No. 842,803. PATENTED JAN. 29, 1907.

G. MURCH.

MACHINE FOR DEALING PLAYING CARDS.

APPLICATION FILED MAR. 22, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

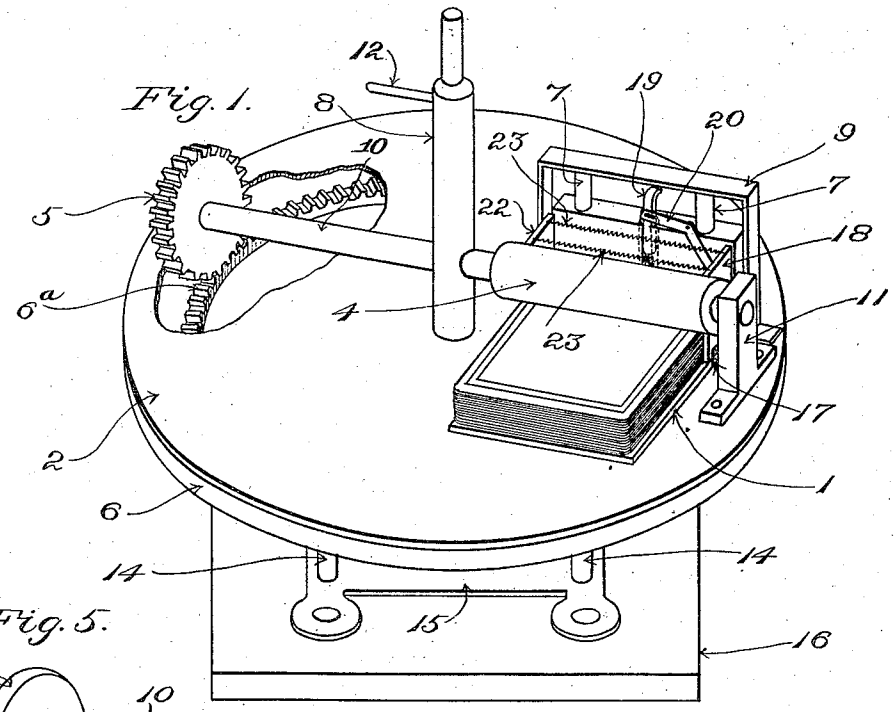


Fig. 5.

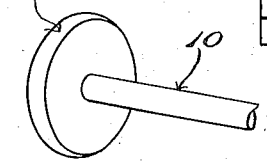


Fig. 2.

Witnesses:
Oscar F. Hill
Edith J. Anderson.

Inventor:
George S Murch
by Chas. F. Randall
Attorney.

No. 842,803. PATENTED JAN. 29, 1907.

G. MURCH.

MACHINE FOR DEALING PLAYING CARDS.

APPLICATION FILED MAR. 22, 1905.

2 SHEETS—SHEET 2.

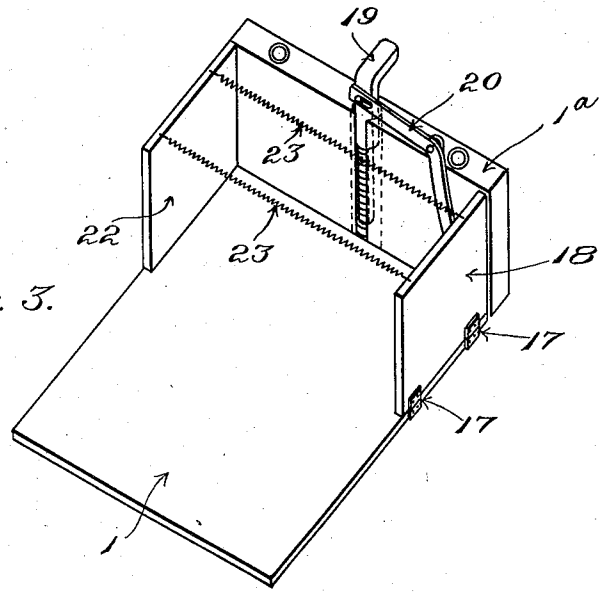


Fig. 3.

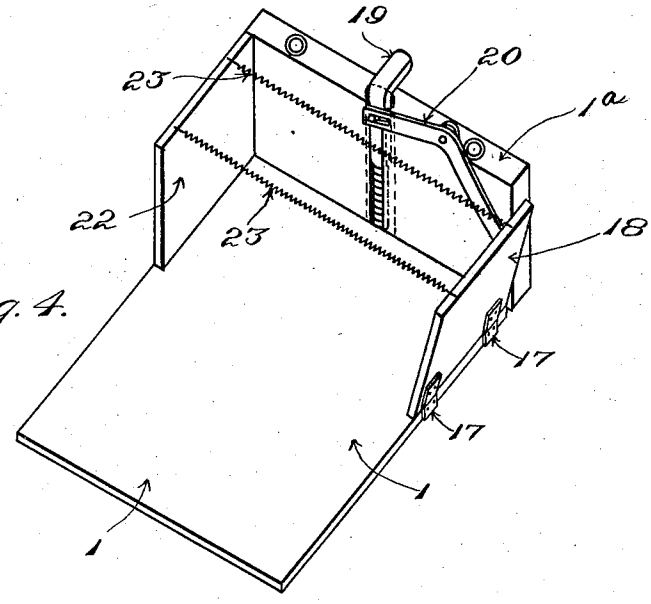


Fig. 4.

Witnesses:
Oscar F. Hill
Edith J. Anderson.

Inventor:
George Murch
by Chas. F. Randall
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE MURCH, OF CAPETOWN, CAPE COLONY.

MACHINE FOR DEALING PLAYING-CARDS.

No. 842,803. Specification of Letters Patent. Patented Jan. 29, 1907.

Application filed March 22, 1905. Serial No. 251,363.

To all whom it may concern:

Be it known that I, GEORGE MURCH, a subject of Great Britain, residing at Capetown, Cape Colony, have invented a certain new and useful Improvement in Machines for Dealing Playing-Cards, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in a machine which is constructed and arranged to deal or deliver playing-cards or the like automatically at each of a series of stations in rotation—as, for instance, to each of a number of players in turn—and which also is adapted to be adjusted to suit a greater or smaller number of delivery-stations or players, as may be desired.

The invention is illustrated in the drawings, in which latter Figure 1 shows in isometric projection an embodiment of the invention. Fig. 2 shows the said embodiment in isometric projection from a point of view differing from that of Fig. 1. Fig. 3 shows the card-holder detached and in closed condition. Fig. 4 shows the card-holder in partially-opened condition. Fig. 5 shows a friction wheel or roll which may be employed in lieu of the toothed wheel that is shown in Figs. 1 and 2, if desired.

In the drawings the machine is furnished with a convenient base 16, Figs. 1 and 2, which is adapted to rest upon a suitable support at the center of the series of stations at which cards or the like are to be dealt or delivered and which support may be the table upon which a game of cards is to be played. To the top of the base 16 a plate 15 is secured. Posts 14 14, &c., are attached to the said plate 15 and rise therefrom. To the upper ends of the said posts a horizontal disk 6 is affixed, and thereby the said disk 6 is supported in a stationary position. Above the stationary or fixed disk 6 a second disk (designated 2 in the drawings) is arranged. The disk 2 is mounted with capacity to turn or rotate in a horizontal plane. The devices which more immediately are concerned in dealing or delivering the cards or the like successively are mounted upon the disk 2, and by turning or rotary movement of the said disk the dealing or delivering devices are carried around past the successive points at which the cards or the like are to be dealt or delivered. For convenience the disk 2 may be termed the "dealer-carrier."

At 8 is an upright shaft arranged centrally with respect to the disks 2 and 6, the said disk 2 being fixedly connected with the said shaft 8. The lower portion of the shaft 8 below the disk 2 is fitted to a suitable bearing or bearings which are provided in connection with the fixed part of the machine and in which bearing or bearings the shaft turns. The upper portion of the shaft 8 is furnished with a handle 12 for convenience in turning the same and the disk 2.

Upon the disk 2 is provided a card-containing box or card-holder, comprising a bottom 1, an upright back 1^a at the rear end of the box or holder, and oppositely-located side portions 18 22, which are located at opposite sides of the rear portion of the box or card-holder adjacent the said back 1^a. The box or card-holder 1 is mounted with capacity to rise and sink relative to the disk 2 and is guided in its rising and sinking movements by means of upright posts 7 7, the lower ends of which are secured to the disk 2 and the upper ends to the horizontal cross-bar of a yoke 9, which is carried by the said disk. The box or card-holder is formed with holes extending upward through the back 1^a and fitting the said posts 7 7. It rests upon expanding spiral springs 3, two of which encircle the posts 7 7, as shown in Fig. 2. By the expansion of the said springs the box or card-holder is pressed upward. The cards which are to be dealt are placed within the box or card-holder between the side portions 18 22 and with their rear ends adjacent the back 1^a.

At 4 is the dealing-roll. It is arranged above the card-holder 1 and extends across the latter, it being mounted upon a horizontal shaft 10, which is journaled in bearings that respectively are provided in the upright shaft 8 and in a stand 11, which is secured to the upper side of the disk 2 near the periphery of the said disk.

By means of the springs 3 3, &c., beneath the card-holder the top card of the pile of cards held by the card-holder is held pressed in firm contact with the surface of the dealing-roll. Effective frictional engagement of the said dealing-roll and the said card is se-

cured by forming the exterior of the dealing-roll of soft india-rubber or other suitable frictionally-adhesive material. For the purpose of operating the dealing-roll to effect the delivery of the top card from the card-holder the shaft 10 is provided with a driving-wheel 5, which is operatively engaged by suitable actuating means. In Figs. 1 and 2 the wheel 5 is toothed and engages with cog-teeth 6ª with which the fixed disk 6 is furnished. To permit this engagement, the disk 2 is slotted, as shown in Figs. 1 and 2, and the lower portion of the wheel 5 projects through the slot. In Fig. 5 a frictional wheel is shown, the said frictional wheel being a substitute for the toothed wheel of Figs. 1 and 2, and when the same is used a corresponding friction-surface is provided in connection with the fixed disk 6 for coöperation with such friction-wheel.

On turning or rotating the shaft 8 and the disk 2 by means of the handle 12 the driving-gearing at 5 6ª will act to turn the dealing-roll, so as to cause the latter to push the top card forward off the pile and from the card-holder. The card-holder is so arranged upon the disk 2 that as the top card is discharged from the card-holder by the action of the dealing-roll such card will fall beyond the edge of the disk 2—for instance, onto the table on which the machine is placed.

The parts will be proportioned and adjusted to produce the proper ratio between the rotation of the dealing-roll and that of the dealer-carrier 2 to cause cards to be dealt or delivered at the predetermined number of points in each rotation of the dealer-carrier 2—as, for instance, to each of a number of players. The machine may be arranged to deal or deliver from the dealer-carrier at two opposite points, as when it is required to deal to but two players or at three prearranged points, as when it is intended to deal to three players, or at four or more points, as the case may require. Variation in the number of cards which are dealt or delivered in each revolution of the dealer-carrier is provided for by simple adjustment. Among the different modes of effecting such variation is by changing the position of the cards relative to the dealing-roller. One mode of effecting this change in the relative position of the cards is by shifting or adjusting the box or card-holder in the direction of its length beneath the dealing-roll, so as to increase or diminish the distance between the point at which the dealing-roll first engages with the top card and the rear ends of the cards. By this change the number of rotations of the feeding-roll which is required to occur in order to effect delivery of the top card may be regulated. Consequently the ratio between the number of rotations required to deliver one card and the entire number of rotations occurring in each turn of the dealer-carrier 2 may be varied to produce delivery at the required number of stations or players in each turn.

As the cards or the like are caused successively to leave the box or card-holder the springs 3 3, &c., produce upward movement of the box or card holder, so that the pressure of the topmost of the cards remaining in the box or card holder against the dealer-roll is maintained to the last.

In Figs. 3 and 4 I have shown a construction which I contemplate employing for convenience in introducing fresh cards into the box or card-holder in position beneath the dealer-roll. In such figures the side portion 18 is hinged at its lower edge at 17 17 to the bottom of the box or card-holder. Normally the said side portion is held in closed position by the action of contracting spiral springs 23 23, having their opposite extremities connected, respectively, with the hinged side portion 18 and the fixed side portion 22. At 19 is a vertically-movable spring-supported plunger which is fitted to a guide-opening in the back 1ª of the box or card-holder, its upper end being outturned to form a convenient thumb-piece by means of which to operate the plunger. At 20 is a bent lever which is pivotally mounted upon the back 1ª, the said bent lever being arranged to extend transversely with relation to the box or card-holder and having the outer end thereof arranged to make contact with the inner surface of the hinged side portion 18 and the inner end thereof in pin-and-slot engagement with plunger 19. Pressure applied to the upper end of the said plunger of sufficient force to overcome the tension of the spring in connection with the plunger will operate to depress the said plunger within its guide-opening in back 1ª until the limit of the independent movement of the plunger is reached. This independent movement of the plunger will operate lever 20 to press the hinged side 18 outward from its closed position shown in Fig. 3 to its opened position. (See Fig. 4.) The limit aforesaid having been reached continued pressure upon the plunger will force the box or card-holder downward away from the dealer-roll. The tension of the supporting-springs 3 3, &c., for the box or card-holder is considerably greater than the combined tension of the spring which supports the plunger 19 and the springs 23 23. Consequently the springs 3 3 will keep the box or card-holder in its raised position until after the limit of the independent movement of the plunger with respect to the box or card-holder has been reached.

What is claimed as the invention is—

1. In combination, a rotary dealer-carrier, a card-holder carried thereby, and devices

actuated through the rotation of said dealer-carrier to deal or deliver cards or the like at predetermined points in the said rotation.

2. In combination, the rotary dealer-carrier 2, the dealer-roll, means to rotate the said dealer-roll, a laterally-expansible card-support, a spring or springs in connection with said card-support acting to press the same toward the dealer-roll and means to expand the card-support and move the same away from the dealer-roll.

3. In combination, a dealing device, a card-support having a laterally-movable side, a spring acting to hold said side normally in closed position, and a finger-piece operatively connected with said side and by pressure on which the side is opened and the card-support and dealing device are relatively separated.

4. In combination, a dealing device, a card-support having a movable side, means for holding said side normally in closed position, means to yieldingly support the said card-support, a plunger applied to the said card-support and operatively connected with said movable side, whereby by pressure on the plunger the side may be opened and the card-support moved away from the dealing device.

5. In combination, a rotary dealer-carrier, a card-holder carried thereby, a dealing device, and actuating means for said dealing device acting automatically to cause cards or the like to be delivered at predetermined points in the rotation of the said dealer-carrier.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE MURCH.

Witnesses:
C. FOOT,
D. ROBERTSON.