

(No Model.)

F. L. BECKER.
CARD SHUFFLING APPARATUS.

No. 564,774.

Patented July 28, 1896.

Fig. 3.

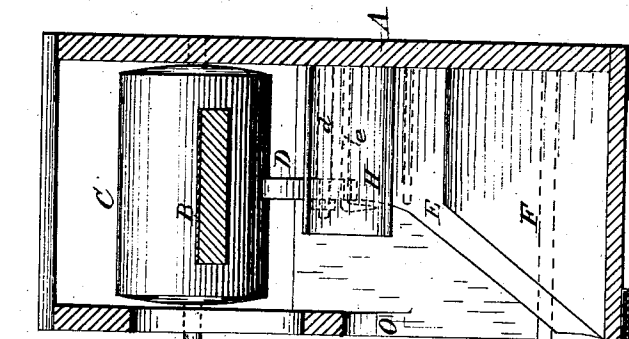


Fig. 2.

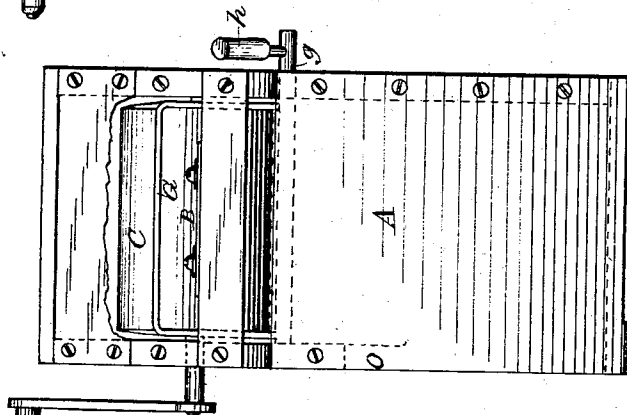


Fig. 1.

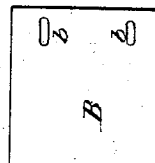
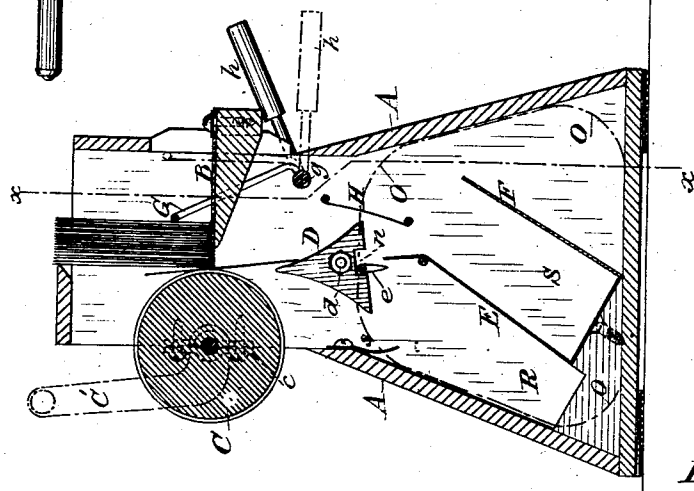


Fig. 4.

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UNITED STATES PATENT OFFICE.

FRANCIS L. BECKER, OF NEW YORK, N. Y.

CARD-SHUFFLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 564,774, dated July 28, 1896.

Application filed July 22, 1895. Serial No. 556,812. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS L. BECKER, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Card-Shuffling Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in apparatus for shuffling cards for any kind of game, such as euchre, whist, poker, &c.

The invention has for its object to provide an apparatus of very simple construction and operation, by which the cards can be thoroughly and rapidly shuffled or intermixed. It also positively separates any combination of cards, such, for instance, as three or four jacks, aces, &c., of which, when mixing by hand, advantage could be taken by experts, if the dealer felt so disposed; on the other hand, the chance being that, after mixing, the operator may produce just such combinations, which, however, are beyond the knowledge and possible calculation of the most expert player when using my apparatus. Furthermore, that the apparatus is not liable to get out of order, and it cannot be tampered with; and, finally, that more than one deck of cards can be thoroughly shuffled at one and the same time.

My invention consists in the peculiar construction of certain details and the arrangement of parts, as will be more fully described hereinafter, and specifically pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 represents a vertical section of my apparatus with a pack of cards in position for shuffling. Fig. 2 is an end elevation of the same. Fig. 3 is a cross-section on line *xx* of Fig. 1. Fig. 4 is a detail view of the adjustable gage-plate.

In the accompanying drawings, A represents a case or frame made of any suitable material, and either plain or ornamental, as desired. It has an opening at the top, through

which the cards are introduced upon a plate B. This forms a gage-plate and is provided with slots *b*, so that it is adjusted to or from the roller C in such manner as to allow the thickness of the card to be carried through the space by turning the roller. The roller is covered with rubber or its equivalent or suitable flexible material to cause a slight friction or rubbing action against the cards and cause one after the other to descend. The roller is journaled in bearings *c*, which can be adjusted to form a slight friction or binding action against the journals, so that the roller will not turn too freely. It has a crank-handle C' on one end for turning it when the cards are to be shuffled. A short distance below the roller and nearly in a vertical line with the circumference of said roller is pivoted an automatic switch D on a rod *d*, secured to the case. It is of nearly triangular shape, having its sides slightly concaved and its upper point a little rounded, so as to prevent any possibility of any cards when descending from catching or sticking on said switch. Its lower or nearly horizontal side is provided with a notch *n*, the sides of which alternately come in contact with a rod *e*, by which the switch is held or stopped in its movements when oscillated. This is a very important feature of my invention. A short distance below this switch are arranged two plates E F in an inclined manner and form the receptacles R S for the cards when they drop, after separation by the switch D. A presser G, consisting of a rectangular bent wire attached to a rod *g*, which extends at one side of the case and is provided with a weighted handle *h*, so that it can fall of its own weight, when released, after having been pressed against the cards by the hand, as shown in Fig. 1 by the broken lines.

A short distance back of the switch D is placed a guide-plate H, secured to the side of the case, and serves to guide the cards in descending into the receptacle S or prevent them from passing over the plate F. After the cards have been mixed the hand can be inserted through an opening O at the lower side of the case and both parts withdrawn ready for dealing.

On about a level with the rod *d* on the side of the case is placed a small spring *s*, which

assists in throwing the cards toward the plate E.

The operation is as follows: The gage-plate is first adjusted toward the roller C by placing 5 two (not more) cards between the roller and the gage-plate, pressing said plate tightly against said cards, and then fastening it firmly by the screws. Thus one card must have space enough between the roller and 10 plate to be moved freely but not drop through of its own accord. The deck of cards are placed in square manner on the gage-plate close to the roller. They are then pressed gently by the presser G against the roller and 15 the crank turned from the top away from you. Do not turn backward, and not too fast, so as to block the cards. The cards will then pass through the space and in descending strike against the switch on one side and, being 20 guided by the guide-plate, will pass into the receptacle S. The switch D, by the card, will be thrown against the rod e and tilt toward the other side by it, and as the next card descends it will be carried into the receptacle 25 R, and so alternately until all the cards have been dropped. The hand is then inserted through the opening O and both parts of the pack can be withdrawn ready for dealing to the players.

30 The operation may be repeated, if desired, although usually not necessary.

Sometimes two cards may drop into either of the receptacles at the same time when turning the roller, but this is considered rather 35 an advantage, because it prevents all systematic mixing and makes, therefore, a probable calculation of how the cards follow still more an impossibility. When three cards drop through at a time, the gage-plate must 40 be adjusted.

Whenever the cards are not moved by the roller, by it having lost its adhesive quality

through greasy matter, &c.; from the fingers, it should be cleaned with a moist and clean cloth or rubbed with a piece of fine sandpaper. 45

The hole O extends from the lower part of the gage-plate to the bottom of the case, only small corners being left.

Having thus described my invention, what I claim is— 50

1. An apparatus for shuffling cards, consisting essentially of a case, provided with a roller operated by a crank-handle and adapted to pass the cards between said roller and a gage-plate, in combination with a pivoted switch 55 and receptacles for receiving the cards, all as specified.

2. In the card-shuffling apparatus described, the combination of a delivery-roller and an adjustable gage-plate constructed as 60 shown, with a pivoted presser, consisting of a rod, provided with a rectangularly-bent wire and a weighted handle, and arranged in such manner, that a varying pressure may be exerted by the operator's hand to force the 65 cards directly against the roller as and for the purpose set forth.

3. In an apparatus for shuffling cards, the combination of a roller, a pivoted switch, arranged below said roller and adapted to separate said cards and a guide-plate arranged 70 as shown, to convey them to receptacles, as specified.

4. In an apparatus for shuffling cards, the combination of a feeding mechanism, a covered roller and an automatic switch, with a 75 guide-plate and two receptacles, arranged as shown.

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

FRANCIS L. BECKER.

Witnesses:

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