance of the operative stroke. If there be a projectile 137 in one of the slots 136, a forward movement of the arm 132 will, through the engagement of the extensions 141 with the disc, be effected, the amount of such movement being determined by the location of the occupied slot in the series, it being clear that the least movement will be effected if the disc be in the forward slot, and that no movement of arm 132 will occur when there is no disc in any slot. It will now of course be clear that the spacing of the discs is desirably such that the different amounts of movement of the arm 132 thus arranged to be effected will position different seats under the pin 72, so that different degrees of movement of the player pieces may thus be predetermined.

Means are provided for retaining the stop member 73 in its set position, and as here shown, such means comprises the provision of ratchet teeth 147 on the arm 132 with which a pawl 148 is arranged to operatively engage. The pawl 148, it will be noted, is pivoted to the plate 23 and is arranged to be disposed in accordance with the disposition of a lever 149 also pivoted to the plate 23, which lever is pivotally connected to the pawl 148 at one end and rests on the arm 71

at the other. The pawl and lever are so related to the arm 71 and ratchet teeth, that when the arm 71 is in fully raised position, the pawl is inoperatively disposed with respect to the teeth, while the first lowering of the arm 71 upon the return stroke of the hand lever 111 permits the engagement of the pawl behind the appropriate ratchet tooth and so holds the stop member 73 in its set position during the lowering of the pin 72 to its seat and until the next play of the apparatus. As the operating member 113 returns to normal position, the projection 143 of support member 138 is arranged to be engaged by the end 151 of the slot 144 whereby the latter member is returned to its normal retracted position and the extension 143 is withdrawn from in front of the occupied slot to effect a release of the disc therein.

The disposition of a disc in one or the other of the slots 136 is preferably arranged to be effected in accordance with the skill of a player of the game. As here shown, an upwardly and backwardly sloping surface 152 is provided at the top of the casing 11 over which one of the discs 137 is arranged to be slidably projected from a station at the lower edge of the surface 152. The surface 152 is provided at its upper edge with spaced perforations 153 into one of which the player endeavors to direct the disc by snapping or otherwise propelling it. The placing of the discs in different of the perforations is preferably arranged to have different significance in the game—some for instance representing a "two base hit", others a "home run", and so on. If the disc fails to enter any perforation, it slides back to the forward edge and into a trap passage 154 provided thereat, the unsuccessful effort of the player then constituting a "strike" or "out" as may be desired. Connected to the various perforations 153 are passages 156 which are arranged to communicate with different of the slots 136 when the arm 132 is in fully withdrawn position and to present the disc properly disposed to permit it to roll into the appropriate slot. To prevent a disc leaving its passage 156 except when the appropriate slot is in registration with such passage, a stop member 157 is provided, such member being arranged to be operatively disposed adjacent the end of the passage except when escape of the disc therefrom is desired. As here shown, the member 157 is pivoted to the plate 23 and is arranged to have its free end disposed in slots 158 provided near the passage ends when the passages and slots 136 are out of registration whereby a disc will be held in the passage. A laterally projecting pin 159 is provided on the stop member 157, with which a projection 161 provided on the arm 132 is arranged to slidably engage as the latter reaches its fully retracted position whereby a disc may enter its slot.

To provide for keeping records of a game played with the apparatus, manually operable run indicating devices 162 are provided, such devices being here shown mounted at the front of the casing near the bottom thereof and arranged to be reset to a zero indication by means of a rod 163 operatively associated therewith and extending through a side of the casing, such rod being here shown provided with a crank handle 164. For indicating outs in a game, an indicating device 166 is also shown provided, such device being also arranged to effect the rotation of a star-wheel 167 in accordance with its record. On each third out the points of the wheel 167 are arranged to engage a projection 168 provided on the plate member 93 to effect the upward movement thereof and thus secure the leading runner piece at the home station in a manner previously described.

Supposing now that a play has left the pin 72 seated in any one of the seats 74 the operation of the device would be effected as follows. The player would first endeavor to project a disc 137 along the surface 152 and into one of the perforations 153. Assuming that he succeeds in placing the disc in a perforation, the disc would travel through the action of gravity into the appropriate passage 156 and be held at the lower end thereof by means of the stop member 157. The player would now pull forwardly on the operating hand lever 111 to rotate the operating member 113 with the result that during the first part of the forward rotation of the latter this member would first project the thrust member 116 against the arm 79 to rock the same and its shaft 78 to thereby effect a release of the leading runner piece and at the same time engage the pawl 97 in the notch of stop arm 102 to hold the shaft 78 against a return rotation, in the manner hereinbefore described. After the shaft 78 is thus held, the thrust member 117 is arranged to become inoperatively engaged with the lever 114 whereby the thrust member 116 is freed in the manner previously described and thus does not thereafter prevent a return movement of arm 79. In the meantime the lever 122 will have been operatively rocked to lift the pin 72 out of its seat and clear of all the seats whereby the spring 131 will function to dispose the link member 132 in fully retracted position with the disc receiving slots 136 of the arm 132 opposite the ends of the passages 156, the coin passage stop member 157 having been rendered inoperative as the link member 132 reaches such position. The complete raising of pin 72 also, of course, renders the brake lever 91 and pawl 148 inoperative. It will be clear that if the previous play has been an "out", the slots and passages will already be in registration, and it will be noted that such a relation is assumed in the various figures of the drawings. With the disc in its slot, further forward rotation of

the operating member 113 now causes the forward projection of the support member 138 to engage the extension 141 thereof against the disc and thereafter move the link 132 longitudinally forwardly, it being noted that the greatest movement of the latter is produced when the disc is disposed in the rearmost slot and that the proper seat 74 will now be positioned in the path of pin 72.

During the return movement of the member 113, the first entry of the lever 126 into the slot 127 renders the pawl 148 operative to engage its appropriate tooth and so hold the link 132 in projected and operative position and as the lowering of the pin 72 to its proper seat is permitted whereby shaft 57 is rotated to urge an equal and predetermined movement of all the runner pieces in the manner described. The rotation of arm 51 thus produced effects a release of plate 97 to render the pawl 94 inoperative and so permit the return rotation of the shaft 78 and the resulting forward movement of the runners at the home station against the tooth of the forward plate 82. When a "three-bagger" is made and there is a runner at second base, the latter will, by the movement of arm 51, be moved around to home, while the freed runner piece will be simultaneously moved to third base. As the pin 72 is brought to rest, it will, through its bearing on the movable stop member 73, operatively dispose the brake arm 91.

We claim:

1. In a game apparatus, a playing field providing a series of spaced stations including a starting station, player pieces arranged to be initially positioned at said starting station, means arranged at each successive operation thereof to move a different piece from said starting station to another station and means operative independently of said last means for moving pieces disposed at other than said starting station to said last station.

2. In a game apparatus, a playing field providing a starting station, player pieces arranged to be initially stationed at said starting station, normally inoperative means arranged at each operation thereof to urge a displacement of the pieces at said starting station, and means operative to permit the movement of but one piece from the starting station at each operation of said first means.

3. In a game apparatus, a playing field, player pieces variously positionable over said field, means operative to simultaneously urge a displacement of each of the pieces from their particular positions on the field, and means operative during the operation of said first means to prevent the displacement by said first means of certain of said pieces from a home position thereof.

4. In a game apparatus, a playing field, player pieces variously positionable over said

field, means operative to releasably hold certain of said pieces against displacement, and a movable member frictionally and independently engaging with all of said pieces whereby a movement of said member will be permitted for effecting movements of the unheld pieces.

5. In a game apparatus, a playing field, player pieces variously positionable over said field, independent arms operatively engaging said pieces and each arranged to be moved to shift the position of its player piece, and means arranged upon each operation thereof to move a variable and independently predetermined number of said arms.

6. In a game apparatus, a playing field, player pieces movable over said field in planes substantially parallel thereto, independent and pivotally mounted members carrying said pieces, means operative to simultaneously move certain of said members to displace said pieces, and means operative to variably predetermine the members to be moved.

7. In a game apparatus, a playing field, independent and co-axially pivoted arms arranged for movement over said playing field, a player piece carried by each of said arms and disposed over said field, a member arranged to maintain a frictional engagement with all of said arms whereby a movement thereof may effect a movement of one or more arms in its plane, and means operative to effect an operative movement of said member.

8. In a game apparatus, a playing field, player pieces, independent and coaxially pivoted arms carrying said pieces for movement over said field, telescopically engaged hubs carrying said arms, a sleeve coaxially related to said hubs, and friction shoes on said sleeve arranged to independently engage different of said hubs whereby the rotation of said sleeve will urge the rotation of said hubs to effect a movement of the different pieces.

9. In a game apparatus, a playing field, player pieces, independent and coaxially pivoted arms carrying said pieces for movement over said field, telescopically engaged hubs carrying said arms, a sleeve coaxially related to said hubs, friction shoes on said sleeve arranged to independently engage different of said hubs whereby the rotation of said sleeve will urge the rotation of said hubs to effect a movement of the different pieces, and means operative to effect a rotative movement of said sleeve.

10. In a game apparatus, a playing field, player pieces, independent and coaxially pivoted arms carrying said pieces for movement over said field, telescopically engaged hubs carrying said arms, a sleeve coaxially related to said hubs, friction shoes on said sleeve arranged to independently engage different of said hubs whereby the rotation of said sleeve will urge the rotation of said hubs to effect a

movement of the different pieces, means operative to effect a rotative movement of said sleeve, and means operative independently of the preceding means to predetermine the amount of rotative movement of said sleeve.

11. In a game apparatus, a member providing a surface having delineated thereon a playing field, player pieces arranged to be variously disposed over said field, coaxially pivoted arms mounted for movement behind said member, and means connecting said player pieces to said arms and arranged to cooperate to maintain said arms in a fixed order.

12. In a game apparatus, a playing surface, player pieces arranged to be variously positioned over said surface, means operative to simultaneously urge like displacements of said pieces, a pivoted member operatively associated with said means and arranged upon a pivotal movement thereof to operate said means, and stop means variably positionable with respect to said pivoted member whereby different degrees of pivotal movement of said pivoted member will be permitted.

13. In a game apparatus, a playing surface, player pieces arranged to be variously positioned over said surface, means operative to simultaneously urge like displacements of said pieces, a pivoted member operatively associated with said means and arranged upon a pivotal movement thereof to operate said means, stop means variably positionable with respect to said pivoted member whereby different degrees of pivotal movement of said pivoted member will be permitted, and means independently operative to predetermine the positioning of said stop means.

14. In a game apparatus for simulating the playing of a base-ball game, a playing field

providing bases, runner pieces arranged to be progressively moved around the circuit of said bases, means arranged at each operation thereof to simultaneously urge a like movement of runner pieces to bases in advance thereof, and means operative independently of said first means and in accordance with the skill of an operator to predetermine the degree of movement urged upon said runner pieces.

15. In a game apparatus, a playing field, player pieces, pivoted arms carrying said pieces for movement over said field, hubs carrying said arms, and a member arranged to independently and frictionally engage different of said hubs for urging the rotation thereof to effect a movement of the different pieces.

16. In combination with a game apparatus providing a playing surface, player pieces arranged to be variously disposed over said surface, a member operative to simultaneously urge like displacements of said player pieces in proportion to the degree of actuation thereof, and means adapted to operate said member, a member providing a second surface, a projectile arranged to be slidably projected on and over said last surface by an operator of the apparatus, and stop means operative in accordance with the disposal of the projectile after said projection thereof to determine the degree of actuation of said member.

In testimony whereof, we have hereunto set our hands at Oakland, California, this 26th day of November, 1926.

GORDON B. MILLS:
AUGUST J. SCHMIEDESKAMP.
HENRY E. SKINNER.