May 2, 1939. N. I. STARK 2,156,551

CARD SYSTEM

Filed June 23, 1936

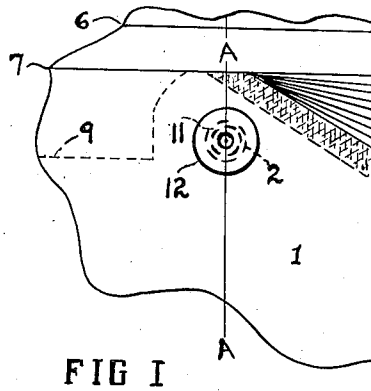


FIG I

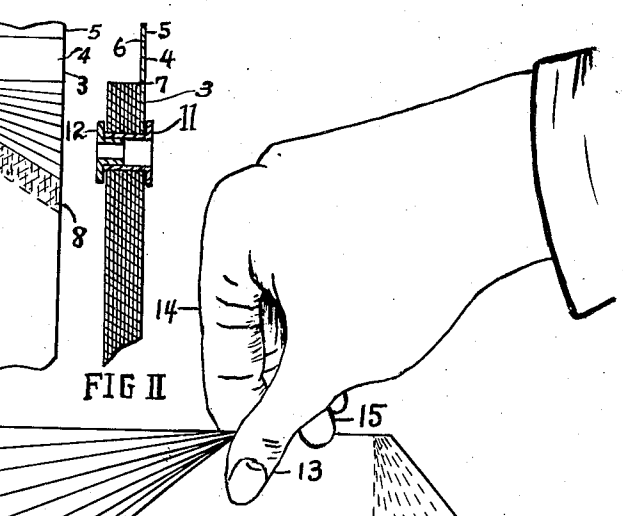


FIG II

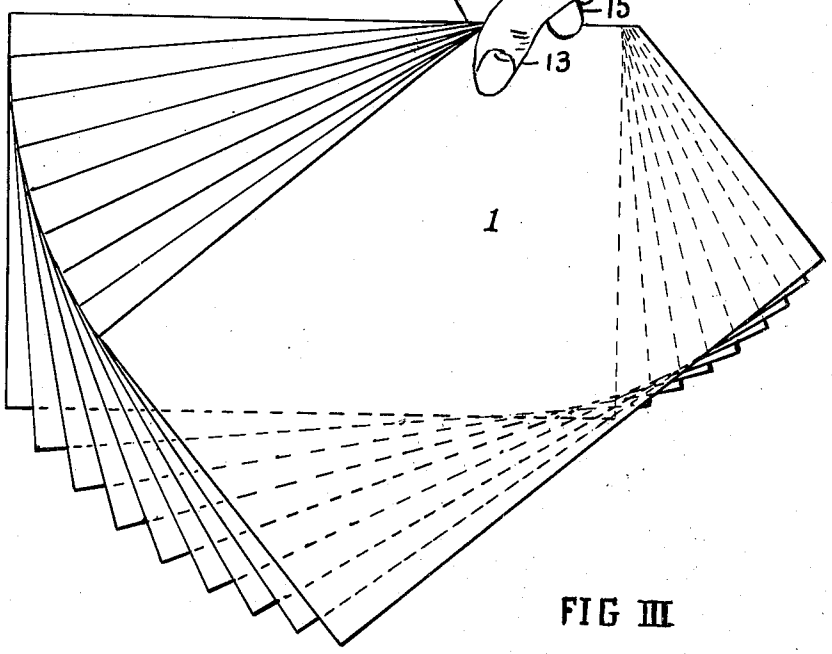


FIG III

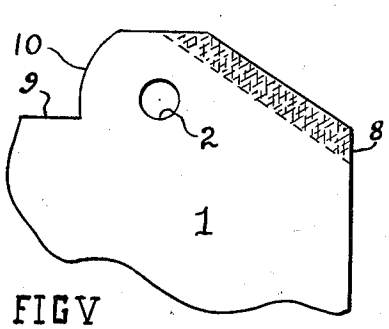


FIG V

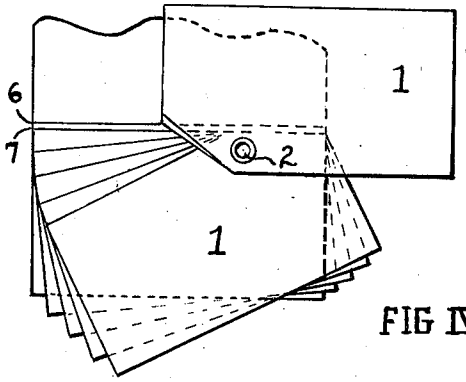


FIG IV

INVENTOR

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UNITED STATES PATENT OFFICE

2,156,551

CARD SYSTEM

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9 Claims. (Cl. 129—16.5)

This invention relates to card systems and has for its primary object the devising of means whereby a number of card members are arranged in sequence in a suitable manner and adapted to be swung on a suitable axial member so that a portion of each card member may be exposed for indexing purposes, whereby one or more card members may be withdrawn from a set and again readily inserted in their proper place without interfering with the order and arrangement of the other card members.

Another object of this invention is to provide a simple and inexpensive while efficient card system for use in connection with standard file boxes, cabinets and wherever quick reference to indexed information is required, and to this end the invention consists in a construction and a combination of elements of which a preferred embodiment is herein disclosed, with due reservations as to changes in form and proportion which may be resorted to within the principles involved as defined in the appended claims.

In the drawing:

Figure I is a fragmental plan view of a number of card members including a portion of the folding cover and the top card member showing the approximate depth for treating the abutting portion of each card member against wear.

Figure II is a sectional view of Figure I taken on line A—A.

Figure III is plan view showing card members fanned out and the position of the hand for holding the card members when a stop member is not included with the set.

Figure IV is a plan view showing the method of swinging the card members back for reference without detaching the axial member when such card members are fanned out.

Figure V is a plan view of a modified form card member cut away so that the card members will fit loose leaf covers.

The card members 1 may be of any desired shape and made of any suitable material and may be printed in any suitable manner for various uses.

The card members have perforations 2 in the same position for each card member and in alinement one with the other and formed preferably in the upper right hand corners thereof, said perforations may be formed by any shaped punch that will make an opening to permit card members to swing freely on axial tube member 11 or of a size to permit any finger of the hand to serve as an axial member.

The corners of the card members are preferably cut away adjacent said perforations or openings on straight lines tangential to the arc of swing to form what will hereinafter be termed the abutting portions, the arc of swing here meaning an arc the radius of which extends from the center of tubular member 11 to the uppermost edge of the front card member 1.

The abutting edge portion of each card member lies in front of a portion of an adjacent card member and the outermost ends of such portions are formed and arranged in suitable spaced relation, the edges of the portions being tangential to different sectors in the arc of swing, causing the abutting portion of each card member to swing to a different radial portion about said opening when card members are positioned with the lowermost edges in alinement. The forming of the abutting portions of card members in this manner can be accomplished by the use of any standard paper cutting machine, thereby reducing the cost of manufacturing card members considerably.

The abutting portions of card members may be coated and thereby strengthened by dipping into a solution having a Celluloid or shellac base or covered with a very thin sheet of Celluloid to prolong wear of this portion shown at 8 in Figures I and V.

Card member 3 in Figure I is perforated only; not having its corner cut this card member may extend sufficiently to form a top portion 4 and front cover portion 5 which is scored at 6 and 7 to facilitate folding over of the cover.

The top portion 4 serves as a stop member for the card members 1 in the cover when cover 5 is folded over, and this portion is perforated to correspond to perforations of card members contained therein, and the cards have their corners adjacent said perforations cut in a manner as described to form abutting portions which abut against stop member 4 when said card members are fanned out.

Card members 1 may be formed as shown at 9 in Figure V for use in standard ring type loose leaf books or binders, the upper portion opposite the perforations and abutting portions of all card members being cut away to form projection 10 shown in Figure V. The portion of the ring not serving as an axle will serve as a stop for said abutting portions to abut against and this projecting type card member will fit binders that would otherwise have rings or binding devices keeping said card members from fitting the binder properly.

This projecting type of card member may be

used wherever it is desired not to encroach on any part of the main portion of a card member, or to serve as a holder for another card or paper containing the desired information instead of being directly on said card member when attached thereto in any suitable manner.

The flanged tubes 11 and 12 in Figures I and II are formed so tube 12 fits in axial tube 11 and is held frictionally therein. The length of tube 11 varies depending on the number and thickness of card members assembled thereon, while the length of tube 12 may be any length that will prevent accidental separation of the two. The flanges on tubes 11 and 12 are preferably of the same diameter and of sufficient size to keep thumb 13 and first finger 14 shown in Figure III from binding the cards when operating the invention.

In Figure III the card members represented are the same as shown in Figure I, but in fanned out position showing exposed portions on four different sides, two sides facing front and two sides facing the rear shown by dotted lines, all of which may be used for indexing purposes; the rear card is without extended folding cover portion and the position of finger 14 and thumb 13 conceals tubes 11 and 12.

It is obvious that the flanged tube 12 may be readily removed from flanged tube 11 for taking out card members for typing or other purposes, and that many other standard eyelets or binding devices may be substituted for flanged tubes 11 and 12.

In the operation of this invention as illustrated in the drawing, the card members are assembled on flanged tube 11 so each card member will swing freely thereon when flanged tube 12 is inserted in flanged tube 11 and arranged so the abutting portions of each succeeding card member extends slightly beyond the abutting portions of a preceding card member, when card members are positioned with their lowermost edges in alinement.

When finger 15 is held in the path of swing so the abutting portions of card members rest against this finger as in Figure III the card members fan out, to expose a space to view on each card member for indexing purposes.

When cover portions 4 and 5 are included and in a folded position over card members 1, the cover portion 4 serves as a stop for the abutting portions in place of finger 15, whereby card members will be ready for quick selection when cover 5 is lifted and card members may be swung back as shown in Figure IV, so information on selected card member may be seen.

As the operation of the invention depends on gravity the axial member may be lifted thereby allowing the abutting portions of the card members to fall against a suitable stop or all the card members may be allowed to fall to their center of gravity and a suitable stop member moved against the abutting portions until all the abutting portions are even with each other causing the said card members to fan out.

The formation of the abutting portions of the card members depends on the size and number of card members used, together with what surface it is desired to expose for indexing purposes. When more card members are needed than is practical to form in a single set, two or more sets of said card members may be swung on a single axial member.

If card members are perforated and provided with abutting portions as set forth and arranged in a filing cabinet instead of being assembled on an axial member the card members may be fanned out by merely inserting a suitable axial member in said perforations of a suitable number of card members and fanning them out in a manner similar to that shown in Figure III. A practical application of this principle is to have the perforation or opening formed to a size to permit a finger of the hand to be inserted in said opening to serve as an axle for said card members to swing freely thereon; while another finger of the hand may be used as a stop for card members to abut against.

If card members in a filing box or cabinet are withdrawn from a set and inserted in the wrong place respecting the formation of the abutting portions or if for certain indexing purposes it may be necessary to have said card members disarranged in respect to the spaced relation of the abutting portion, a small portion of one corner of said card members will always remain visible and may be used for indexing purposes. Referring to Figure III in the drawing, this portion is both sides of the lower left hand corner of the card members shown therein.

Having described my invention I claim:

1. A card system comprising a number of card members, each having an opening adjacent one corner thereof in alinement one with the other, an abutting portion formed adjacent each said opening, said portions being along lines of tangency to the same arc, and an axial member engaging said card members loosely through all said openings and arranged therein so that the lower card edges are normally in alinement one with the other, but in lines of tangency to different radii of the same arc when said abutting portions are in abutment with a suitable stop to provide a temporary visual portion for each said card member.

2. A card system comprising a number of card members, each having an opening adjacent one corner thereof in alinement one with the other, an abutting portion formed adjacent each said opening, said portions being along lines of tangency to the same arc but normal to different radii of such arc when said card members are in position with their lower edges in alinement.

3. A card system comprising a number of card members, each having an opening adjacent one corner thereof and in alinement one with the other, such said corner terminating into two obtuse angles to form an abutting portion therebetween, said obtuse angles of one card member being different from that of all others, and an axial member engaging said card members loosely through all said openings.

4. A card system comprising a number of card members, each provided with a planar projection having an opening in alinement one with the other, an abutting portion formed adjacent each said opening, said portions being along lines of tangency to the same arc, but normal to different radii of such arc when said card members are in position with their lower edges in alinement.

5. A card system comprising a number of card members, each having an opening adjacent one corner thereof in alinement one with the other to receive a suitable axial member and an abutting portion formed adjacent each said opening so each said abutting portion of each succeeding card member extends slightly beyond the abutting portion of a preceding card member when said card members are in normal position with their lower edges in alinement, but each abutting

portion being in alinement one with the other when brought in abutment with a suitable stop by rotating card members on said axial member to bring lower edges of said card members in lines of tangency to different radii of the same arc.

6. A card system comprising a number of card members, each having an opening adjacent one corner thereof in alinement one with the other, a cover member folded on itself and having an opening adjacent said folded portion, an axial member fastened at said opening in said cover member, said card members each having an abutting portion adjacent its opening, said portions being formed along lines of tangency to the same arc, but normal to different radii of such arc when the card members are in position with their lower edges in alinement and said card members arranged loosely on said axial member so said abutting portions may abut against said folded portion.

7. In a card system, the combination of two card members, each having an opening adjacent one side thereof in alinement one with the other, an axial member engaging both said card members freely through each said opening, one of said card members having a portion folded on itself to provide a stop at the bend thereof, the other card member having a portion cut away to form an abutting portion in spaced relation to said stop when said card members are in normal position with their lower edges in alinement one with the other, but said lower edges in lines of tangency to different radii of the same arc when one of said card members is rotated on said axial member and said abutting portion is brought against said stop.

8. In a card system, the combination of two card members, each having an opening formed therein in alinement one with the other, one of said card members having two of its sides terminating into two obtuse angles to form an abutting portion between said sides, said abutting portion formed adjacent said opening along a line of tangency to an arc, the other said card member having a portion folded on itself to provide a stop at the bend thereof for said abutting portion, an axial member engaging both said card members freely through each said opening so the lower edges of said card members are normally in alinement one with the other, but in lines of tangency to different radii of a single arc when one of said card members is rotated on said axial member and said abutting portion is brought against said stop.

9. In a card system, the combination of two card members, each having an opening formed therein in alinement one with the other, one of said card members having two of its sides terminating into a pair of angles, one of which is an obtuse angle to form an abutting portion at one of said sides, said abutting portion formed adjacent said opening along a line of tangency to an arc, the other said card member having a portion folded on itself to provide a stop at the bend thereof for said abutting portion, an axial member engaging both said card members freely through each said opening so the lower edges of said card members are normally in alinement one with the other, but in lines of tangency to different radii of a single arc when one of said card members is rotated on said axial member and said abutting portion is brought against said stop.

NATHAN I. STARK.