

Aug. 28, 1945.

J. J. HICKEY

2,383,860

MACHINE FOR PLAYING CARD GAMES

Filed Dec. 1, 1943

5 Sheets-Sheet 1

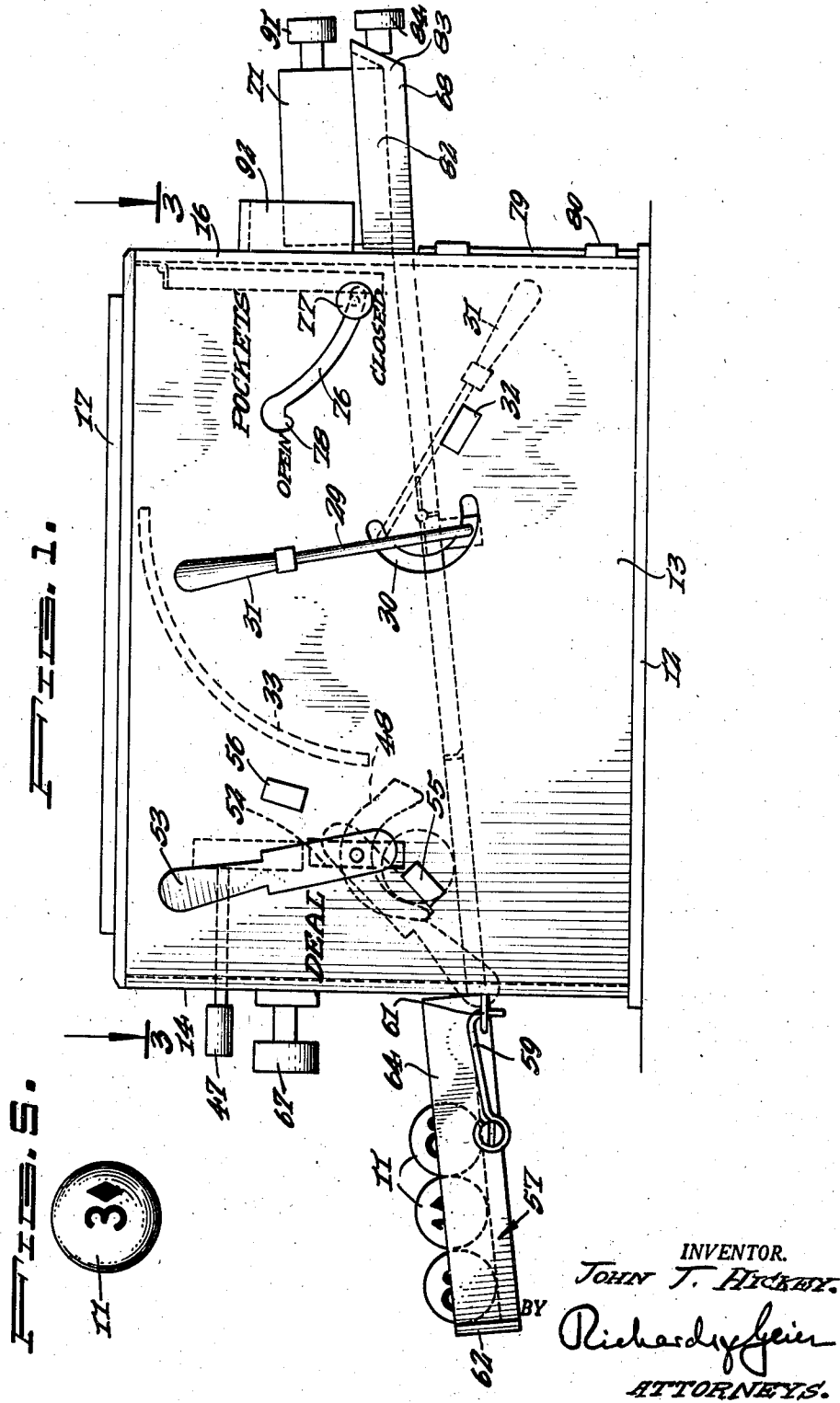


FIG. 1.

30

INVENTOR.
JOHN T. HICKEY.
BY
Richard J. Fein
ATTORNEYS.

Aug. 28, 1945.

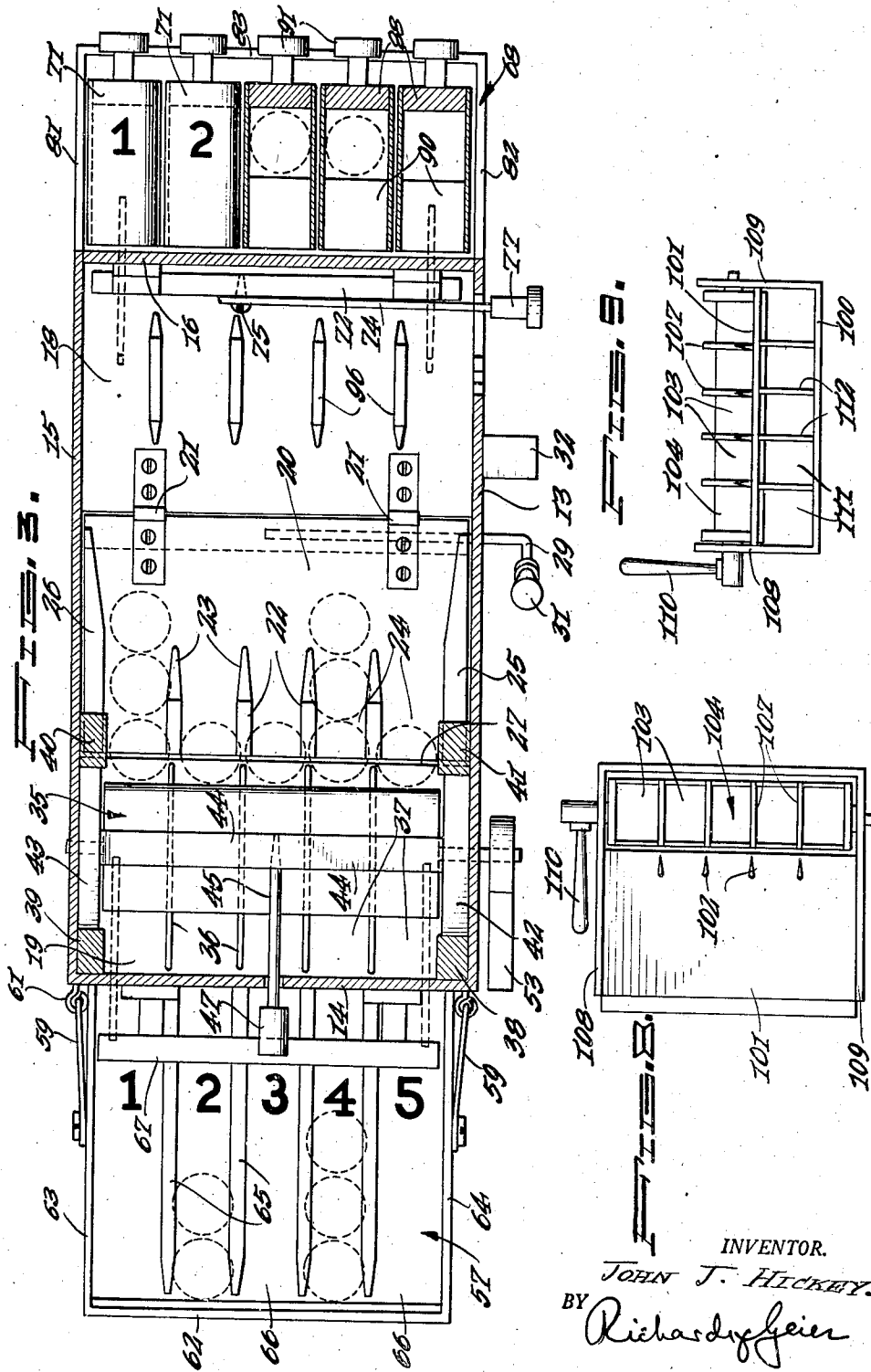
J. J. HICKEY

2,383,860

MACHINE FOR PLAYING CARD GAMES

Filed Dec. 1, 1943

5 Sheets-Sheet 3



INVENTOR.
JOHN J. HICKEY.
BY *Richard Dykeman*
ATTORNEYS.

Aug. 28, 1945.

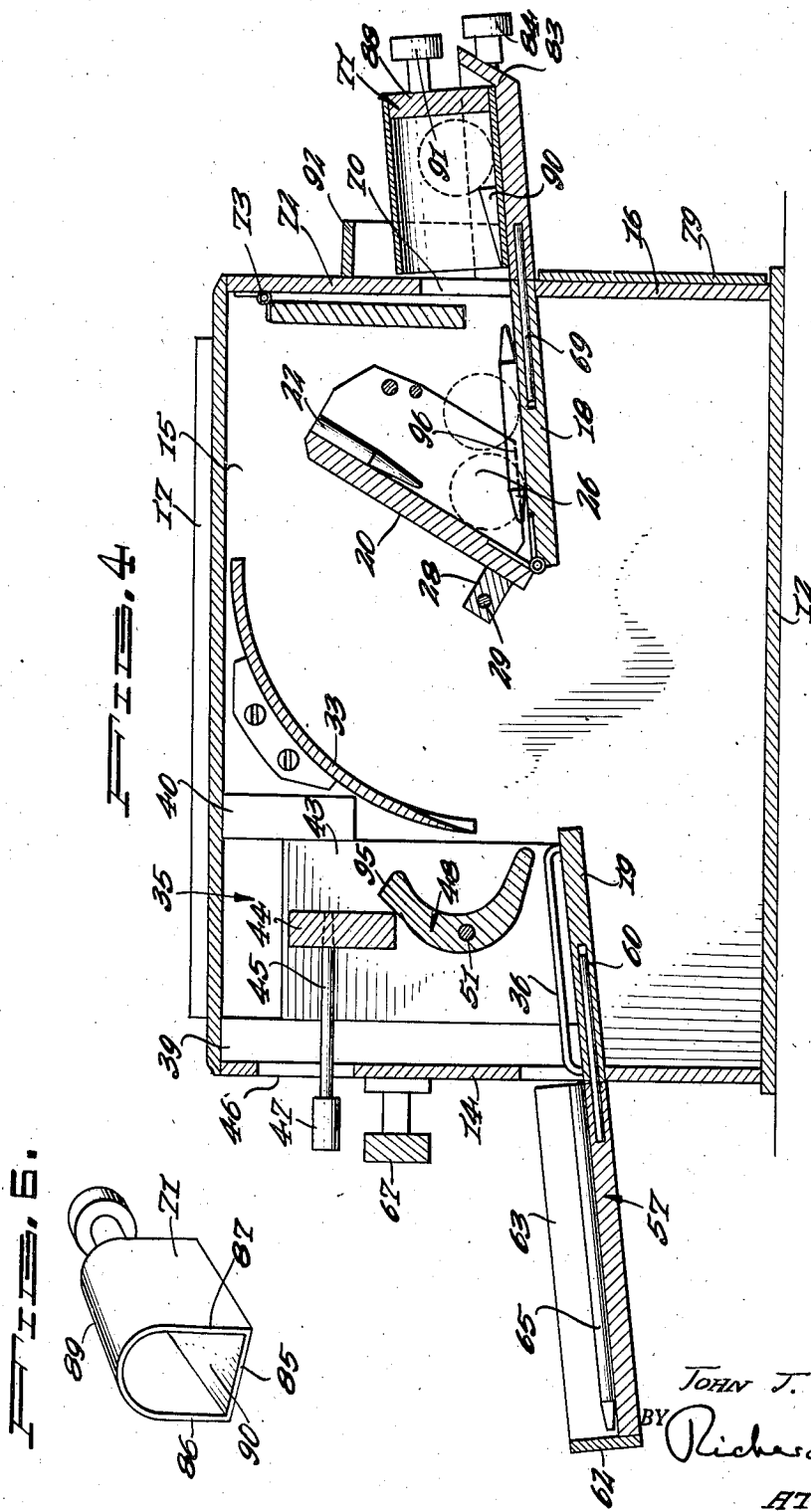
J. J. HICKEY

2,383,860

MACHINE FOR PLAYING CARD GAMES

Filed Dec. 1, 1943

5 Sheets-Sheet 4



INVENTOR.
JOHN J. HICKEY.
BY *Richard G. Geier*
ATTORNEYS.

UNITED STATES PATENT OFFICE

2,383,860

MACHINE FOR PLAYING CARD GAMES

John J. Hickey, Arlington, N. J.

Application December 1, 1943, Serial No. 512,423

12 Claims. (Cl. 273-148)

This invention relates to games and refers more particularly to machines for playing solitaire, stud poker, and other games which are usually played with a deck of fifty-two or fifty-three playing cards.

My Patent No. 2,334,093, issued November 9, 1943, describes a machine for playing solitaire, the operations of which replace various manipulations which must be carried out in the course of a card game.

This machine includes a rotary drum containing a swingable body which is used for elevating balls serving as a substitute for the cards.

An object of the present invention is to improve a machine of this type by constructing it in such manner that the various parts thereof will be protected against undue strain or breakage.

Another object is the provision of a game-playing machine which is compact and easily portable and the various parts of which occupy the least possible amount of space.

Yet another object is the provision of a machine for playing card games various parts of which may be conveniently replaced by others in the course of a game or may be removed for transportation purposes.

Other objects of the present invention will become apparent in the course of the following specification.

In accomplishing the objects of the present invention, it was found desirable to provide a main casing which is portable and which contains a swingable body used for the mixing or shuffling of the balls serving as a substitute for cards. The casing is provided with an inclined ramp used to transmit the mixed balls toward a gate. Two detachable parts may be connected to the main casing or removed therefrom whenever the machine is not being used.

One of these detachable parts constitutes a display board carrying display channels and adapted to be attached adjoining the gate so that it may become an extension of the inclined platform.

Another detachable part may be connected to the opposite or rear wall of the casing and serves as a carrier for a plurality of pockets. The number of the pockets may be equal to that of the display channels and may depend on the game which is being played.

The invention will appear more clearly from the following detailed description when taken in connection with the accompanying drawings

showing by way of example preferred embodiments of the inventive idea.

In the drawings:

Figure 1 shows in side elevation a game-playing machine constructed in accordance with the principles of the present invention.

Figure 2 is a longitudinal vertical section through the machine.

Figure 3 is a top view of the machine with some parts removed and other parts shown in section along the line 3-3 of Figure 1.

Figure 4 is similar to Figure 2 and shows various parts in a different position.

Figure 5 illustrates one of the balls serving as a substitute for cards.

Figure 6 is a perspective view of one of the ball-carrying pockets.

Figure 7 is a sectional view through the machine provided with different ball-concealing means.

Figure 8 is a top view of the ball-concealing means shown in Figure 7.

Figure 9 is a front view of the ball-concealing means shown in Figures 7 and 8.

Figure 10 is a fragmentary sectional view of the ball-concealing means illustrating a different position of the actuating lever.

The game-playing machine is played with the use of balls 11 illustrated in Figure 5 and serving as a substitute for playing cards. The balls may be made of wood, metal, cement, ordinary or magnifying glass, porcelain or any other suitable material. The balls may be made in convenient sizes, ranging from $\frac{3}{4}$ of an inch to $1\frac{1}{2}$ inches in diameter and may be made of four colors which are a well-recognized component of ordinary playing cards; namely, black for spades, blue for clubs, red for hearts and white or ivory for diamonds.

The balls are numbered, lettered and decorated in a manner similar to that provided on playing cards, possibly with the addition of luminous markings or the effects of magnifying glass.

The main casing of the machine may be substantially rectangular in form and may include a bottom 12, walls 13, 14, 15 and 16 and a removable cover 17. The cover 17 may be hinged to the side walls 13 or 15. This container may be made of metal, wood, plastics or other suitable materials.

Obviously, the illustrated container may be replaced by a table or bench or some other structure of any other convenient shape. The casing may be provided with magnifying or reflector

glass (not shown) to display or illustrate the balls or various parts of the machine.

As shown in Figure 2, the interior of the container includes a ramp 18 which is inclined downward in a direction toward the front wall 14 of the casing. The ramp 18 extends above the bottom 12 and is firmly attached to the rear wall 16 of the casing and to the side walls 13 and 15 thereof. The ramp 18 extends to about $\frac{1}{3}$ of the length of the casing. Another $\frac{1}{3}$ of the length of the casing is occupied by a front ramp 19 which has the same inclination as the ramp 18 and is located in the same plane.

The ramp 19 is firmly connected to the front wall 14 of the casing and to its side walls 13 and 15. The space between the ramps 18 and 19 may be occupied by a swingable platform 20 which may be connected by hinges 21 to the front edge of the ramp 18.

When the platform 20 is located in its normal position shown in Figure 2, it serves as a continuation of the ramps 18 and 19 and connects these ramps. As shown in Figures 2 and 3, the platform 20 carries a plurality of parallel guides 22 which terminate in tapered barriers 23.

The guides 22 are uniformly spaced one from the other and define a plurality of parallel channels 24. In the example illustrated, there are five channels 24, although the number of these channels may be varied at will. The sides of the platform 20 carry walls or barriers 25 and 26, which serve the purpose of eliminating any jamming of the platform by the balls 11.

A rod or wire 27 extends between the barriers or flanges 25 and 26 and is firmly embedded therein. The rod 27 is located at a height above the supporting surface of the platform 20 which is somewhat higher than the diameter of the balls 11. Thus, the rod 27 will not prevent the rolling of the balls 11 upon the platform 20 toward the ramp 19. On the other hand, the rod 27 is useful for the sorting of the balls and for preventing congestion or jamming.

The underlying surface of the platform 20 carries an extension 28 which contains a rod 29. The rod 29 extends through an arcuate opening 30 formed in the side wall 13, and is bent to form a handle 31.

It is apparent that a player may swing the platform 20 from the position shown in Figure 2 to the position shown in Figure 4 and vice-versa by operating the handle 31.

The bent part of the rod 29 moves within the arcuate opening 30, Figure 1, in the course of this swinging motion.

The stop 32, Figures 1, 3, which is located upon the outer surface of the wall 13 is used to limit the extent of this swinging motion in one direction, while the hinges 21 Figures 2, 3, limit the motion in the opposite direction.

A curved barrier 33 is located above the platform 20 and has a surface which follows substantially the path of movement of the outer edge of the platform. Thus, the barrier 33 prevents the balls heaped upon the platform, in the position shown in Figure 2, from falling upon the platform 19.

The barrier 33 may be attached to one of the side walls of the container by any suitable means 34.

The ramp 19 is arranged to cooperate with a gate device designated by the numeral 35 in the drawings. The ramp 19 is provided with guides 36 which may be made of wire or any other suitable material and which may be in alignment

with the guides 22 carried by the platform. Thus, the guides 36 form channels 37 which constitute a continuation of the channels 24.

The gate 35 is reciprocable in the vertical direction along four guides, 38 to 41. The guides 38 and 41 are firmly attached to the side wall 13. The guides 39 and 40 are located opposite the guides 38 and 41 respectively and are attached to the side wall 15. Additionally, guides 38 and 39 may be firmly attached to the front wall 14.

Two plates 42 and 43 are slidable in these guides, the plate 42 being located between the guides 38 and 41 while the plate 43 is located between the guides 39 and 40 (Figure 3). The plates 42 and 43 are joined by a wall or barrier 44 which extends parallel to the front wall 14.

The wall 44 carries a rod 45 which extends through an opening 46 provided in the front wall 14. The outer end of the rod 45 carries a handle 47.

As shown in Figures 2 and 4, the slot 46 extends substantially in a vertical direction thereby affording the possibility of moving the gate up and down by movement of the rod 45 within the slot 46.

The ball selector 48 has the form of a trough which is substantially U-formed in cross section and which is provided with walls 49 and 50 located at a distance from one another which is slightly greater than the diameter of the ball 11. The ball selector 48 extends parallel to the walls 14 and 44 and is keyed intermediate the walls 49 and 50 upon a pivot or rod 51.

The pivot 51 has one end which is mounted in the plate 43. The opposite end of the pivot 51 extends through a slot 52 provided in the wall 13. This outer end of the rod 51 is firmly connected with a handle 53, Figure 1. The handle 53 is not only movable vertically along with the entire gate 35, but it is also swingable in the direction of the arrow 54 shown in Figure 2 between two stops 55 and 56 Figure 1 carried by the wall 13.

A display board 57 constitutes a detachable part which may be conveniently removed and preserved in the interior of the container when the machine is not in use. In the example illustrated, the display board 57 is attached to the front wall 14 close to the opening 58 by means of hooks 59 shown in Figure 1 or pins shown in Figure 2.

The hooks 59 may be inserted into eyelets 61 carried upon the outer surface of the wall 14. Projections or pins 60 may be inserted into suitable openings provided in the platform 19. The display board 57 has a front barrier 62 which stops the balls rolling off. As shown in Figure 2, the board 57 is so inclined that it is located in the same plane in which the ramps 18 and 19 and the platform 20 are located. The board 57 is also provided with side walls 63 and 64 as well as guides 65 which are located in alignment with the guides 22 and 36 and form passages or channels 66 which constitute a continuation of the channels 24 and 37.

As shown in Figure 3, the channels 66 may be numbered in consecutive order for the convenience of the players.

As will be described hereafter, it may be necessary to tilt the container rearwardly in the course of the game.

In order to facilitate this tilting, the front wall 14 of the container carries a handle 67 which is preferably located between the openings 46 and 58 provided in the front wall 14.

A second detachable part is constituted by a pocket-supporting board 68. Any suitable means may be used for attaching the board 68 to the rear wall 16 of the container and in the example illustrated, pins 69 are used for this purpose. The pins 69 are firmly embedded in the board 68 and may project into suitable openings formed in the ramp 18 and the wall 16.

As shown in Figure 2, the board 68 is located close to an opening 70 provided in the rear wall 16. The opening 70 is approximately of the same size as the opening 58 and is sufficiently large to enable the passage of the balls 11 from the interior of the container to the board 68 and the pockets 71 located thereon.

The opening 70 is normally closed by a door 72 which may be hinged at 73 to an inner surface of the wall 16. The door 72 may be manipulated by a rod 74 which is attached at 75 Figure 3 to the door and which extends through an elongated slot 76 which is provided in the side door 13. The outer end of the rod 74 carries a knob 77.

As shown in Figure 1, the slot 76 may be provided with a recessed portion 78 which will hold the rod 74 and the door 72 in an open position.

As already stated, the interior of the container is accessible through a hinged cover 17. Preferably, the rear wall 16 is also provided with a door 79 which is hinged at 80 to the wall 16 and which provides ready access to the interior of the container.

The detachable board 68 carries side walls 81 and 82 and a rear wall 83, which may be somewhat inclined and which may carry a knob 84. Thus, the board 68 has the form of a tray which is open adjacent the opening 70. The board or tray 68 is used to carry a plurality of pockets 71. Since all pockets are alike, only one of them will be described hereafter.

The pockets may be consecutively numbered and the numerals upon the pockets should correspond to those upon the channels 66 for the purposes of the game.

As is shown more clearly in Figures 2 and 6, each pocket 71 has a bottom 85, side walls 86 and 87, a rear wall 88 and a top 89 which may be curved or vaulted and which may be integral with the side walls 86 and 87. Thus, the pocket 71 is open on one side only. The lower surface 85 of the pocket may be provided with an inclined angular stop 90, the purpose of which is to prevent a ball 11 located close to the rear wall 88 of the pocket from rolling out of the pocket without considerable shaking or without turning the pockets.

The rear wall 88 of the pocket carries a knob 91.

The rear wall 16 of the container may be provided with a projection or a canopy 92 located above the front ends of the board 68 and of the pockets 71.

The manner of playing a game such as stud poker by means of the illustrated machine will be described now by way of example:

In the assembled position of the machine which is shown in the drawings, the two detachable members 57 and 68 are attached to the walls 14 and 16 respectively. The balls 11 which represent playing cards and which are used in numbers equal to that of a deck of cards are introduced into the interior of the container and are placed upon the ramp 18 and the platform 20 which at that time occupies the flush position shown in Figure 2. Approximately one-half of the balls will rest upon the platform.

The shuffling or mixing of the balls is carried

out by the swinging of the platform which is accomplished by a player who swings the handle 31 back and forth within the slot 30. Then, the platform will swing from the position shown in Figure 2 to the position shown in Figure 4 and back again.

In the course of this swinging movement of the platform, approximately one-half of the balls will be elevated, forced into and cast over unto the remaining unlifted lot of balls. When the platform is return to its normal position shown in Figure 2, the lot of the fifty-two or fifty-three balls will settle down to one tier descending upon the ramp 18 and will thus be mixed or shuffled in the course of the infiltrating, tiering-up and settling operations. The swinging of the platform will, therefore, mix the mass of balls in an efficient, thorough and indiscriminate manner.

At the completion of the mixing operation, the balls rest upon the ramp 18 and the platform 20, and are held by the gate 48.

Due to the provision of partitions 22 and the rod 27, some of the balls will occupy the channels 24 and will be pressed by other balls against the gate.

As shown in Figure 2, the gate 48 is of such shape that when it is swung in a direction opposite to arrow 54, the end 50 will rise and the front row of balls will enter gate 48 between the projecting walls 49 and 50. Turning of gate 48 in the direction of arrow 54 will release these balls in the direction of the opening 58 so that the balls will roll by gravity onto the board 57 and will be located in the grooves 66.

It is apparent that one ball will be dealt into each channel 66 and will be revealed to the players. Therefore, each reciprocation of the member 48 will separate from the large mass of balls and count out or allocate to the players a number of playing units equal to that of the channels 66, one unit being allocated to each channel.

Since jamming, clogging or wedging of the balls close to the gate 48 would interfere with the proper dealing of the balls, the machine is provided with various means, the object of which is to prevent this jamming.

In the first place, the pointed ends 23 of the partitions 22 sort the balls and compel them to form regular rows within the channels 24.

In the second place, the provision of the rod 27 which may be made of wire and which may be located about one and a quarter inches above the level of the platform 20, confines the movement of the balls to one tier at the door entrance.

Thirdly, the wall 50 of the gate 48 is provided with an extension 95 which is so located that at the end of each revolution it will strike the mass of balls pressing against the gate with a sharp blow and thereby in conjunction with the tapered rods 23 and the transverse rod 27, completely eliminate all jamming of the balls at the entrance of the gate.

As already stated, the gate 48 is reciprocated by the turning of the handle 53. The handle may be made of metal or cement and may be made sufficiently heavy so that it will remain in a downward position except when lifted by the dealer.

Obviously, a small spring (not shown), or any other suitable means may be used to attain the same purpose.

It is apparent that when the machine is used for playing poker, each partial revolution of the

gate 48 will deal, discharge and deliver into the numbered display channels 66 of the board 57 one ball for each of the players.

In various games the open dealing of cards is replaced or carried out in conjunction with a concealed dealing.

In accordance with the present invention, the second detachable part or pocket holder 68 is used for the purpose of this concealed dealing.

For this purpose the tray 68 carries pockets or containers 71 which are open toward the opening 70, but normally the opening 70 is closed by the door 72. In order to move the balls from the interior of the container to the pockets 71, the player raises the door 72 and tilts the container in the direction of the rear wall 16 by lifting the handle 67 attached to the front wall 14. Then, the ramp 18 and the platform 20 will be inclined in the opposite direction and will cause a rolling of the balls toward the wall 16. Guides 96 will guide the balls into the pockets 71. Then, the player restores the machine to its normal position while maintaining the door 72 in its open position. Then all the balls with the exception of one, will run out of each pocket and that one ball will be entrapped in each pocket by the provision of the projecting portion 90.

Thereupon the swinging door 72 is restored to its closed position shown in Figure 2.

As already stated, the door 72 may be operated by the knob 77 and for the convenience of the player, the door 72 may be held in its open position through the provision of the recess 78.

It is apparent that the described operation will place one ball 11 in each of the pockets 71 and that ball will be concealed from the players. The operator of the machine may remove the pocket holder 68 from the casing and place it in a position which will enable each of the players seated around the front of the machine, to pick up his numbered pocket from the tray.

It is apparent that by combining the concealed delivery of the playing units with the unconcealed delivery, the players receive the equivalent of the "up-cards" and "down cards" of a card game. At the conclusion of each round of play, an accumulation of balls 11 may rest in the display channels 66, such balls being the equivalent of discards in card games.

These balls and the balls dumped out of the pockets may be returned to the interior of the machine by raising the entire gate 48 by means of the lever 47 and simultaneously tilting the container in the manner hereinbefore described by the use of the handle 67. Then, the discards will be returned and the next round of play may be initiated by carrying out the described shuffling operation.

In addition to poker the game of solitaire and many other games may be played by means of the described machine.

An important advantage of this machine is that the use of removable or detachable trays 57 and 68 reduces its size to a considerable extent. Furthermore, the novel mixing steps of the machine are carried out within the casing without rocking it and without the provision of large rotary parts.

The anti-jamming devices of the machine are effective to provide the desired distribution of the balls.

Figures 7 to 10 show a machine wherein the second detachable part; namely, the tray 68 has been replaced by a different mechanism. Other parts of the mechanism are the same, the same

numerals indicating similar parts in the drawings.

The ball-receiving device comprises a lower floor 100 and an upper floor 101 which is located in substantially the same plane as the platform 18. The upper floor or platform 101 carries guides 102 leading to chambers 103 formed by partitions 107 within a substantially cylindrical body 104.

The cylindrical body 104 has a closed section 105 and an open section 106 and contains partitions 107 which form the chambers 103.

The cylindrical body 104 is pivoted in the side walls 108 and 109 and is provided with a handle 110. In the position shown in Figure 7, the cylindrical body 104 will receive balls in its chambers 103. These balls may roll by gravity toward these chambers provided that the casing is tilted by lifting the handle 67 and that the door 72 is open. Thereupon the handle 110 is turned from the position shown in Figure 7 to the position shown in Figure 10 so that the balls will be dropped upon the lower platform 100 and into chambers 111 which are formed by partitions 112.

The partitions 112 are carried upon the lower platform 100. The balls located in the chambers 111 may be supplied to the players by any suitable means. For instance, the device may be provided with inclined channels which are not shown in the drawings and which lead from the chambers 111 to the individual locations wherein players are seated.

A device of this type is described in my United States Patent No. 2,334,093 of November 9, 1943.

The described platforms 100 and 101 may be conveniently replaced by separate pockets located at the corners of the case and communicating with channels leading to the locations of the players. It is apparent that the invention shown above has been given by way of illustration and not by way of limitation and that the above-described machine is subject to wide variations and modifications without departing from the scope or intent of the present invention. For instance, the release of balls may be carried out by a vertical movement of the gate without it being necessary to swing it. This and other variations and modifications are to be included within the scope of the present invention.

What is claimed is:

1. An apparatus simulating the dealing in card games, wherein the cards are replaced by balls carrying card indicia, comprising, in combination with a casing and means located within said casing for mixing said balls, a ball-displaying tray removably attached to one side of said casing, a pocket-carrying tray removably attached to an opposite side of said casing and adapted to conceal said balls before, during and after removal, and means located within said casing for transmitting the mixed balls to said trays.

2. An apparatus in accordance with claim 1; wherein said ball-displaying tray comprises a board, side walls enclosing said board on three sides, guides carried by said board and forming channels extending parallel to each other and to two of said three sides, and means for connecting a fourth side of said board to a wall of said casing.

3. An apparatus in accordance with claim 1, wherein said pocket-carrying tray comprises a board, side walls enclosing said board on three sides, and means for connecting a fourth side of said board to a wall of said casing, said apparatus further comprising, in combination, separate

pockets removably carried by said tray and having openings formed therein for receiving balls within said pockets, means within said pockets for retaining balls therein, and separate knobs carried by said pockets.

4. An apparatus in accordance with claim 1 wherein said pocket-carrying tray comprises a lower floor, an upper floor, partitions extending between said lower floor and said upper floor and forming pockets, and means for shifting balls from said pockets to said upper floor and vice versa.

5. An apparatus in accordance with claim 1, wherein said pocket-carrying tray comprises a lower floor, an upper floor, partitions extending between said lower floor and said upper floor and forming pockets, an opening being formed in said upper floor and extending transversely to said pockets, a hollow cylindrical body located in said opening and having an open portion for receiving balls, partitions in said cylindrical body in alignment with the first-mentioned partitions, and a handle connected to said cylindrical body for turning the same.

6. An apparatus simulating the dealing in card games, wherein the cards are replaced by balls carrying card indicia, comprising, in combination with a casing, means located within said casing for mixing said balls, means for receiving, displaying and segregating in separate hands said balls means intermediate the ball mixing and ball receiving means to allocate some of said balls from the mixing to the receiving side, and means for returning said balls for further dealing after the completion of a hand.

7. An apparatus according to claim 6 further comprising means of receiving, concealing, and segregating said balls to complement playing hands.

8. An apparatus according to claim 6 further comprising means of receiving, concealing and segregating said balls, said means comprising separate pockets removable from connection with said casing.

9. An apparatus simulating the dealing in card games, wherein the cards are replaced by balls carrying card indicia, comprising, a casing having an opening therein, a ramp within said casing, a ball-mixing device located within said casing and comprising a platform swingably connected to said ramp, and a lever connected with said platform for actuating the same and extending outside of said casing, said platform being adapted to form a continuation of said ramp, in its normal position, and a gate operatively carried by said casing adjacent the outer end of said platform in the normal position of the latter, the said gate being adapted when operated to allocate the said balls through the opening in the casing to a position therebeyond.

10. An apparatus simulating the dealing in card games, wherein the cards are replaced by balls carrying card indicia, comprising a casing having a front wall a rear wall, and two side walls, a ramp inclined downwardly toward said front wall and connected to said rear wall, an opening for the passage of said balls being formed in said front wall above said ramp, a platform swingably connected to said ramp and located in its normal position, in the plane of said ramp, a lever extending outside of said casing and

connected with said platform for swinging the same, another ramp located in the plane of the first mentioned ramp and connected to said front wall to constitute a continuation of said platform in the normal position thereof, and a gate operatively mounted at said front wall over the second mentioned ramp, and adapted when operated to select and allocate some of said balls to complement playing hands.

11. An apparatus simulating the dealing in card games, wherein the cards are replaced by balls carrying card indicia, comprising, a casing having a front wall, a rear wall and two side walls, a ramp inclined downwardly toward said front wall and connected to said rear wall, guides upon said ramp to form channels for said balls, a platform swingably connected to said ramp and located, in its normal position, in the plane of said ramp, a lever extending outside of said casing and connected with said platform for swinging the same, guides upon said platform forming channels constituting a continuation of the first-mentioned channels, side flanges carried by said platform, a rod carried by said side flanges and extending above said platform to provide a passage for balls rolling thereon, a barrier extending within said casing close to the path of movement of the outer edge of said platform, said barrier acting to prevent misplacement of balls heaped upon the platform when in normal position another ramp located in the plane of the first-mentioned ramp and connected to said front wall to constitute a continuation of said platform in the normal position thereof, a gate at said front wall over said second mentioned ramp, guides upon said second-mentioned ramp forming channels constituting a continuation of the first- and second-mentioned channels, and a handle attached to said front wall for rocking said casing.

12. An apparatus simulating the dealing in card games, wherein the cards are replaced by balls carrying card indicia, comprising, a casing having a front wall, a rear wall and two side walls, two ramps located within said casing in one plane which is inclined in a direction downwardly toward said front wall, said ramps being attached to the front and rear walls respectively, a platform swingably connected to one of said ramps and interconnecting said ramps in its normal position, an opening being formed in said rear wall adjacent one of said ramps, another opening being formed in said front wall adjacent the other one of said ramps, a gate intermediate the platform and rear wall adjacent said other opening, said gate comprising two plates, a ball-selecting member swingably mounted in said plates and having an outer ball-engaging wall and an inner ball-engaging wall, an inwardly directed projection upon said inner ball-engaging wall to prevent the jamming of said balls, a lever connected for actuating said ball-selecting member to select and allocate said balls, a wall interconnecting said plates, and a handle carried by the last-mentioned wall and projecting through said front wall for raising and lowering said gate to permit the passage of balls therethrough from one side of the apparatus to the other, and guides located within said casing for guiding said plates in the course of said raising and lowering movements.

JOHN J. HICKEY,