April 13, 1954 L. P. SAUNDERS 2,675,239

DEVICE FOR SHUFFLING PLAYING CARDS OR THE LIKE

Filed May 26, 1950

Fig. 1.

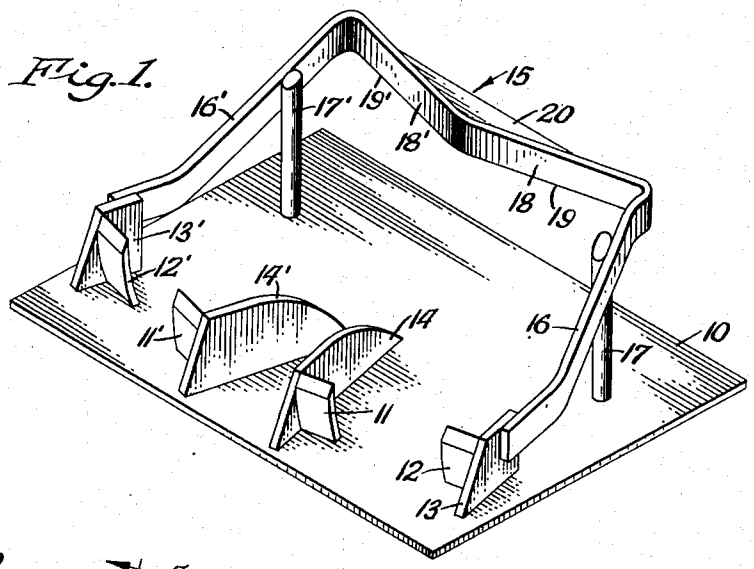


Fig. 2.

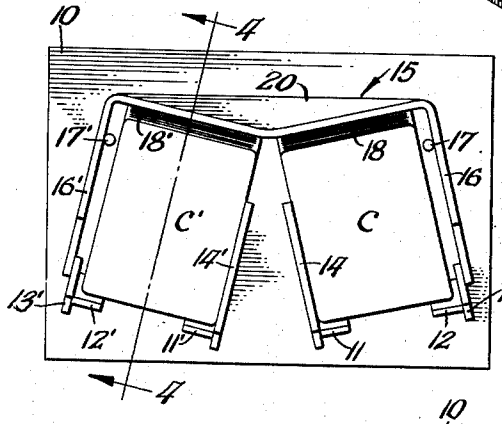


Fig. 4.

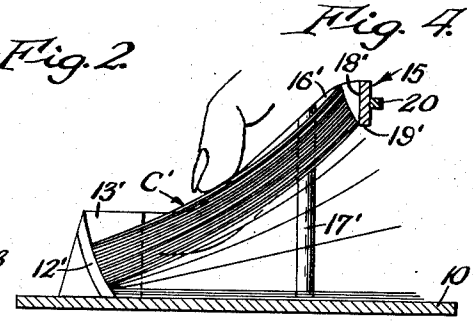


Fig. 3.

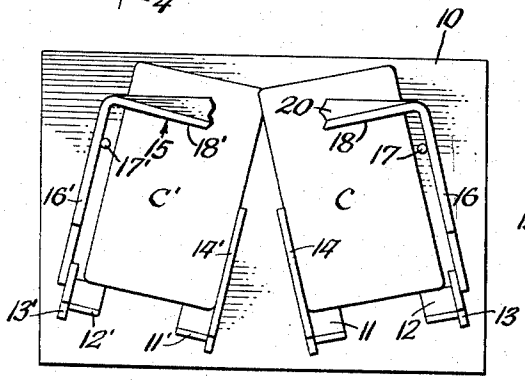
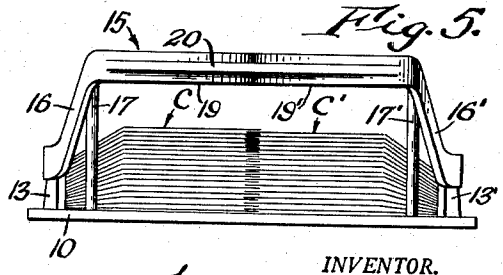


Fig. 5.



INVENTOR.
Laurence P. Saunders
BY
Popp and Sommer
Attorneys.

Patented Apr. 13, 1954

2,675,239

UNITED STATES PATENT OFFICE

2,675,239

DEVICE FOR SHUFFLING PLAYING CARDS OR THE LIKE

Laurence P. Saunders, Lockport, N. Y.

Application May 26, 1950, Serial No. 164,312

7 Claims. (Cl. 273—149)

1

This invention relates to improvements in a device for shuffling playing cards or the like.

The objects of the invention are to provide a card shuffler on which two groups or stacks of playing cards or the like can be quickly and effectively interleaved; and which is simple in construction and inexpensive to manufacture.

Other objects and advantages of the invention will be apparent from the following description and accompanying drawing in which

Fig. 1 is a perspective elevational view of a card shuffler embodying my invention, no playing cards being illustrated on the device.

Fig. 2 is a top plan elevation view thereof on a slightly smaller scale and showing two groups or stacks of playing cards in position before being interleaved.

Fig. 3 is a view similar to Fig. 2 with a central portion of the upper card rest being broken away to show the interleaved condition or overlapped adjacent corners of the two stacks of cards.

Fig. 4 is a vertical sectional view on a slightly enlarged scale taken on line 4—4 of Fig. 2 and illustrating the manner in which the cards are released by pressure thereon.

Fig. 5 is a front end elevational view of the card shuffler and showing the two groups or stacks of cards partially interleaved, this view looking at the upper end of the device as shown in Fig. 3 but on a slightly enlarged scale.

The card shuffler as illustrated is made of plastic pieces cemented together although it is to be understood that any suitable material can be used and also any suitable mode of connection of the various parts can be employed.

The card shuffler comprises a base 10 shown in the form of a rectangular plate on which are arranged means for holding two groups or stacks of playing cards in an upwardly inclining position and at an angle to each other so that when these stacks are pushed downwardly toward the base the adjacent corner portions of the cards become interleaved or overlapped. For this purpose stops are provided on the base 10 against which the lower end of each stack of cards rests and an upper rest member is arranged above the base 10 to support the upper end of each stack of cards.

The lower stops for one stack of cards represented at C are shown as two upstanding parts 11 and 12 rising from the base 10 and spaced from each other transversely of the stack of cards engaged thereby so as to engage the rear edges of the cards in such stack. A similar pair of stops 11^1 and 12^1 are provided for the other stack of

2

cards represented at C^1. The inner stops 11 and 11^1 are adjacent each other.

An outer side guide plate 13 engages the outer lateral end face of the lower outer stop 12 and extends forwardly at a right angle to such stop. This guide plate 13 braces the stop 12 and also the inner surface of this guide plate serves as a guide for the outer side edges of the stack of cards C. A similar outer side guide plate 13^1 is provided for the other outer stop 12^1.

An inner side guide plate 14 engages the outer lateral end face of the lower inner stop 11 and extends forwardly parallel to the outer side guide plate 13. A similar inner side guide plate 14^1 is provided for the inner stop 11^1. These inner side guide plates 14 and 14^1 extend forwardly from the front faces of the respective inner stops 11 and 11^1 for a distance about equal to half the length of the playing cards as best shown in Fig. 3.

The perpendicular distance between the opposing faces of the respective side guide plates 13, 14 and 13^1, 14^1 is slightly greater than the width of the playing cards so as to permit the cards to move both vertically and horizontally relative to these guide plates without binding between them.

The upper card rest comprises a transverse bar indicated generally at 15 arranged in elevated position above the base 10. This bar is shown as supported by a pair of rearwardly and downwardly turned arms 16, 16^1 connected respectively to the outer side guide plates 13, 13^1, and a pair of upright posts 17, 17^1 arranged near the forward ends of the arms 16, 16^1 and connected respectively thereto. The posts 17, 17^1 are preferably set back as shown a relatively short distance from the corner juncture of the transverse bar 15 with the front end of the respective arm 16 or 16^1, and these posts serve as outer guides for the side edges of the stacks of cards C and C^1 respectively adjacent their front ends.

The transverse bar 15 is formed to provide a pair of vertical card engaging surfaces 18 and 18^1 each having a continuous lower rear edge 19 or 19^1 respectively parallel with the upper surface of the base 10. The surfaces 18 and 18^1 are arranged at an angle to each other so that the surface 18 is parallel with the card engaging or front faces of the lower stops 11 and 12 and the surface 18^1 is parallel with the card engaging or front faces of the lower stops 11^1 and 12^1. A horizontal reenforcing rib 20 is shown as arranged on the front of the transverse bar 15 to rigidify this bar.

Referring to Figs. 2 and 3 the card engaging surfaces for one stack of cards is arranged at such an angle to the card engaging surfaces for the other stack of cards that the adjacent front upper inner corners of the stacks C and C[1] are slightly separated when resting against the transverse bar 15 as shown in Fig. 2; but when these stacks are lying flat on the base 10 the adjacent corner portions of the cards in the two stacks are interleaved or overlapped, as shown in Fig. 3.

Further, the front or card engaging surface of the various lower stops 11, 11[1], 12 and 12[1] are preferably curved about the lower rear edge 19 or 19[1] as a centerline and having a radius equal to the distance between this edge and the front faces of the respective stops. However, the front or card engaging surfaces of these lower stops may be straight as a chord of the curve shown.

It is also to be noted that the distance between the edge 19 or 19[1] and the card engaging surfaces of the respective stops 11, 12 or 11[1], 12[1] is slightly less than the length of a playing card so that the respective card engaging surface on the transverse bar 15 will support a stack of cards resting against the lower stops, but yet permitting the upper front ends of the cards to pass the edge 19 or 19[1] successively beginning with the lowermost card when pressure is applied to the top of the stack to bow the same, as shown in Fig. 4. If desired a tool or mechanical means (not shown) may be arranged to contact the cards directly and apply the pressure thereto, instead of manually engaging the cards as illustrated in Fig. 4.

In use, the cards to be shuffled are first divided into two groups or stacks C and C[1] containing approximately the same number of cards. The stacks C and C[1] are then placed in the respective positions shown in Fig. 2 in which each stack rests against its lower stops and leans against the transverse bar 15. The operator then presses downwardly on the stacks simultaneously at about their centers. This causes the cards from the bottom card to the top card in each stack successively to traverse the edge 19 or 19[1] and as the cards fall toward the base 10 the adjacent front inner corner portions of the cards from the two stacks overlap one another. With the partially interleaved cards on the base 10, the operator can place his fingers in the space between the pair of lower stops and push the cards forwardly away from the lower stops. In doing this the partially interleaved stacks of cards are guided by the side guide plates 13, 14, 13[1] and 14[1] and posts 17 and 17[1] to move toward each other and increase the degree of overlapping. At the same time the cards are presented forwardly of the transverse bar 15 where they can be easily picked up by the operator.

From the foregoing it will be seen that the present invention provides a card shuffler which has a simple construction and can be manufactured at low cost, and which is easy to operate to effectively shuffle stacks of cards rapidly.

I claim:

1. A device for shuffling cards, comprising a base, a rest bar supported in an elevated position above said base and having separate card engaging surfaces arranged at an angle to each other, and separate card engaging stop members arranged on said base on the same side of said bar and opposite said surfaces, whereby two inclined stacks of cards having their opposite ends resting against said surfaces and stop members and with their upper edges at an angle to each other can be pressed toward said base to cause the elevated ends of the cards in said stacks to leave successively said surfaces and partially overlap one another as the cards fall onto said base.

2. A device for shuffling cards, comprising a base, a bar member supported in an elevated position above said base and having its rear face inclining rearwardly from opposite ends of said bar member to provide two surfaces arranged at an angle to each other, and upstanding stops on said base disposed rearwardly of said bar member, whereby two inclined stacks of cards having their opposite ends resting against said surfaces and said stops and with their upper edges at an angle to each other can be pressed toward said base to cause the elevated ends of the cards in said stacks to leave successively said surfaces and partially overlap one another as the cards fall onto said base.

3. A device for shuffling cards, comprising a base, a bar member supported in an elevated position above said base and having its rear face inclining rearwardly from opposite ends of said bar member to provide two surfaces arranged at an angle to each other, and a pair of spaced upstanding stops on said base disposed rearwardly of said bar member and opposite each of said surfaces, whereby two inclined stacks of cards having their opposite ends resting against said surfaces and said stops and with their upper edges at an angle to each other can be pressed toward said base to cause the elevated ends of the cards in said stacks to leave successively said surfaces and partially overlap one another as the cards fall onto said base.

4. A device for shuffling cards, comprising a base, a bar member supported in an elevated position above said base and having its rear face inclining rearwardly from opposite ends of said bar member to provide two surfaces arranged at an angle to each other, a pair of spaced upstanding stops on said base disposed rearwardly of said bar member and opposite each of said surfaces, and a side guide on each of the lateral outer sides of each pair of said stops, whereby two inclined stacks of cards having their opposite ends resting against said surfaces and said stops and arranged between the corresponding pairs of said side guides and with their upper edges at an angle to each other can be pressed toward said base to cause the elevated ends of the cards in said stacks to leave successively said surfaces and partially overlap one another as the cards fall onto said base.

5. A device for shuffling cards, comprising a base, a bar member arranged in an elevated position above said base and having separate card engaging surfaces arranged at an angle to each other, a post on said base adjacent each end of said bar member and connected thereto, separate card engaging stop members arranged on said base on the same side of said bar member and opposite said surfaces, and side guide means associated with said stop members, whereby two inclined stacks of cards having their opposite ends resting against said surfaces and said stop members and between said side guide means and with their upper edges at an angle to each other can be pressed toward said base to cause the elevated ends of the cards in said stacks to leave successively said surfaces and partially overlap one another as the cards fall onto said base.

6. A device for shuffling cards, comprising a

base, a bar member arranged in an elevated position above said base, a rearwardly and outwardly facing card engaging surface at opposite ends of said bar member on the same side thereof whereby such surfaces are arranged at an angle to each other when viewed from above, a support arm extending upwardly from said base and forwardly toward each of said surfaces substantially perpendicularly thereto and connected at its forward end to the adjacent outer end of said bar member, a post arranged on said base adjacent each of said arms and connected thereto adjacent its forward end, and upstanding card engaging stop means on said base disposed rearwardly of said bar member and opposite each of said surfaces, whereby two inclined stacks of cards having their opposite ends resting against said surfaces and said stops and with their upper edges at an angle to each other can be pressed toward said base to cause the elevated ends of the cards in said stacks to leave successively said surfaces and partially overlap one another as the cards fall onto said base.

7. A device for shuffling cards, comprising a base, a bar member supported in an elevated position above said base, a rearwardly and outwardly facing card engaging surface at opposite ends of said bar member on the same side thereof whereby such surfaces are arranged at an angle to each other when viewed from above, the lower rear edge of each of said surfaces being substantially straight and parallel with the upper surface of said base, and upstanding card engaging stop means on said base disposed rearwardly of said bar member and opposite each of said surfaces, the front face of each of said stop means being curved about the respective one of said lower rear edges as a center and the radius of such curvature being slightly less than the length of a playing card, whereby two inclined stacks of cards having their opposite ends engaging said card engaging surfaces and front faces and with their upper edges at an angle to each other can be pressed toward said base to cause the elevated ends of the cards in said stacks to leave successively said surfaces and partially overlap one another as the cards fall onto said base.

References Cited in the file of this patent

FOREIGN PATENTS

Number	Country	Date
6,968	Great Britain	1890
27,568	Great Britain	1909
29,288	Great Britain	1913