

Feb. 14, 1933.

S. B. FREIBERG

1,897,929

CARD FILING DEVICE

Filed Oct. 15, 1927

2 Sheets-Sheet 1

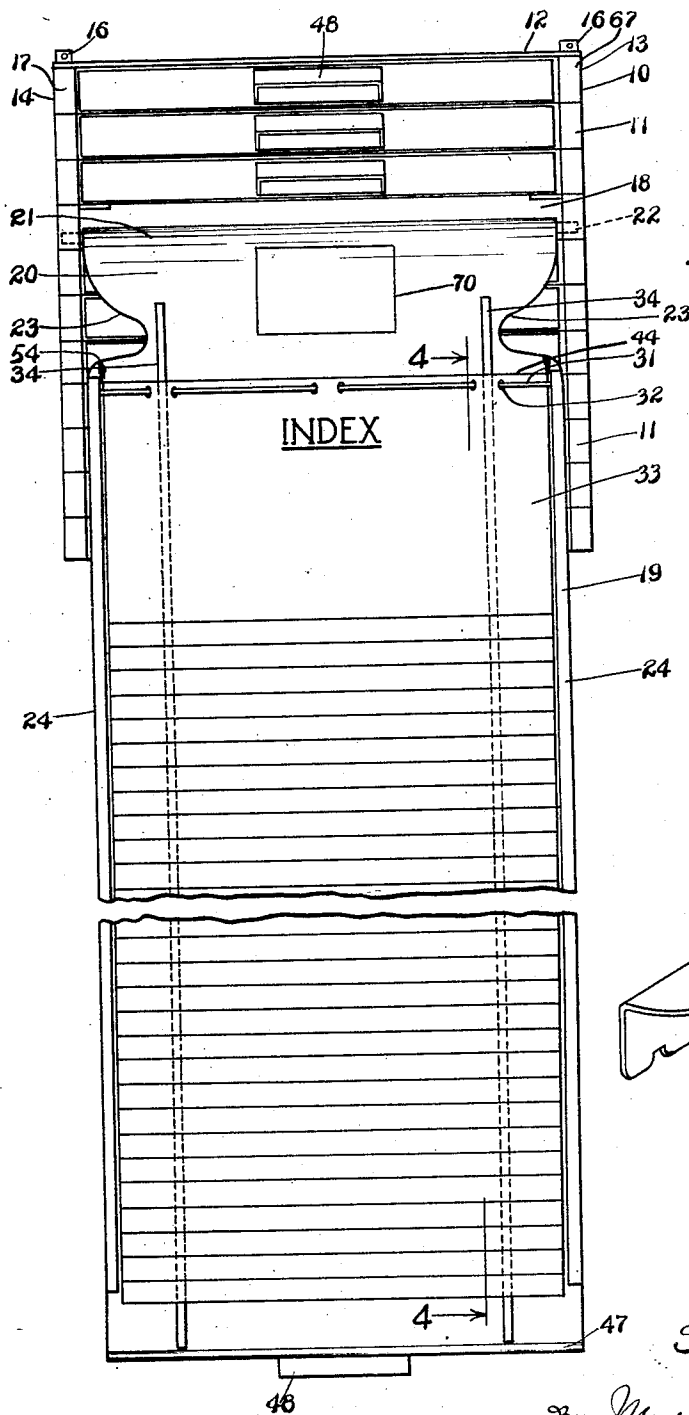
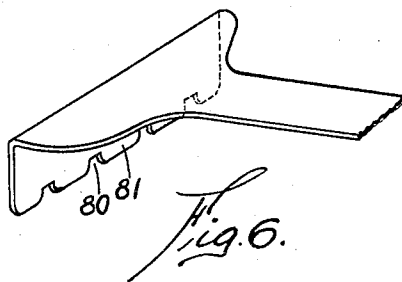


Fig. 1.



Inventor

Stanley B. Freiberg,

By Murray and Fugelter

Attorneys

Feb. 14, 1933.

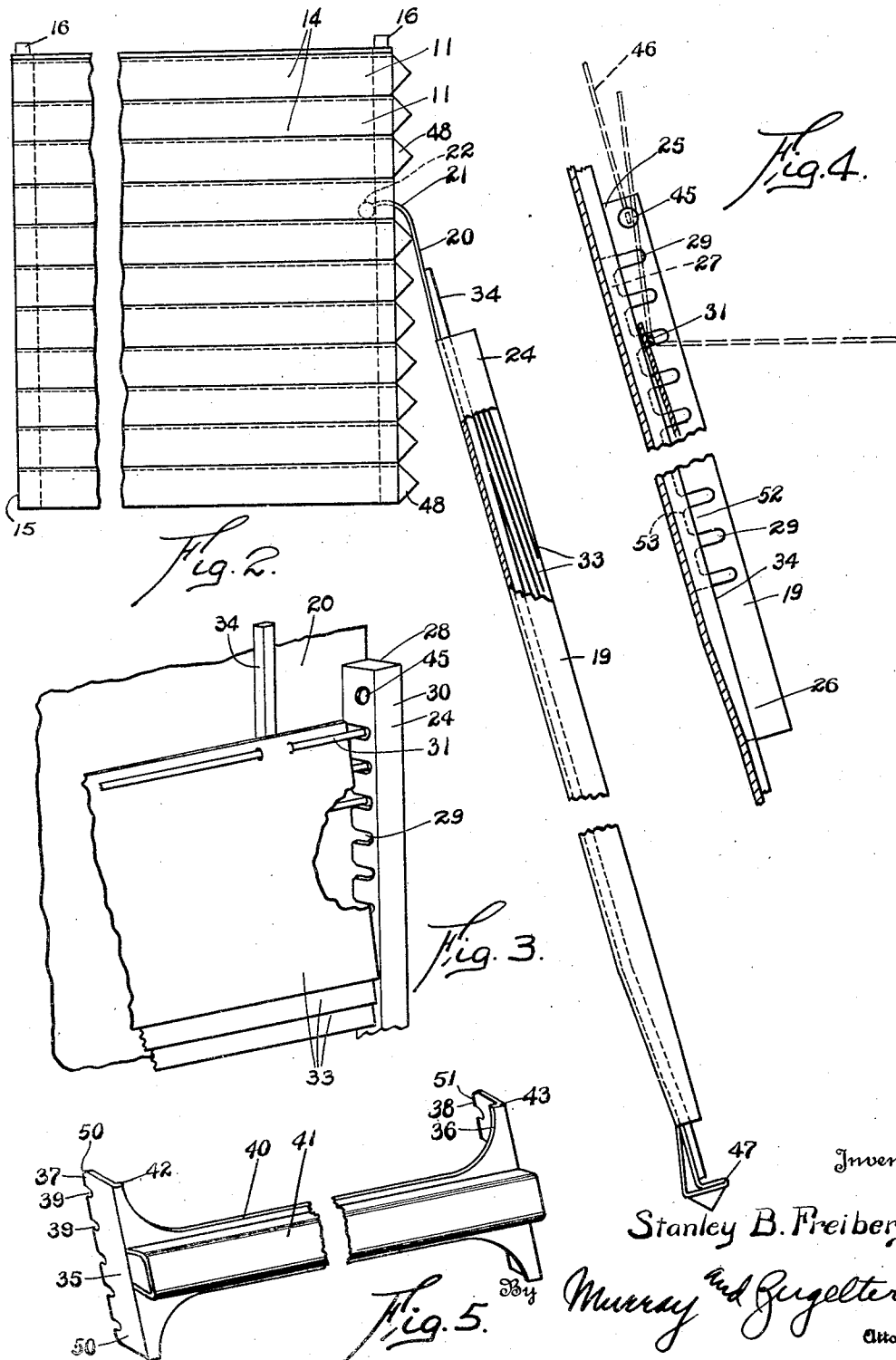
S. B. FREIBERG

1,897,929

CARD FILING DEVICE

Filed Oct. 15, 1927

2 Sheets-Sheet 2



Inventor

Stanley B. Freiberg,

Murray and Ziegler

Attorneys

UNITED STATES PATENT OFFICE

STANLEY B. FREIBERG, OF CINCINNATI, OHIO, ASSIGNOR TO INTERNATIONAL VISIBLE SYSTEMS CORPORATION, OF CINCINNATI, OHIO, A CORPORATION OF OHIO

CARD FILING DEVICE

Application filed October 15, 1927. Serial No. 226,490.

An object of this invention is to provide a simple and efficient card filing device of a character wherein all of the cards of a given cabinet section are exposed at one time.

Another object is to provide a device of the kind referred to, wherein various cards may be readily adjusted to various positions relative to one another and to the card-retaining casing.

Another object is to provide a retaining means that may be detachably connected with a card and which need not be removed from the card when passing the card through the typewriter or other device of that character.

Another object is to provide a device of the character indicated, wherein individual card racks may be readily and expeditiously inserted in and removed from the cabinet or casing.

These and other objects are attained by the means described herein and disclosed in the accompanying drawings, in which:

Fig. 1 is an elevational view, parts being broken away, showing a device embodying the invention.

Fig. 2 is a side elevation, parts being broken away, of the device shown in Fig. 1.

Fig. 3 is a detailed perspective view, parts being broken away, of the device shown in Figs. 1 and 2.

Fig. 4 is a sectional view on line 4—4 of Fig. 1.

Figs. 5 and 6 are perspective views of card-shifting devices forming details of the invention.

The cabinet itself comprises a plurality of individual casings 11, that may be mounted upon one another, whereby to provide a sectional cabinet structure. Each casing 11 comprises a top 12, sides 13 and 14, and a suitable back 15. The casing 11 may carry suitable upwardly projecting lugs 16, or the like, whereby successive casings may be mounted one upon another, in vertical alignment, for providing a sectional cabinet structure. The top 12 of each casing may serve as a bottom member for each casing next above. Any suitable bottom member may be provided for the lowermost casing or sectional compartment. The forward ends 17 and 67

respectively may be turned inwardly for providing flanges that extend over the lugs 16. If desired, the sides 13 and 14 may be formed integral with the back member 15. The lug members 16 serve as stop members, that normally preclude withdrawal from the pocket or way 18, of the individual card trays 19, one each of which card trays is disposed in one each of the pockets 18.

Each card tray 19 comprises a substantially long, flat and relatively narrow plate 20, having its rear end arcuately curved as shown at 21 and carrying at its extreme end a suitable transversely extending rod or pin 22. The opposite ends of the rod 22 extend beyond the lateral edges of the plate 20 and are adapted to normally lie between the pair of pins 16 disposed at the front of any individual casing and the pair of pins 16 disposed at the rear of the same casing. Adjacent the rear end of the plate member 20 there are formed recesses 23. The recesses are so formed that the plate 20 may be moved arcuately about the point of contact of one end of the rod 22 upon one of the lugs 16, whereby to subsequently position the ends of the rod 22 out of alignment with the lugs 16. Thereafter, the card tray 19 may be moved longitudinally of the casing, for disconnecting the card tray from the casing. The edges or shoulders 90, defining the forward ends of the recesses 23 are rounded for guiding the tray 19 into its way 18.

Forwardly from the recesses 23, one each of which recesses is formed at each rear side of the plate 20, there are mounted substantially square bars 24. The bars are identical and of rack like structure. If desired, the bars or racks may be made integral with the plate 20. The end portions 25 and 26 of the bars are formed solid and serve as stops or limiting means for an elongated way or slot 27 formed in and along the inner face of the bar. The outer wall 28 of the bar is solid and defines the one lateral edge of the way 27. At spaced intervals along the way 27 there are provided elongated recesses 29, that communicate at their lower ends with the way 27 and which project toward the upper edge or face 30 of the bar 24. The

elongated ways 27 in the opposed bars 24 are coextensive. The upwardly extending recesses or pockets 29 are formed in pairs, one each of each pair of pockets being disposed in the opposed bars 24. A plurality of spring bars 31 are provided. The indicated spring bars are adapted to extend transversely of the plate 20 and to have their ends inserted in the pockets 29. The opposed ends of any one spring bar 31 are lodged one each in one of the pockets 29 of a given pair of such pockets 29. The spring bars 31 are relatively thin and flat and are adapted to be threaded through suitable eyes or openings 32 formed in cards 33. Although flat spring bars are shown herein, the use of flat spring bars or card holders is not essential to the invention disclosed herein. Flat spring bars have certain advantages, wherefore same are shown and claimed in my co-pending application, Serial No. 245,406, filed January 9, 1928. The width of the spring bars 31 is approximately the same, or slightly less than the width of the elongated pockets 29. Preferably, the outer ends of the pockets 29 are arcuate or semi-circular. This semi-circular formation of the pockets 29 permits the spring bars 31 to be turned freely and readily in the pockets 29, whereby to permit the exposure of either side of any card, such as 33.

In order to retain the various spring bars 31 in their proper pockets 29, there is provided a pair of ribs 34, that extend in parallelism along the plate 20. The ribs 34 are disposed rather close to the bars 24 and are of a height greater than the width of the ways 27, so that normally the ribs 34 sustain or retain the opposed ends of the spring bars 31 sufficiently above the ways 27 to preclude shifting of the cards 33 and the spring bars 31 longitudinally of the plate 20. When it is desired to shift any one of the cards 33, together with its associated spring bar 31, longitudinally of the plate 20, from one pair of pockets 29 to a different pair of pockets 29, the opposed ends of the spring bar are bent toward the plate 20 by placing pressure upon the spring bars 31 intermediate the ribs 34 and their adjacent bars 24. The placing of pressure upon a spring bar in the manner indicated, serves to flex the center portion of the bars upwardly and away from the plate 20, so that the ends of the bar may be brought into registry or alignment with the way 27, whereupon the bar may be moved longitudinally of the ways 27 to the selected pair of pockets 29. Upon releasing the ends of the bar 31, the reaction of the bar 31 causes the ends to move upwardly in the pockets 29 and out of alignment with the way 27. The adjustment of the cards 33 may be accomplished by means of an operator's fingers, or a suitable shifting member such as that shown in Fig. 5 may be provided for

singly or collectively shifting a number of cards.

The shifting device shown in Fig. 5 comprises a pair of flanges 35 and 36, that are insertable between the cards 33 and the bars 24. The lower edges 37 and 38 of the flanges 35 and 36 respectively are recessed at intervals as shown at 39. The recesses 39 are spaced at substantially the distance at which the pockets 29 are spaced one from the other. Upon inserting the flanges 35 and 36 between the cards and the bars 24, the recesses 39 are so positioned that each recess 39 will receive an end of one of the bars 31. It is intended that the recesses 39 shall be in pairs, one recess of each pair being disposed in the flange 37 and one in the flange 38. Thereupon, by applying downward pressure upon the shifting member 40, the spring bars 31 are depressed at their ends while the centers thereof are flexed upwardly. All of the spring bars depressed by the shifting member 40 may thereupon be moved longitudinally of the ways 27. A suitable finger-piece or handle 41 may be provided upon the shifting member 40. The edges 42 and 43 of the flanges 35 and 36 respectively are intended to register with the edge 44 of the uppermost card to be shifted, and the recesses 39 are so positioned along the flanges 35 and 36, that they will receive the opposed ends of the spring bars 31, as previously explained, when there is registration of the edges 42 and 43 of the shifting device 40 with the edge 44 of the uppermost card 33.

Each of the bars 24 is provided with a bore 45, into which an end of a spring bar 31 may be introduced. It is intended that the card, supported by the spring bar received by the pair of bores 45, shall be of a fairly heavy stock and shall not be shifted longitudinally of the plate 20. A card of this character serves as a backing or writing surface upon which the shiftable cards may bear in the event that the cards are turned to the position indicated in dotted line at 46 in Fig. 4.

The forward end of the plate 20 may be developed into a suitable flanged structure such as is shown at 47 in Fig. 2, such structure 47 serving as a closure for the way 18 when the card tray has been wholly inserted in the way 18. A suitable index tab holding device 48 may be provided upon the flange structure 47.

Although the cross-bars 31 are shown as narrow flat bars, it is to be understood that these spring bars may not be of the specific form mentioned, although that form is preferable because the bars may readily pass through a typewriter, and in addition, the edges of such bars serve, to some extent, as frictional means for precluding the cards from freely falling from a raised position, such as is shown at 46 in Fig. 4, to the normal

position as shown in full lines in the same figure.

The recesses 39, provided in the flanges 35 and 36 of the shifting device, are preferably arcuate or semi-circular, whereby to readily effect entering of the spring bars 31 in such recesses 39. The corners of the flanges 35 and 36 are preferably rounded, as shown at 50, to facilitate use of the shifting device to obviate inadvertent contact with any of the spring bars 31 that might lie adjacent the shifting device 40 at the time the shifting device is applied. The flanges 35 and 36 may also be rounded along their inner sides, as indicated at 51, to facilitate entering of the flanges 35 and 36 between the cards and the bars 24. The lower portions of the walls 52, having slots or pockets 29, may have rounded corners at the entrance to the slots as indicated at 53, to facilitate movement of the spring bars 31 to and from the pockets 29. If desired, the bores 45 may be enlarged to such an extent that they will receive a plurality of spring bars 31 and cards carried thereby, whereby to provide a conveniently accessible supply of cards for use with the device.

Although various parts, as disclosed and described herein, may be made from single members, it is to be understood that the various co-operating parts may be fabricated from a plurality of pieces of material and that various parts shown and described herein may be combined into a unitary structure or element, without departing from the invention. If desired, a pair of depressions may be provided at the upper or inner end of the plate 20, so as to obviate contact of the shifting member 40 upon the plate 20 at such time as the cards at the inner or upper end of the tray may be shifted. The depressions may in some instances be necessitated because the upper or rear end of the plate 20 is inclined upwardly as is the forward part of plate 20, as may be best observed in Fig. 2. Unless the incline will interfere with use of the shifting member 40, depressions are unnecessary.

The shifting device has its endmost recesses 39 so spaced from the ends of the flanges 35 and 36 that the abutment of such ends against an adjacent card holder or spring bar 31 serves to align such recesses 39 with the spring bars 31 and with cooperating pairs of pockets 29.

The plate 20 may be provided with an aperture 70 into which the index tab holders 48 may enter to permit any tray to assume a substantially vertical position when the tray is moved to its extended position for exposing the cards thereon. The tray as shown in Fig. 2 may approximate a more nearly vertical position than that in which it is shown.

The shifting device shown in Fig. 6 differs from the device shown in Fig. 5, in that re-

cesses 80 corresponding to recesses 39, are not rounded at their inner ends, whereas the lugs 81, disposed between the recesses 80, have their corners rounded.

I claim:

1. In a record filing device the combination of a pair of spaced racks, means for carrying record-receiving devices and having ends received between the teeth or lugs of the racks for retaining said means in spaced relation one to the other, and record-receiving devices carried by said means.

2. In a filing device the combination of a tray having racks formed along its lateral edges, the racks having the teeth thereof projecting toward and spaced from the bottom of the tray, means for insertion between the teeth of the racks and shiftable along the racks by moving the ends of the same into the spaces between the tray and the rack teeth, record-receiving devices carried by said means, and means for sustaining the first-mentioned means in the tray and with the ends of said first-mentioned means between the teeth of the racks.

3. In a filing device the combination of a tray having racks formed along its lateral edges, the racks having the teeth thereof projecting toward and spaced from the bottom of the tray, means for insertion between the teeth of the racks and shiftable along the racks by moving the ends of the same into the spaces beneath the rack teeth, record-receiving devices carried by said means, means for sustaining the first-mentioned means in the tray and with the ends of said first-mentioned means between the teeth of the racks, and a shifting device for moving the ends of the first-mentioned means into the spaces beneath the teeth of the racks for shifting said means.

4. In a device of the class described the combination of means having pairs of oppositely aligned pockets and having oppositely aligned ways into one each of which the pockets of each set of pockets open, support means in their normal positions extending between pairs of pockets, and means sustaining the support means in their respective pairs of pockets when in normal position, the support means and sustaining means adapted to permit movement of said support means to abnormal position in said ways for shifting the support means to and from selected pairs of pockets.

5. In a device of the class described the combination of means having pairs of oppositely aligned pockets and having oppositely aligned ways into one each of which the pockets of each set of pockets open, support means in their normal positions extending between pairs of pockets, means sustaining the support means in their respective pairs of pockets when in normal position, the support means and sustaining means adapted

to permit movement of said support means to abnormal position in said ways for shifting the support means to and from selected pairs of pockets, and record-receiving means carried by the support means.

6. In a device of the class described the combination of a plate having its opposite edges flanged and return-bent and providing therewith opposed aligned ways, the edges having a rack-like structure, the free ends of the teeth of which extend toward the plate whereby pockets are formed, which pockets open into the ways, the pockets along the edges being oppositely aligned in pairs, a rib on the plate substantially coextensive with the ways and having its upper edge projecting from the plate to a distance intermediate the upper and lower limits of the pockets, and flexible normally straight record-supporting means sustained by the rib and having their opposite ends disposed in pairs of the pockets, the sections of supporting means disposed between the pockets and the rib being adapted for depression into the ways for movement thereof to and from selected pockets.

7. In a device of the class described the combination of a plate having its opposite edges flanged and return-bent and providing therewith opposed aligned ways, the edges having a rack-like structure, the free ends of the teeth of which extend toward the plate whereby pockets are formed, which pockets open into the ways, the pockets along the edges being oppositely aligned in pairs, a rib on the plate substantially coextensive with the ways and having its upper edge projecting from the plate to a distance intermediate the upper and lower limits of the pockets, flexible normally straight record-supporting means sustained by the rib and having their opposite ends disposed in pairs of the pockets, the sections of supporting means disposed between the pockets and the rib being adapted for depression into the ways for movement thereof to and from selected pockets, and record-receiving means carried by the flexible supporting means and retained in overlapping relationship by the positioning of the support means in the pockets.

8. The combination of a tray having longitudinally extending and oppositely aligned ways, and having pockets oppositely aligned in pairs and opening into said ways, means normally retained in a pair of said pockets and adapted to support record-receiving means, and a shifting device comprising a pair of spaced flanges provided with means for engagement with said support means for moving the support means to and through the ways for shifting thereof to and from selected pairs of pockets.

9. In a device of the class described the combination of a plurality of record-receiving members positioned in overlapping relationship

and each provided with support means extending laterally from the opposite ends thereof, a tray having pockets arranged oppositely in pairs along the opposite edges thereof, the support means on the record-receiving members extending into the pockets, and a rib on the tray sustaining the record-receiving members above the tray, said rib being spaced inwardly from the pockets and providing a recess adjacent the pockets and into which recess portions of the record-receiving members may be depressed for moving the overlapping record-receiving members from the pockets.

10. As a new article of manufacture, a shifting device comprising a pair of spaced flat members, a handle member joining said members, said flat members having rack-like or serrated edges for providing recesses oppositely aligned in pairs and into which recesses the opposite ends of card holders may enter, for moving such card holders along a card-holding tray.

11. The combination of a tray having oppositely aligned pairs of fixed pockets, the pockets having outlets, card holders having their opposite ends disposed in the pairs of pockets, and means for shifting the card holders to and from selected pairs of pockets through the outlets of the latter.

12. The combination of a tray having oppositely aligned pairs of pockets, the pockets having outlets, card holders having their opposite ends disposed in the pairs of pockets, and means for shifting the card holders to and from said pockets through the outlets of the latter without separating the card holders from the tray.

13. The combination of a tray having a pair of parallel opposed ways and having pockets along and opening into said ways, the pockets being oppositely aligned in pairs, card holders extending between the pairs of pockets, means for sustaining the holders in said pockets and means for shifting the card holders through the ways to and from selected pairs of pockets.

14. The combination of a plurality of perforated record-receiving members, a resilient member for each record-receiving member, inserted through the perforation of its respective record-receiving member, a tray having longitudinal ways and spaced pairs of oppositely aligned pockets opening to said ways, receiving the resilient members and retaining the record-receiving members in overlapping relationship; means for positioning the card holders with their ends in the pockets and above the ways, the resilient members, when flexed, being adapted for movement to and from said ways for shifting to and from selected pairs of pockets, and means for flexing and shifting the resilient members to and from pairs of pockets without removing same from the tray.

15. The combination of a tray having oppositely aligned pairs of fixed pockets, card holders having their opposite ends disposed in the pairs of pockets, and means for shifting card holders to and from other selected pairs of pockets.

16. The combination of a tray having oppositely aligned pairs of pockets, card holders having their opposite ends disposed in the pairs of pockets, and means for shifting the card holders to and from others of said pockets without separating the card holders from the tray.

17. The combination of a tray having a pair of parallel opposed ways and having pockets along and opening into said ways, the pockets being oppositely aligned in pairs, card holders extending between the pairs of pockets, and means for sustaining the holders in said pockets and for shifting the card holders through the ways to and from other selected pairs of pockets.

In testimony whereof, I have hereunto subscribed my name this 14th day of October, 1927.

STANLEY B. FREIBERG.

30

35

40

45

50

55

60

65