

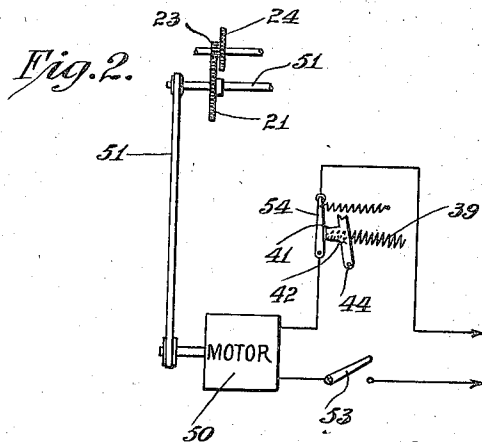
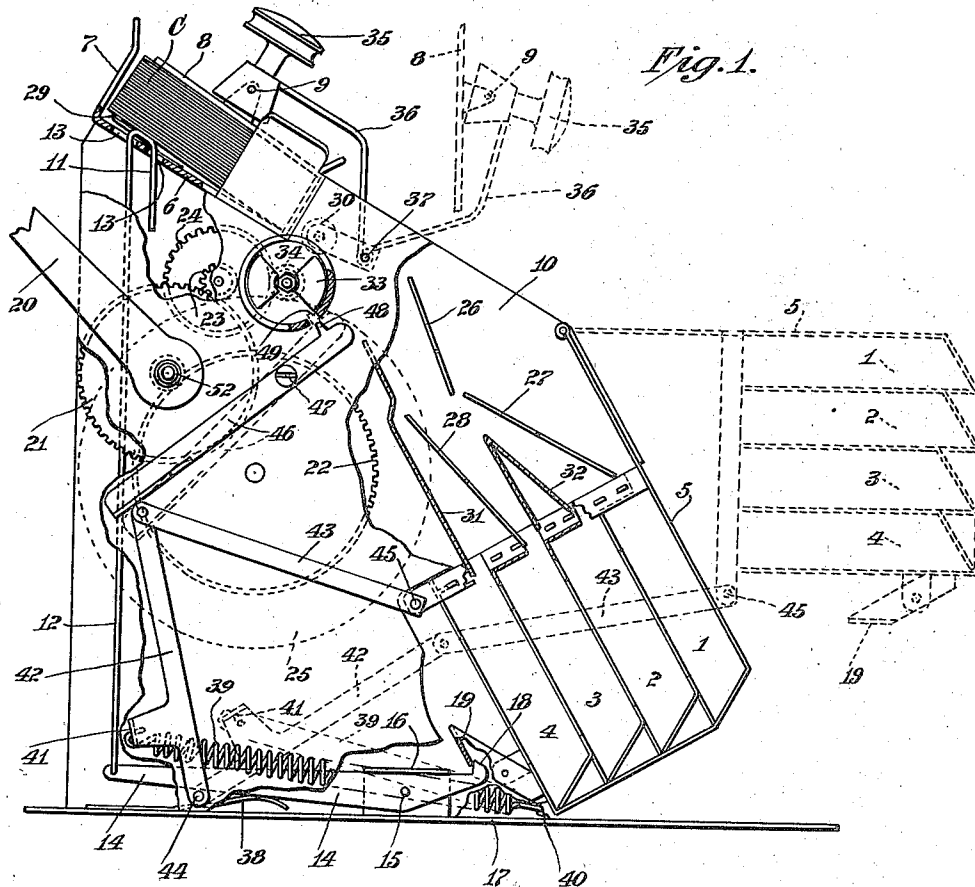
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CARD SHUFFLING AND DEALING DEVICE

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CARD SHUFFLING AND DEALING DEVICE

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8 Claims. (Cl. 273-149)

This invention relates to new and useful improvements in devices for shuffling and dealing playing cards.

It is the object of the present invention to provide certain improvements in the shuffling and dealing machine disclosed in Patent No. 2,016,030 to Louis F. Woodruff and Edwin L. Rose disclosing a device in which, by operating a hand crank, the cards are fed from the deck, one at a time, into four separate compartments, each holding a hand for one player. The distribution of the cards into the compartments is controlled by shunting mechanism the operation of which is determined by the shapes of cams which have been designed in accordance with a predetermined mathematical formula which makes a normal random distribution of the cards inevitable, irrespective of the original order of the cards in the deck.

In accordance with one feature of the invention said compartments are concealed from view of the players and inaccessible until released by the dealer upon the completion of the deal. When released, the compartments and cards are so positioned that no player can see the face of any of the cards, and each player may easily remove his hand from its compartment.

Another feature of the invention has to do with the automatic locking of the shuffling and dealing device while the compartments are released, whereby the device is operable only while said compartments are in the concealed position.

These and other features of the invention will more clearly appear from the following detailed description of a device in which they are embodied and the appended claims.

The drawing represents a preferred embodiment, only so much being shown as is necessary for a clear understanding of the novel features. For other details of the construction reference should be had to said patent of Woodruff and Rose.

Referring now to the drawing, a deck of cards C to be shuffled and distributed into four compartments or pockets 1-4 in pivoted rack 5 is placed on a platform 6. The cards are held in place by the upstanding rim 7 of the platform and by a weight 8 pivotally mounted at 9. A casing 10 completely encloses the device except for an opening on the top through which the cards may be placed on platform 6, and one on its front through which the rack 5 may be swung in and out of the side walls of the casing.

The weight of the cards and weight 8 presses down the hooked end 11 of a vertical rod 12

passed through perforations 13 in platform 6. The lower end of rod 12 is swiveled to one end of a lever 14 which is pivoted at 15 in ears 16 struck up from bottom plate 17 of the casing. The other end of pivoted lever 14 is formed into a detent 18 which engages a hooked projection 19 on rack 5 and holds the latter with its compartments concealed within the casing and in a substantially vertical position ready to receive the cards.

The shuffling and dealing may now be accomplished in the manner set forth in said application of Woodruff et al. A handle 20 is rotated and causes through the agency of gears 21-25 and suitably cut cams the tilting of vanes 26, 27 and 28 in a predetermined order and the reciprocation of a hooked finger 29. The latter is provided between the lowermost card and platform 6 and advances the cards one at a time to roller 30 which, depending on the position of vane 26, sends the card into chutes 31 or 32. From these chutes the cards fall into the pocket determined by the position of vane 27 or 28.

The speed of operation is limited by a governor 33, pinion 34 of which is rotated by gear 24. The roller 30 is driven owing to frictional engagement with the governor. The governor may be of any well-known type. The one shown in the drawing consists of a drum enclosing two wedge-shaped weights to one of which the numeral 33 is applied. These weights are rotated with the pinion 34 and are so mounted on a disk carried by the latter that during rotation they will fly out to contact with the surrounding brake drum. Preferably, a spring (not shown) normally holds the weights retracted, away from the brake drum.

After all the cards have been deposited into the compartments 1-4, the dealer grasps knob 35 to which the weight 8 is pivoted and swings it on an arm 36 pivoted at 37 into the position shown in dotted lines. When the weight is removed from rod 12, a leaf spring 38 mounted on bottom plate 17 tips the pivoted lever 14 to disengage the detent 18 from hooked projection 19 of rack 5, and the latter is swung into the position shown in dotted lines. This is accomplished by a coiled spring 39 tensioned between a lug 40 in bottom plate 17 and a projection 41 on a lever 42. Lever 42 is hinged to a lever 43, the former being pivoted at 44 to the casing bottom 17, and the latter to rack 5 at 45.

When the bell-crank levers 42, 43 are moved out of the position indicated in solid lines, they release a bar 46 pivoted at 47. The bar drops into position indicated in dotted lines in which a

nose 48 drops into one of two or more apertures 49 provided in the brake drum of governor 33. This locks the weights of the governor and therefore the gearing 34, 24, etc., of the device against rotation, whereby shuffling and dealing cannot be accidentally started while the rack 5 is in its open position.

The compartments 1-4 are now in a horizontal position holding the four "hands" with the cards face down. The players who cannot see the bottom cards may withdraw their respective "hands". The rack 5 is then pushed back into the casing until detent 18 snaps over hook 19, and the device is ready for a second operation.

As shown in Fig. 2, instead of operating the device by hand it may be operated by means of an electric motor 50 the shaft of which is connected through a belt 51 with shaft 52 of gear 21. The circuit of motor 50 is controlled by means of a hand-operated switch 53 and a spring-pressed switch 54. The latter is held closed by the bell-crank 42, 43, e. g., by projection 41, and opens when the rack 5 opens and the bell-crank is swung open by spring 39.

What is claimed is:

1. In a card shuffling and dealing machine, a rack having card hand compartments, a casing partially concealing said compartments, means for moving said rack out of said casing into an open position, means including a rotatable shaft for dealing cards into said compartments, means for locking said shaft against rotation, and means controlled by said rack for actuating said last mentioned means.

2. In a card shuffling and dealing machine, a rack having card hand compartments, a casing partially concealing said compartments, hand-operated means for moving said rack out of said casing into an open position, means including a rotatable shaft for dealing cards from a deck into said compartments, and means jointly controlled by said rack and said hand-operated means for locking said shaft.

3. In a machine according to claim 2, characterized by a latch for holding said rack in the closed position, said latch being controlled by the deck of cards.

4. In a machine according to claim 2, characterized by a latch for holding said rack in the closed position, said latch being controlled by said hand-operated means.

5. In a card shuffling and dealing machine, a platform for a deck of cards, a rack having four card hand compartments hinged to said platform, walls surrounding said platform on two sides, a latch for holding said rack in a closed position between said walls with the compartments in substantially upright position, a spring for urging said rack out from between said walls into an open position with the compartments in substantially horizontal position, a controller for said latch projecting said platform into contact with the lowermost card in the deck, a hinged weight resting on the top card in the deck, means including a rotatable shaft for dealing cards from said deck into said compartments, a speed governor coupled with said shaft, a lock for said governor, and means controlled by said rack for actuating said lock, whereby said governor and shaft coupled with it are locked in the open and released in the closed position of said rack.

6. In a machine according to claim 1, an electric motor for rotating said shaft, a hand-controlled switch in the motor circuit, and a spring-pressed switch in said circuit controlled by said rack.

7. In a card shuffling and dealing machine, a receptacle for a deck of cards, a member adapted to rest on said deck of cards, means for shuffling and dealing the cards into a plurality of compartments, and means controlled by said member for changing the position of said compartments after the "hands" have been dealt into the compartments.

8. In a card shuffling and dealing machine, a receptacle for a deck of cards, means for shuffling and dealing the cards into a plurality of compartments, means for governing the speed of said shuffling and dealing means, means for moving the compartments with respect to the shuffling and dealing means, and means operative thereupon for locking the speed governing means.

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