

[54] CARD DEALER

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[52] U.S. Cl. ....273/149 R

[51] Int. Cl. ....A63f 1/14

[58] Field of Search.....273/149 R, 149 P

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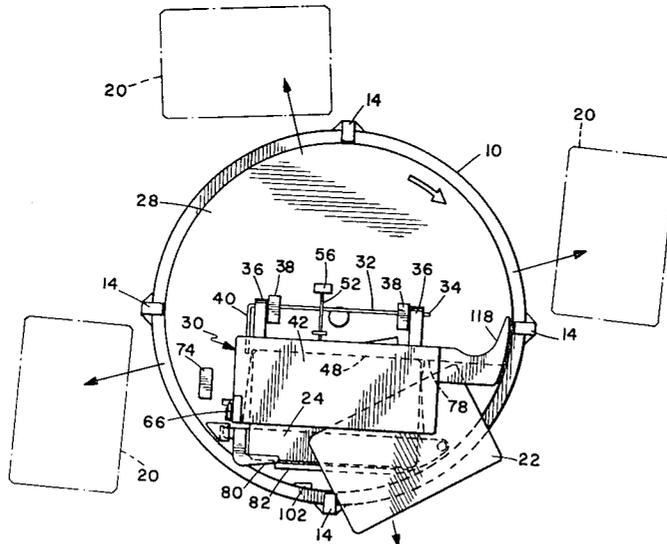
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[57] ABSTRACT

A rotary dealer for playing cards, adapted to be placed more or less centrally of a playing surface and capable of receiving a deck of cards and distributing or dealing the cards into the required number of hands at player's stations, the magazine for the cards being tilttable upwardly for easy loading and the cards being dealt from the top of the deck by initially skewing the top card radially outward from the magazine to be arrested by one of the stops spaced peripherally on a fixed base so that the skewed card is ejected longitudinally as well as radially outwardly and falls at the corresponding player's station.

8 Claims, 9 Drawing Figures



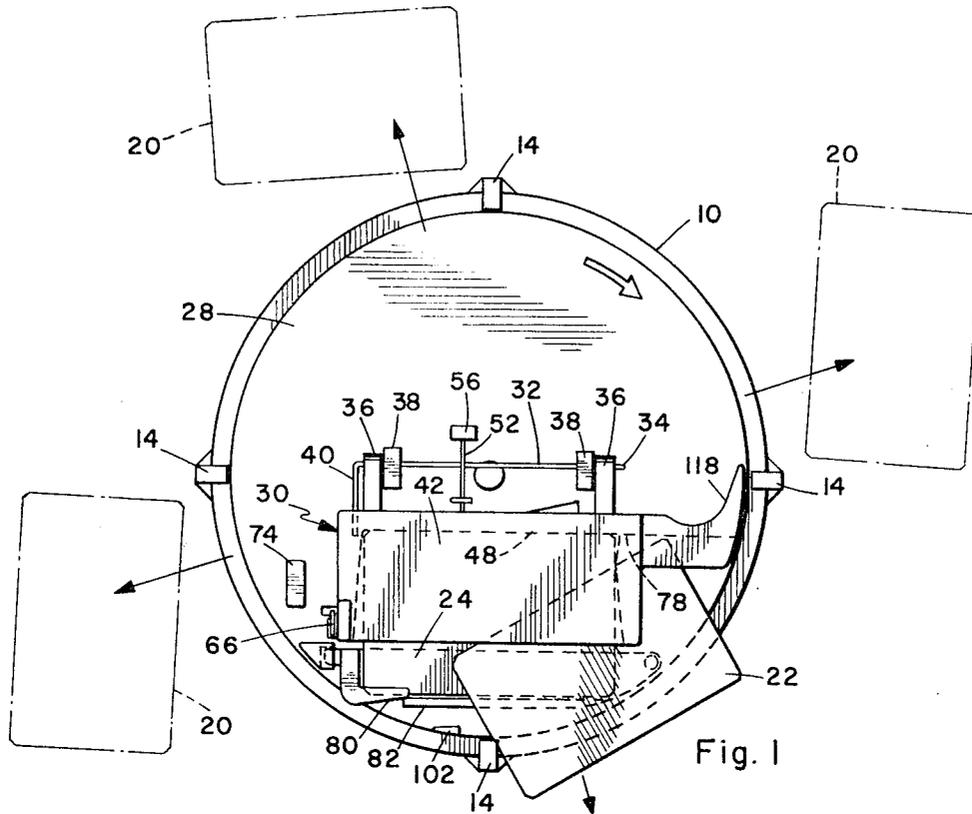


Fig. 1

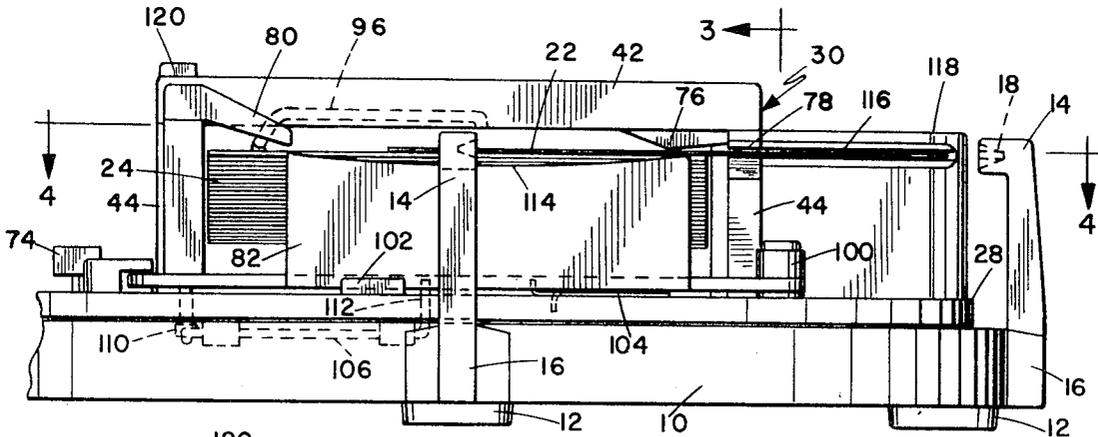


Fig. 2

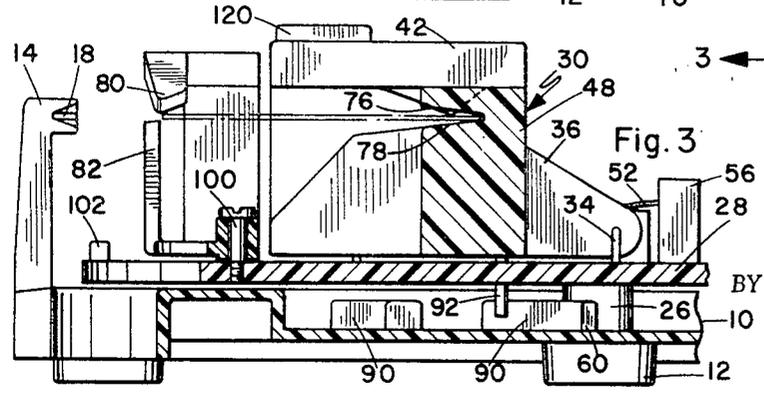


Fig. 3

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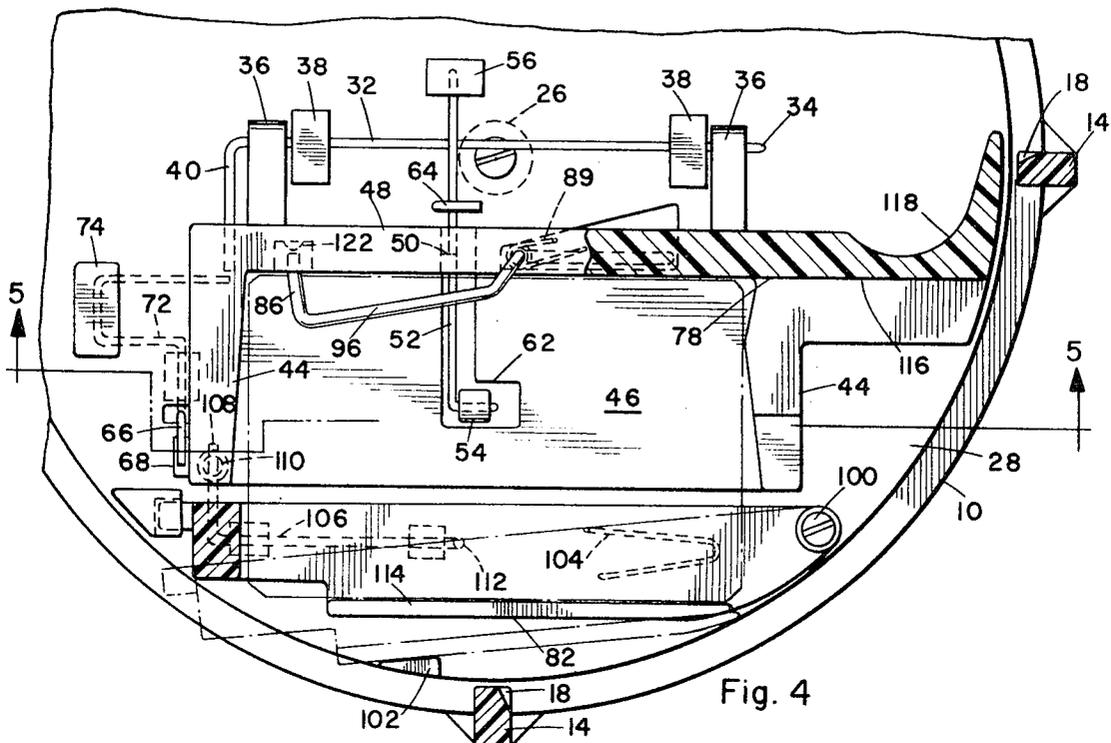


Fig. 4

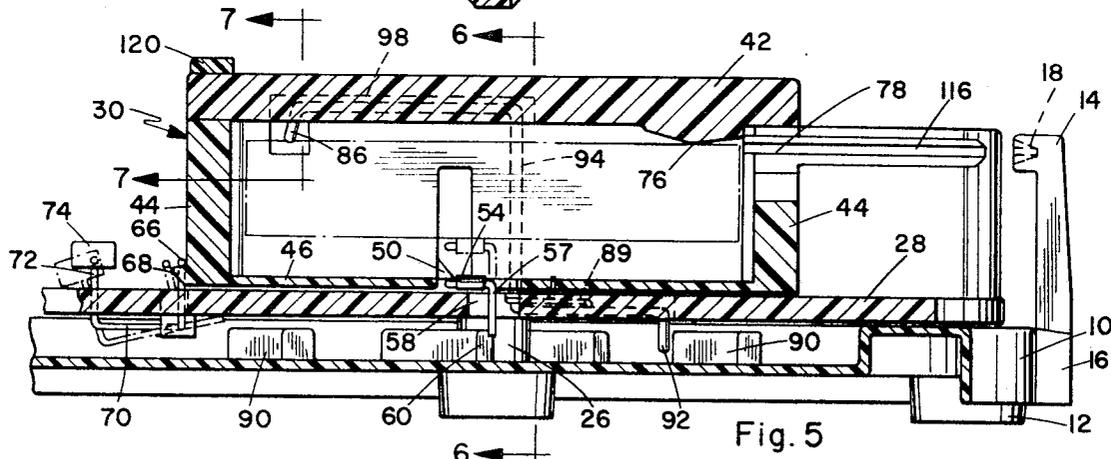


Fig. 5

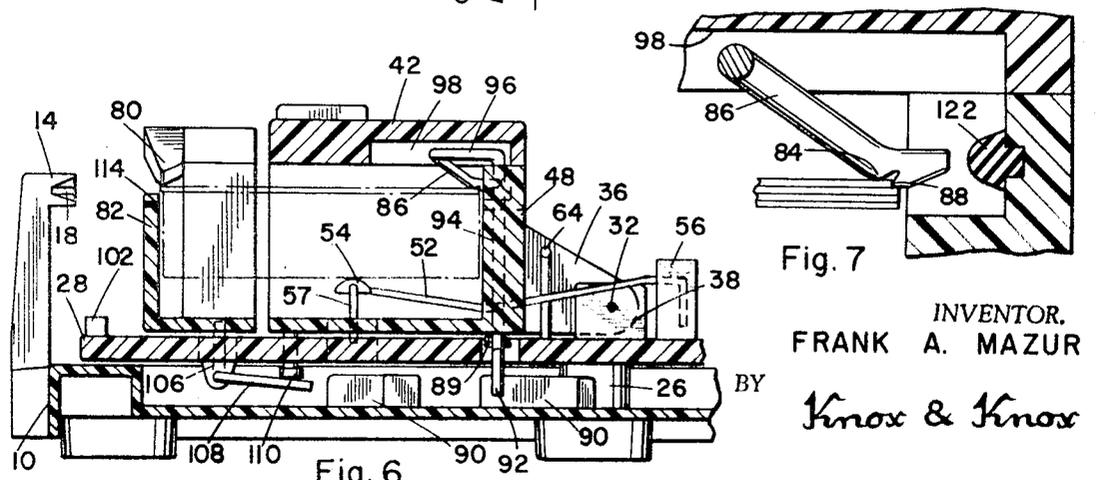


Fig. 6

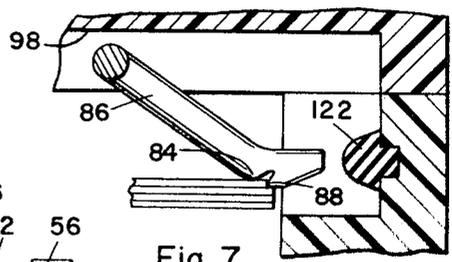


Fig. 7

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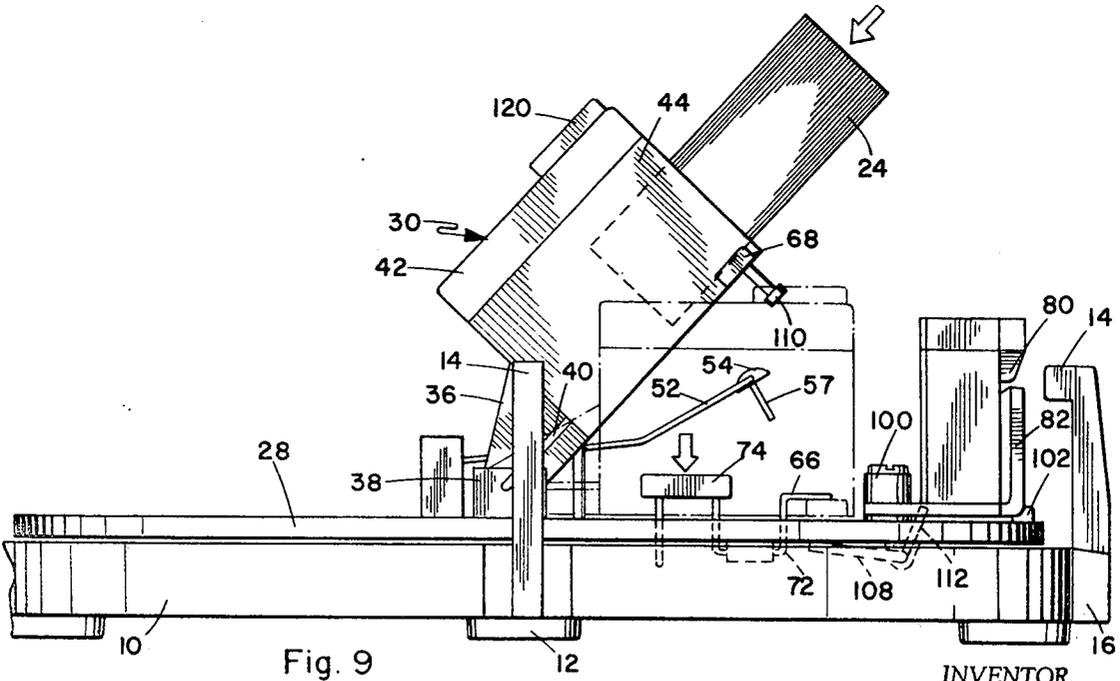
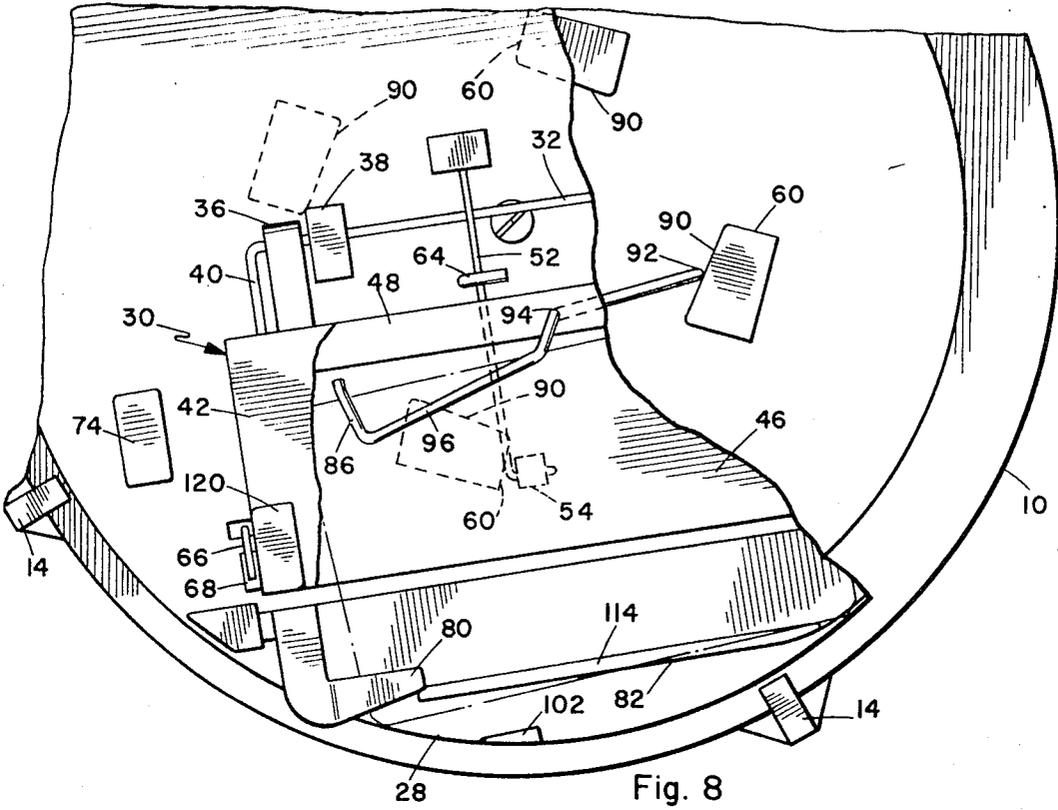


Fig. 9

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## CARD DEALER

## BACKGROUND OF THE INVENTION

Several mechanical card shufflers have been developed but the dealing of the cards is generally accepted as a manual operation. In devices such as are used frequently where Blackjack is played with multiple decks a container for the shuffled decks allows manual sliding of one card at a time from the inclined portion of the container so that the actual dealing into hands is not accomplished mechanically, although the dealer has access only to the top card. Some persons who enjoy card playing do not enjoy dealing the cards, and many players, whether playing for stakes or not, would prefer a purely impersonal, mechanical distribution of the cards. There is therefore a need for a simple, reliable mechanical dealer which is easily portable and the operation of which is easily accomplished by anyone.

## SUMMARY OF THE INVENTION

As claimed, the hereindescribed invention meets the aforesaid need since the item is self-contained and easily placed in the center of an ordinary card table to deal a deck of cards into a number, ordinarily four, hands at as many player's stations. It comprises a small platform, carrying a magazine for a deck of cards, manually rotated relative to its supporting base. The cards are consecutively ejected by first skewing the top card relative to the magazine so that it is arrested from rotation with the platform by a stop fixed to the base of the dealer, and this topmost card is then forced endwise out of the magazine to fall at the side of the base. The magazine can be tilted upwardly to facilitate loading a shuffled deck thereinto and a justifier bar is mounted across the mouth of the magazine to assure initial proper placement of the cards, the justifier bar having a second function as a guard against escape of any but the topmost card. Cams on the base actuate a pusher which probes one end of the topmost card.

## SHORT DESCRIPTION OF THE DRAWING

FIG. 1 is a top plan view of the dealer, showing the card dealing action, one card being shown as it is being moved endwise out of the magazine, certain structure such as the card elevating means being omitted from this figure;

FIG. 2 is an enlarged front elevation view of a major portion of the structure as disposed in FIG. 1;

FIG. 3 is a sectional view taken on line 3—3 of FIG. 2;

FIG. 4 is a sectional view taken on the general plane indicated by the line 4—4 of FIG. 2;

FIG. 5 is a sectional view taken on line 5—5 of FIG. 4 with the deck lifter arm shown in full lines in depressed position as well as in dash line in operative position;

FIG. 6 is a sectional view taken on line 6—6 of FIG. 5;

FIG. 7 is an enlarged fragmentary sectional view taken on line 7—7 of FIG. 5;

FIG. 8 is a partial top plan view, with portions cut away to show the pusher being actuated by a cam in the base; and

FIG. 9 is a side elevation view as taken from the left hand side of FIG. 2, showing the magazine tilted upwardly in full lines, and as locked in operative position in dash lines.

## DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

The preferred form of this invention includes a base 10 which may conveniently be generally circular with non-skid, no-mar feet 12 enabling placement of the dealer on a card table or the like and it is conceived that the dealer, during actual use, will be placed more or less centrally of such card table to deal cards generally radially thereof at a number of stations oriented toward and equal in number to the players. These stations are determined by stops 14 which may be upright posts having their lower ends 16 fixed in spaced relation peripherally of the base, the upper ends having radially inwardly opening slots 18 for sliding reception and guidance of

the cards as will be hereinafter explained. In FIG. 1 the cards 20 are, of course, represented as having been dealt and the term "topmost card" or "top card" 22 will be used herein as designating the uppermost card in the deck 24 either about to be dealt or being dealt as in the foreground of FIG. 1.

At the center of the base 10 an upright arbor 26 is fixed and a platform 28 is rotatably mounted on this arbor as an axial support therefor. A magazine generally indicated by the numeral 30 is pivotally mounted on the platform as illustrated, by a torque bar 32 which has one end 34 downturned and fixed to the platform 28, while intermediate portions function as hinge pins between trunnions 36 on the magazine and bearing blocks 38 on the platform. The other end of the torque bar 32 is bent forwardly as at 40 and connected to the magazine to bias the same toward the upwardly tilted position thereof indicated in full lines in FIG. 9. The magazine is essentially a box with an open front side, a top plate 42, end plates 44, bottom plate 46 best shown in FIG. 4, and back wall 48 as indicated in FIGS. 1 and 8.

In the uptilted position the magazine 30 can receive a deck 24 of cards which initially rest on the bottom plate 46. When the magazine is depressed into what may be considered its operative position the catch 50 shown in FIG. 5 snags the shank portion 52 of the card-elevating pressure pad 54 and carries the same downwardly against an inherent spring bias of the pressure pad shank portion 52 which is terminally fixed to the platform as by securement in the boss 56 on the platform. To release the pressure pad 54 and thus to raise the deck in the magazine a trigger extension 57 of the pressure pad depends through an aperture 58 in the platform to be engaged by a trigger cam 60 on the base 10, it being noted that the bottom plate 46 of the magazine is apertured as at 62 to permit the pressure pad 54 to spring upwardly into contact with the underside of the deck 24, all as best illustrated in FIGS. 4, 5, and 6. In this connection it is important to note that for ease of insertion of the deck into the magazine 30 when the latter is uptilted, the pressure pad 54 is restrained beneath the magazine by a catch 64 as perhaps best shown in FIG. 9.

To hold the magazine in depressed or operative position, one end portion of a latch bar 66 hooks over the catch 68 on the magazine, the other end 70 being restrained beneath the platform so as to torque the latch bar into engagement with the catch 68, and an intermediate portion 72 of the latch bar is a fingerpiece which may incorporate a small pad 74 thereon above the platform and adapted to be pressed to enable the latch bar 66 to be torqued out of engagement when it is desired to tilt the magazine.

In the form of the invention shown in the drawings, the upward thrust of the pressure pad 54 presses the top card against three indexing means. The first is an indexing projection 76 on the underside of the top plate 42 near what may be considered the card exit slot 78 in the corresponding end plate 44 of the magazine. The second is an indexing finger 80 at one end of and at the top of the deck justifier bar 82, and the third indexing means is the part 84 of the top card pusher 86 which will now be described.

The essential action of the pusher 86 will be clear from a consideration of FIG. 7 which depicts the top card 22 about to be skewed substantially radially by the tooth 88 of the pusher. This tooth may be a screw threaded into the pusher to permit depth adjustment. The pusher is biased toward retracted position by the spring 89 shown in FIG. 5 and is actuated successively by the pusher cams 90 on the base 10, three of the four pusher cams being shown in position in FIG. 8. The pusher 86 is carried by the magazine 30 and is essentially a bellcrank with an actuator arm and cam engaging terminal 92, and an upper arm 96 terminating in the indexing part 84 and single card engaging tooth 88, the pivot portion 94 of the pusher is of course mounted on the back wall 48 of the magazine and the top plate 42 of the magazine will ordinarily be recessed as at 98 to accommodate the upper arm 96 in its limited travel.

The indexing finger 80 has been mentioned above as fixed to the justifier bar 82, this latter being pivoted as at 100 to the

rotatable platform 28 and extending along the front of the magazine, when the latter is depressed. The justifier bar is biased outwardly away from the magazine toward the stop 102 by a spring 104 indicated in FIG. 5, and is pivoted toward the magazine, to justify a deck of cards therein, during the last small increment of travel of the magazine as it is depressed by a bellcrank 106 pivoted on the platform with an actuator arm 108 depressed by a knob 110 on the magazine and a justifier bar engaging arm 112. To give the cards limited freedom to move upwardly in the magazine under the action of pressure pad 54 the magazine has a very minor overtravel when being depressed and rebounds very slightly before being restrained by the latch bar 66 as described supra and this slight rebounding of the magazine causes the knob 110 to rise very slightly after depression thus reversing the bellcrank 106 very slightly and releasing the justifier bar 82 a corresponding degree from the edge deck 24. Finally, in this regard, the justifier bar has a downwardly concave top surface 114 to accommodate the ordinarily slightly bowed playing cards and the indexing finger 80 on the justifier is spaced above the adjacent end of this surface 114 a distance only very slightly greater than the thickness of the ordinary playing card so that skewing of more than one card at a time, by the pusher 86, is prevented even though the cards may tend to adhere to each other.

The above mentioned exit slot 78 in the magazine end wall is aligned with a slot 116 in a fingerhold 118 so that a substantially continuous vertical wall is defined by the root portions of the slots 78 and 116, along which a corner of the top card 22 slides. The fingerhold 118 is of course fixed to the rotatable platform 28 and is used for manually rotating the platform and magazine assembly. A fingerpad 120 is fixed to the magazine to facilitate its depression after loading. A resilient pad or bumper 122 on the back wall cushions the pusher, preventing rebound and eliminating any clicking sound.

The operation of the dealer will be obvious from a consideration of the foregoing abstract, summary and detailed description, taken in conjunction with the drawings. It is very important to note that in the foregoing detailed description of a preferred embodiment, in the interest of clarity, no attempt has been made to point out the possible alternative variations of structure which might be used. It is conceived that virtually all portions could be changed in form and design and applicant considers his invention to be that encompassed by the appended claims.

I claim:

- 1. A dealer for playing cards, comprising:
  - a base having cams thereon corresponding with the required number of player positions;
  - a platform mounted on said base for rotation about a vertical axis;
  - a magazine on said platform dimensioned to receive a deck

- of cards;
- means to bias the cards in said magazine upwardly in said magazine;
- a one-card-at-a-time pusher having an actuator operated successively by said cams when said platform is rotated for partial ejection of the top card generally radially outwardly from said magazine and platform; and
- stops fixed to said base, equal in number to said cams, and disposed to arrest partially ejected top cards successively from further rotation with the platform and thus completing the ejection of the successive top cards into an equal number of piles of said stops.
- 2. A dealer according to claim 1 wherein said pusher is disposed toward the leading end of said magazine as it is rotated along with said platform so that said top card is skewed (22) by the pusher, relative to the magazine; and said magazine has a lateral escape opening adjacent to the top thereof permitting the skewed top card to slide endwise relative to the magazine.
- 3. A dealer according to claim 2 and including structure on said platform defining a wall extending from said escape opening substantially radially of the platform, said wall positively pushing the skewed card outwardly as the platform is rotated.
- 4. A dealer according to claim 3 wherein said structure is also a fingerhold fixed on said platform for use in rotating the same in use.
- 5. A dealer according to claim 1 wherein said magazine has a bottom plate, and an open side and is pivotally mounted for tilting said open side upwardly to facilitate loading;
- said means to bias being a spring-biased pressure pad mounted on said platform to press upwardly on the underside of a deck of cards in said magazine;
- said bottom plate having an aperture through which said pressure pad is retracted out of the magazine, when the latter is in tilted position, for further facilitating loading.
- 6. A dealer according to claim 1 wherein said magazine has an open side and is pivotally mounted for tilting said open side upwardly to facilitate loading;
- an arm mounted on said platform and extending across said open side of the magazine when the latter is in depressed position, said arm having an upright card justifying bar.
- 7. A dealer according to claim 6 wherein said arm has an indexing member disposed slightly above said justifying bar and slightly spaced therefrom inwardly toward said magazine to index the top of the deck of cards at a point one card thickness above said justifying bar.
- 8. A dealer according to claim 7 wherein said justifying bar extends longitudinally of said arm and has a slightly downwardly concave top surface for better accommodation to cards having a slight curvature.

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