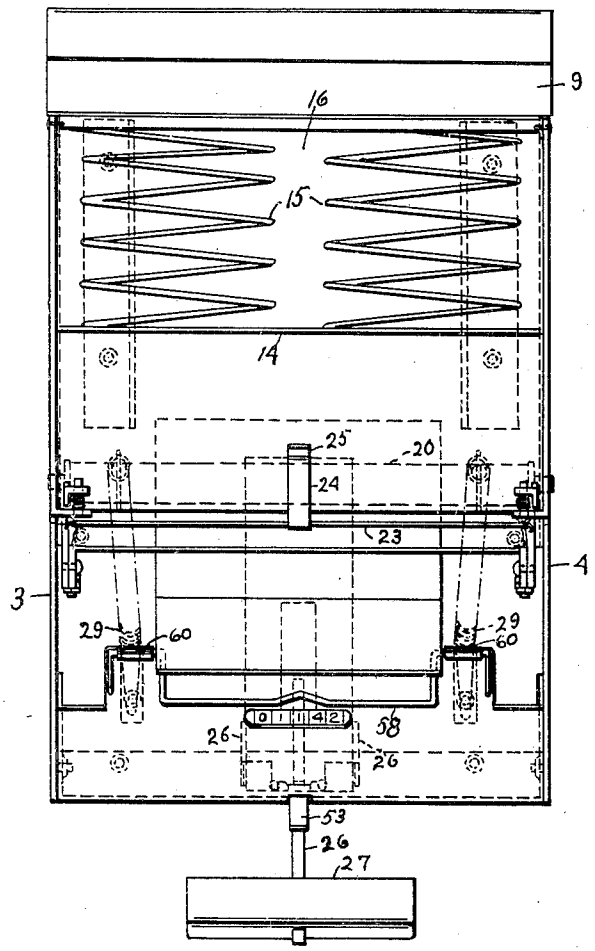
Nov. 1, 1949 C. C. HARRIS ET AL 2,486,841

APPARATUS FOR SUCCESSIVELY DISPLAYING THE FOREMOST ARTICLE FROM AN ASSEMBLAGE OF ARTICLES

Filed Dec. 14, 1945 4 Sheets-Sheet 1

Fig. 1.



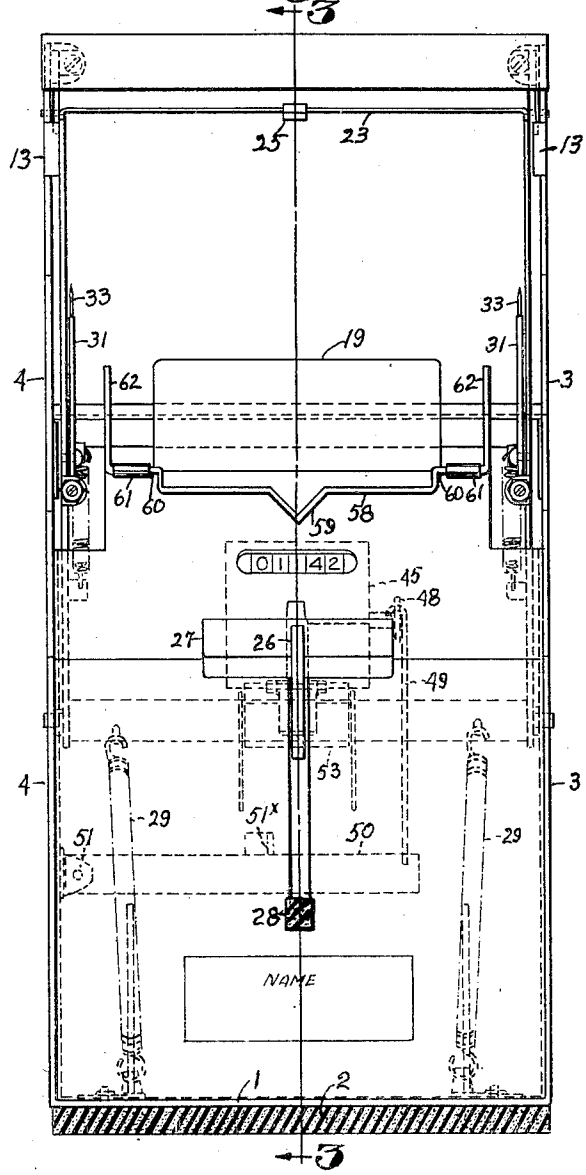
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Fig. 2.



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APPARATUS FOR SUCCESSIVELY DISPLAYING THE FOREMOST ARTICLE FROM AN ASSEMBLAGE OF ARTICLES

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Fig. 3.

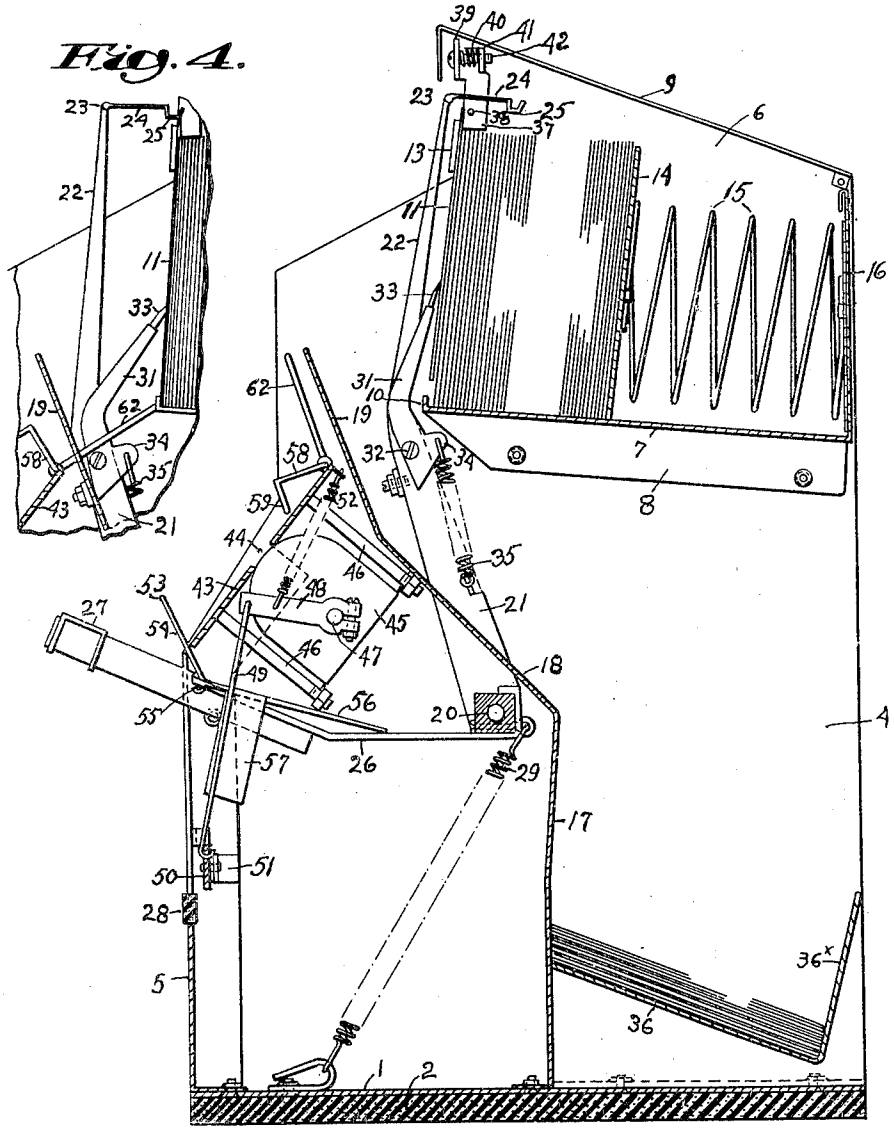


Fig. 4.

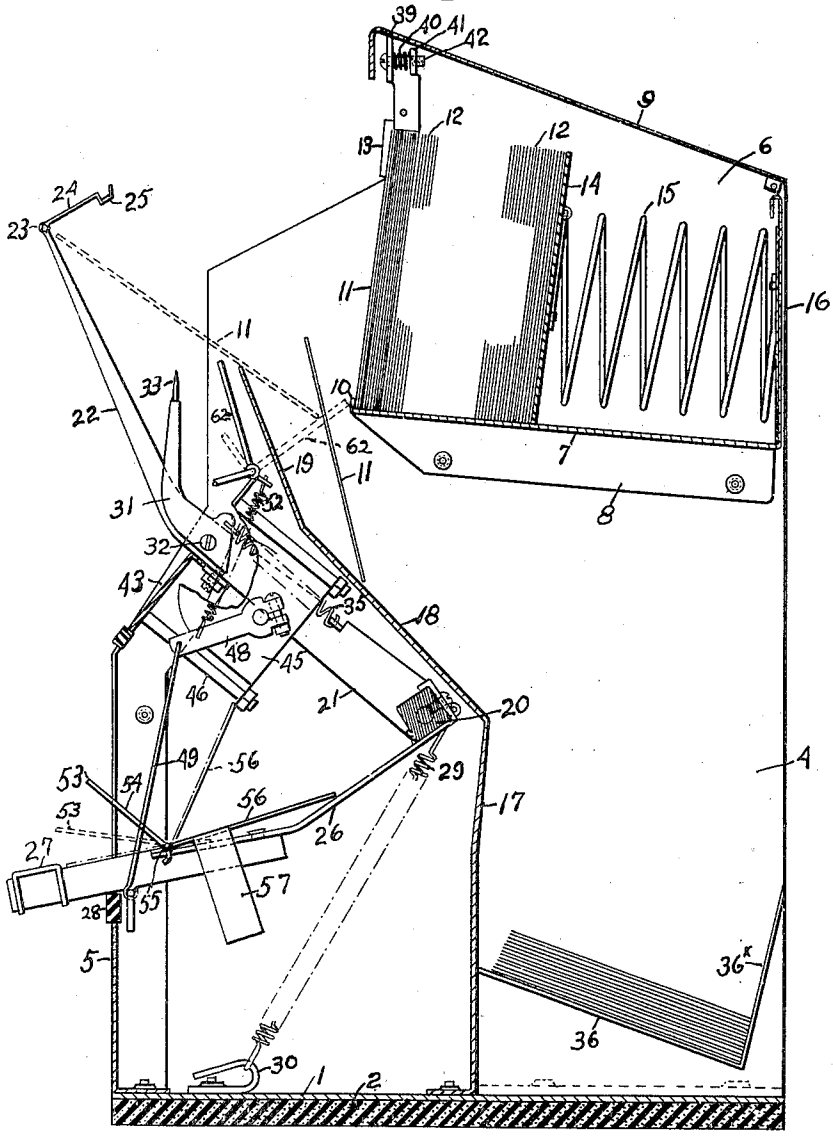
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APPARATUS FOR SUCCESSIVELY DISPLAYING THE FOREMOST ARTICLE FROM AN ASSEMBLAGE OF ARTICLES

Filed Dec. 14, 1945 4 Sheets-Sheet 4

Fig. 5.



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UNITED STATES PATENT OFFICE

2,486,841

APPARATUS FOR SUCCESSIVELY DISPLAYING THE FOREMOST ARTICLE FROM AN ASSEMBLAGE OF ARTICLES

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Application December 14, 1945, Serial No. 635,080

8 Claims. (Cl. 40—78)

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This invention relates to mechanism for successively delivering the foremost article from an assemblage of articles and the main object of the invention is to provide mechanism embodying a novel principle of slidably moving the foremost article of the assemblage relatively to the next adjacent article and thereafter freeing the foremost article from the assemblage by a tipping or flipping movement.

The principle of the present invention may be employed to remove the foremost card of an assemblage in the manner described whether the assemblage is in vertical, horizontal or inclined position.

A further object of the invention is to provide mechanism for successively exposing to view articles of an assemblage having selected faces fronting in the same direction and reassembling the articles with their selected faces in the original sequential order.

The invention comprises broadly mechanism for holding an assemblage of articles in parallelism and reciprocable article-removing means, preferably having a swinging movement toward and from the foremost article of the assemblage, provided with means operable when moved into engagement with the foremost article of the assemblage to move it slidably upon the next adjacent article a predetermined distance and thereafter when moved in the opposite direction to free the article from the assemblage and cause it to drop, preferably with the selected face downward, so that when successive articles are superposed in reassembling the selected faces will be arranged in the original sequential order.

The invention is adapted to be embodied in any machine for thus exposing and/or delivering successive articles from an assemblage, such as handling machines for successively displaying to view for inspection and/or selective removal individual articles of an assemblage including cards containing addresses and/or other data which it is desired to copy, addressograph metal plates, stencils, etc.

The invention is also applicable to vending machines for various articles such as packages of gum, candy, cigarettes, etc.

An illustrative embodiment of the invention is shown and described herein as a machine for assisting inspection and copying filing cards bearing addresses and other suitable data having selected faces bearing such data arranged in a predetermined sequential order and reassembling the cards in the original sequential order.

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In usual practice an assemblage of such cards arranged in predetermined order is taken from a filing drawer and placed in said order upon a copyist's desk with the principal face uppermost or foremost. As the required data is copied from each successive foremost card the card is removed manually from the assemblage and placed upon the card next previously removed, usually with the principal face bearing the data uppermost, so that when copied cards are picked up for refiling the sequence of the principal faces thereof is reversed and must be rearranged before being replaced in the file. In many instances the cards of such assemblages when thus handled are spilled or rearranged thereby requiring considerable time to replace them in the proper sequence.

The present invention is designed to provide a device which can be conveniently located within the proper range of vision of the copyist and which will support the cards of the assemblage in their predetermined sequence with the principal face of the foremost card exposed for copying. Means are provided which can be readily actuated by the operator for removing each foremost card from the assemblage after it has been copied and so depositing the cards as to reassemble the same with their principal faces in the original sequence so that the reassembled cards can be removed and replaced in the file in the same sequential order.

By reason of the present invention a rapid inspection of the cards of an assemblage can be made when it is desired to obtain some specific information without the necessity of manually handling the cards with the attendant disadvantage of searching for an individual card in the file and the likelihood of erroneous replacement of it in the file.

The term "card" or "article" is used herein in a broad sense to include metal address plates such as those used in addressing machines, or other flat articles which it is desired to successively display for inspection or other uses.

Another object of the invention is to provide mechanism for thus manipulating cards or other articles in which the foremost card after removal from the assemblage can be arrested before it is deposited in the reassemblage to enable data to be copied from the reverse face of the card and then replaced in its proper sequential order and delivered to the reassembling mechanism.

Another object of the invention is to provide means for counting the cards as they are successively removed from the original assemblage

and reassembled thereby providing an automatic check to insure that all cards are reassembled.

These and other objects and features of the invention will more fully appear from the following description and the accompanying drawings and will be particularly pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawings, as applied to card handling mechanism, in which,

Fig. 1 is a top plan view of the machine, the cover plate having been removed;

Fig. 2 is a front view of the same;

Fig. 3 is a vertical sectional view on line 3—3, Fig. 2, illustrating the mechanism for removing the foremost card of the assemblage in normal initial position, in which the foremost card is lifted or raised so that the upper edge thereof extends above the upper edges of the remaining cards of the assemblage in position to be removed upon actuation of the article or card remover;

Fig. 4 is a detail view of the card remover in initial position showing the card lifting mechanism engaging the card before it is raised; and,

Fig. 5 is a vertical sectional view like Fig. 3 showing the card remover swung forwardly and illustrated in dotted lines, a card being deposited face downward upon the upper end of a chute which conducts it into the receptacle for accumulating the cards in the original sequential order.

The article displaying and reassembling machine illustrated in the accompanying drawings comprises a metal casing having a bottom 1, which desirably is provided with a soft facing 2 of rubber, felt, or other material, which will frictionally engage the polished surface of a suitable support without slippage, side walls 3 and 4 and a front wall 5. The receptacle 6, which is mounted in the upper portion of the casing, comprises a bottom 7, preferably of sheet metal, having flanges 8 which are secured to the side walls 3 and 4 respectively. The cover plate 9 is hingedly secured to the rear edges of the side walls and rests upon the upper edges of the side wall and desirably is provided at its forward end with an overhanging flange. The bottom 7 of the receptacle has at its forward end a preferably integral flange 10 forming an abutment for the lower edge of the foremost card 11 of an assemblage 12 of cards or other flat articles having selected faces such as those bearing data which are to be copied arranged in a predetermined sequence. The sides 3 and 4 are respectively provided with inwardly extending flanges 13 which narrowly overlie the edge portions of the foremost card of the assemblage.

Means are provided for forcing the foremost card of the assemblage against the abutments 10 and 13. As illustrated herein a plate 14, which engages the reverse face of the rearmost card, is backed by suitable springs 15, as shown in Figs. 1, 3, and 5, which engage the rear wall 16 of the receptacle.

One of the principal objects of the invention is to provide means for successively moving the foremost card from the assemblage with a rotative movement adapted to deposit the cards face downward in such manner that they can be reassembled with their selected faces in the original sequence. This may be accomplished by providing a receptacle to receive the cards after they have been rotated to ninety degrees, but preferably as illustrated herein the cards are deposited upon a chute down which they slide successively into a receptacle in which they are accumulated in superposed position with the faces thereof fronting in the same direction as that of the original assemblage.

In the construction shown in the drawings the casing is provided with a partition having a vertical section 17 suitably secured to the bottom 1 and extending vertically upwardly therefrom, an inclined section 18, and a more steeply inclined section 19 which extends above the base 7 of the receptacle.

Any suitable means may be provided for successively freeing the foremost cards of the assemblage and rotating or flipping the same in such manner that they are deposited in a receptacle or from a chute into a receptacle in the manner aforesaid. In the preferred construction an article or card remover is provided which is operable initially to raise the foremost card out of engagement with the lower abutment and to retain it in such raised position until the data upon the card is copied, with means operable thereafter to disengage or flip the card from the upper abutments and deposit it face downward in the manner aforesaid.

The card or article remover as illustrated herein comprises what may be described as a bell crank lever mechanism having a preferably horizontal pivotal shaft 20 which is mounted in the side walls 3 and 4 of the casing well below the front portion of the receptacle. Parallel arms 21, which are secured to end portions of the shaft 20, are provided with angularly disposed end portions 22 which, when in upright position, are substantially parallel to the foremost card of the assemblage and extend well above the upper edges of the cards of the assemblage. A horizontal bar 23, which is rigidly mounted upon the upper ends of the arms 22, is provided preferably midway of its length with a rearward arm 24 having a hook-shaped end 25 adapted when the arms 22 are swung forwardly to engage the upper edge of the foremost card when raised in the manner hereinafter described and detach it from the abutments 13. An arm 26, which is secured to the shaft 20 preferably midway of its length, extends through a suitable slot in the front wall 5 of the casing, and is provided at its end with a plate 27 adapted to be depressed by the finger of the operator to actuate the card remover. Desirably the lower end of the slot is provided with a cushion 28 of rubber or other suitable material to resist shock when the lever arm 26 is depressed and to deaden the noise which otherwise would result from metal contact. Tension springs 29 connected to the shaft 20 and suitable anchorages 30 secured to the base normally force the card removing member toward the foremost card in the receptacle until the portion 22 of the arm 21 is in proximity to and substantial parallelism with the foremost card of the assemblage as illustrated in Fig. 3.

The arms 22 are each provided with means operable when the arms are moved toward upright position to engage and raise or lift the foremost card sufficiently to clear it from the abutment 10 which engages the lower edge portion of the card. The preferred mechanism illustrated herein comprises levers 31 which are rotatably mounted upon pivots 32 secured to the arms 21 in proximity to the lower ends of the sections 22 thereof and are provided at their upper ends with means to engage the foremost card or article of the assemblage. Where cards

of paper or the like are employed the ends of the levers 31 are provided with sharpened tips 33 adapted to penetrate slightly the face of the cards or with suitable means adapted frictionally to engage the cards with sufficient force to lift them. The lower ends of the levers 31 are provided with lateral extensions 34 which are engaged by spiral springs 35 the lower ends of which are anchored upon the levers 21 at such distance as to impose tension upon the springs.

When the finger operating plate 27 and the arm 26 of the card or article remover is depressed by the operator the card remover is swung forwardly to the position illustrated in Fig. 5 thereby removing the foremost card 11 and causing it to drop to the position illustrated in dotted lines in which the upper end rests against the section 22 of the arm 21, and upon the upper end of the chute section 19 from which the card immediately slides down the chute, as indicated in full lines, and thence into a suitable preferably inclined receptacle 36, the arm 62 at this time being in full line position. Upon release of pressure on the plate 27 the spring 29 swings the article remover rearwardly to the position illustrated in Fig. 4 in which the sharp ends 33 of the end sections 22 of the arms 21 slightly penetrate the side edge portions of the foremost card. Further movement of the lever to upright position illustrated in Fig. 3 forces the upper end of the lever 31 rearwardly and due to the pivotal movement produces an upward movement of the pointed end portion to which the card is then attached thereby forcing the foremost card upwardly so that its upper edge extends beyond the level of the remaining cards of the assemblage, as illustrated in Fig. 3.

In order to prevent such upward movement of the foremost card from frictionally moving the next adjacent card or cards upwardly a preferably adjustable stop is provided to engage the upper edges of said next adjacent cards while permitting the foremost card to be raised. The preferred construction which is illustrated comprises plates or blocks 37 which are pivotally mounted upon studs 38 extending inwardly from the sides 3 and 4 of the casing, and means for pivotally adjusting the plates or blocks sufficiently to compensate for the thickness of the foremost card. As illustrated the plates 37 are provided with inwardly extending integral flanges 39 and springs 40 which are interposed between the flanges 39 and tabs 41 which desirably may be punched inwardly from the side walls 3 and 4 of the casing. A screw 42, which passes through the flange 39 with its head abutting against it with its other end portion having a screw threaded connection with the tab 41, provides means for so adjusting the plate or block 37 about its pivot as to provide sufficient space between the upper abutment 13 and the lower end of the block to permit the upper edge portion of the foremost card to pass therebetween while the under surfaces of the plates or blocks will engage and prevent adjacent cards from being raised. When the card is in such raised position the selected exposed face thereof can be readily copied after which depression of the plate 27 by the operator will cause the hooked end portion 25 of the overlying bar to engage the central portion of the card and flip it free from engagement with the upper abutments so that it will drop face downwardly upon the arms as illustrated in Fig. 5 and thereupon slide down the chute into the receptacle 36 face downwardly in the manner aforesaid.

It may be desirable to check the number of cards or other articles which are thus successively removed from the assemblage and for this purpose suitable counting mechanism of a usual character is associated with the card or article removing mechanism. As illustrated in the drawings the front wall 5 of the casing is provided with a rearwardly inclined section 43 having a suitable aperture 44 therein and the casing of counting mechanism 45 is suitably secured thereto by bolts 46 mounted in the inclined portion 43 of the front wall and engaging suitable flanges on the base of the counting mechanism. The main shaft 47 of the counting mechanism has clamped upon it an arm 48 the end of which is connected by a link or links 49 to the end portion of a lever 50 which is fulcrumed upon a suitable stud 51 on the side wall 4 of the casing, the lever 50 extending in approximately horizontal position across the path of the portion of the arm 26 upon which the finger-actuating plate 27 is mounted and at such distance above the lower limit of movement of the latter that the counting mechanism will be actuated through its usual gearing to rotate the disks of the counter in the usual manner. A suitable tension spring 52 connecting the counter-actuating lever 48 to a flange projecting rearwardly from the upper edge of the inclined upper portion 43 of the front wall serves both to raise the lever 48 of the counting mechanism and the lever 50 when the finger-actuating arm 26 is released and raised by the springs 29.

It may be desirable at times to arrest the card which is freed from the assemblage before it passes down the chute in order that the card may be more closely studied or data upon the reverse face of the card copied, or for any other purpose, and means are provided herein for accomplishing this purpose by locking the card remover in foremost position and providing means to prevent the card from sliding down the chute. In the preferred construction shown the locking means comprises a preferably rectangular wire frame consisting of a horizontal section 53 adapted to be engaged by the finger of the operator, parallel side arms having downwardly extending sections 54 rotatably mounted on a suitable pivot 55 upon the card remover actuating arm 26, with sections 56 extending upwardly and rearwardly therefrom as shown in Fig. 5 of such length that when the finger-actuating section 53 is depressed to the position shown in dotted lines in Fig. 5 the end of the arm sections 56 will abut against a suitable stop such as the support for the counting mechanism. A counterweight or counterweights 57, which is or are secured to the sections 56 of the locking mechanism, normally holds the end thereof in engagement with the arm 26 of the remover actuating mechanism. When therefore it is desired to lock the card remover mechanism in forward position the depression of the finger section 53 will swing the arms 56 upwardly into engagement with the abutment provided by the support for the counting mechanism.

When the card remover mechanism is thus locked in position means are provided for preventing the freed card from sliding down the chute. In the construction above described a stop mechanism is provided which comprises a wire frame of general rectangular form having a horizontal bar 58 provided centrally of its width with a V-shaped forwardly and downwardly offset portion 59 adapted to be engaged by the finger of the

operator and laterally offset portions 60 pivotally mounted in suitable journals 61 upon the upper end of the inclined section 43 of the front wall of the casing. Parallel arms 62 extend rearwardly from said journals 61 and are of sufficient length to engage the front flange 10 of the bottom of the receptacle, as shown in dotted lines Fig. 5. The card-arresting fingers 62 are normally held in forwardly inclined position, as illustrated in Fig. 3 and in full lines in Fig. 5. When it is desired to arrest the card the operator will lift the forwardly extending portion 59 of the stop thereby swinging the arms 62 into engagement with the flange 10, as shown in dotted lines in Fig. 5, so that when the foremost card is released it will be supported by the arms 62 and the upper edge of the section 19 of the chute, as illustrated in Fig. 5, thereby permitting its removal. When the card is to be replaced the forwardly extending portion 59 will be depressed by the finger thereby swinging the arms 62 forwardly and enabling the card to be dropped upon the chute from which it will descend into the receptacle 36.

By reason of the present invention an assemblage of cards having their selected faces fronting in the same direction in a predetermined sequential order can be removed as a unit from the usual storage file and placed in the receptacle with the selected face of the foremost card exposed and retained against the upper and lower abutments by the spring which backs the assemblage, the article remover mechanism being at such time swung forwardly and locked in such position. The operator after having inspected and/or copied the data of the foremost card will then raise the finger operated bar 53 to disengage the arms 56 thereof from the abutment against the supporting mechanism for the counter which will thereafter be held down by the counterweight 57. Upon such release the springs 29 will swing the card removing mechanism rearwardly thereby causing the card or article engaging ends 33 of the levers 31 first to engage the cards or articles, as illustrated in Fig. 4, and upon further movement to raise the card or article out of engagement with the lower abutment 10. The foremost card having then been copied the operator can depress the finger plate 27 of the card remover actuating mechanism thereby swinging it forward so that the hooked end of the bar 25 will engage the projecting central portion of the upper end of the foremost card and rotate it free from the abutments 31 and cause it rotatably to fall with the selected face downward upon the chute from which it can be projected into the receptacle 36. Release of pressure upon the finger plate 27 will permit the springs 29 to swing the card or article remover rearwardly and similarly raise the next foremost card for inspection. This operation may be continued until successive cards have been inspected or copied and removed from the assemblage and reassembled in superposed position in the same sequential order.

When it is desired to arrest an inspected or copied card after its release from the assemblage, the arresting frame may be swung by the finger-actuating member thereof into the path of the card as above described, and the card or other article removed for such use as may be desired. The arresting mechanism may then be swung to inoperative position and the card deposited upon the chute and superposed upon previous cards or articles in proper sequence in the manner heretofore described.

By reason of the present invention a great saving of time is accomplished in the copying of addresses and other data from the cards and reassembling of the same in the same sequential order, misarrangement of the cards when assembled prevented, and proper filing of the cards insured.

It will be obvious that while the invention is particularly described herein with reference to successively displaying selected faces of cards having selected faces bearing the data to be copied that it may be employed for various other uses with such various modifications as are required to adapt it therefor, for example, if the device is used for successively exposing and/or delivering metal address plates or stencils the arms 31 may be provided with suitable means such as hooks to engage beneath the lower edge of the metal address plates or stencils. If the invention is embodied in vending machines the arms 31 may be provided with suitable means positively to engage and slidably move the foremost article relatively to the next adjacent article.

It will be obvious from the foregoing disclosure that the present invention is adapted to many uses including not only displaying and delivering successive articles as above described or as a sorting machine for enabling miscellaneously arranged articles to be readily removed and classified and then arranged in proper sequence, etc.

It will therefore be understood that the particular embodiment of the invention shown and described herein is of an illustrative character and is not restrictive of the meaning and scope of the following claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. Apparatus for successively exposing and reassembling articles of an assemblage having selected faces fronting in the same direction comprising a receptacle supporting said assemblage with the articles in upright position, abutment members narrowly engaging the lower and side edge portions of the foremost article to expose the selected face thereof, means acting upon said assemblage to force the foremost article against the abutments, adjustable means overlying and engaging the upper edge of articles next to said foremost article, a reciprocable article remover having means operable when moved toward the foremost article to engage and raise said article out of engagement with the lower abutment and when moved in the opposite direction to disengage it from the side abutments and cause it to be deposited with the selected face downward, means for actuating said article remover, and means for accumulating the articles so deposited with the selected faces thereof in the original sequential order.

2. Apparatus for successively exposing selected faces of cards of an assemblage thereof having selected faces fronting in the same direction comprising a casing, a receptacle mounted in the upper portion of said casing having abutment members narrowly engaging the lower edge and upper side edge portions of the foremost card, means for maintaining the successive foremost cards of the assemblage in engagement with said abutments, means overlying and engaging the upper edges of the cards next adjacent the foremost card, a card remover pivotally mounted in said casing below said receptacle having upwardly extending arms normally in substantial parallelism with the edge portions of the foremost card, resilient means normally forcing said

arms to said upright position, spring actuated levers mounted on said arms having means engaging the foremost card operable when said arms are moved to upright position to raise the foremost card, and means carried by said arms overhanging the upper edge of the raised foremost card, and means for swinging said card remover forwardly to cause said overhanging means to engage the projecting edge of said card and release the card from the upper abutments with a rotative movement causing the card to be deposited face downward, and means for receiving and accumulating the cards so deposited with the selected faces thereof in the same sequential order.

3. Apparatus for successively exposing selected faces of cards of an assemblage thereof having selected faces fronting in the same direction comprising a casing, a receptacle mounted in the upper portion of said casing having abutment members narrowly engaging the lower edge and upper side edge portions of the foremost card, means for maintaining the successive foremost cards of the assemblage in engagement with said aubtments, means overlying and engaging the upper edges of the cards next adjacent the foremost card, a card remover pivotally mounted in said casing below said receptacle having upwardly extending arms normally in substantial parallelism with the edge portions of the foremost card, resilient means normally forcing said arms to said upright position, spring actuated levers mounted on said arms having means engaging the foremost card operable when said arms are moved to upright position to raise the foremost card, and means carried by said arms overhanging the upper edge of the raised foremost card, means for swinging said card remover forwardly to cause said overhanging means to engage the projecting edge of said card and release the card from the upper abutments with a rotative movement causing the card to be deposited face downward, an inclined chute to receive the cards so deposited and a receptacle at the delivery end of the chute for accumulating successive cards in the original sequential order.

4. Apparatus for successively exposing selected faces of cards of an assemblage thereof having selected faces fronting in the same direction comprising a casing, a receptacle mounted in the upper portion of said casing having abutment members narrowly engaging the lower edge and upper side edge portions of the foremost card, means for maintaining the successive foremost cards of the assemblage in engagement with said abutments, means overlying and engaging the upper edges of the cards next adjacent the foremost card, a card remover pivotally mounted in said casing below said receptacle having upwardly extending arms normally in substantial parallelism with the edge portions of the foremost card, resilient means normally forcing said arms to said upright position, spring actuated levers mounted on said arms having means engaging the foremost card operable when said arms are moved to upright position to raise the foremost card, and means carried by said arms overhanging the upper edge of the raised foremost card, means for swinging said card remover forwardly to cause said overhanging means to engage the projecting edge of said card and release the card from the upper abutments with a rotative movement causing the card to be desposited face downward, an inclined chute to receive the cards so deposited and a receptacle at the delivery end of the chute for accumulating successive cards in the original sequential order, means for locking the article remover when swung forward, and means for arresting the card when deposited upon said chute whereby it can be conveniently removed and properly replaced and upon release of said remover introduced into the assemblage without interrupting said sequential order.

5. Apparatus for successively exposing selected faces of cards of an assemblage thereof having selected faces fronting in the same direction comprising a casing, a receptacle mounted in the upper portion of said casing having abutment members narrowly engaging the lower edge and upper side edge portions of the foremost card, means for maintaining the successive foremost cards of the assemblage in engagement with said abutments, means overlying and engaging the upper edges of the cards next adjacent the foremost card, a card remover pivotally mounted in said casing below said receptacle having upwardly extending arms normally in substantial parallelism with the edge portions of the foremost card, resilient means normally forcing said arms to said upright position, spring actuated levers mounted on said arms having means engaging the foremost card operable when said arms are moved to upright position to raise the foremost card, means carried by said arms overhanging the upper edge of the raised foremost card, means for swinging said card remover forwardly to cause said overhanging means to engage the projecting edge of said card and release the card from the upper abutments with a rotative movement causing the card to be deposited face downward, means for receiving and accumulating the cards so deposited with the selected faces thereof in the same sequential order.

6. Apparatus for successively delivering the foremost article from an assemblage of articles comprising a magazine for supporting the assemblage having a base abutment engaging an edge portion of the foremost article and abutments engaging the opposite side edge portions of the article, means for pressing successive foremost articles against said abutments, a pivotally mounted reciprocable article remover having means operable when moved toward the foremost article to engage and slidably move it upon the next adjacent article sufficiently to disengage the foremost article from the base abutment, and means on said article remover adapted to extend over the opposite edge of the foremost article, then extending beyond said next adjacent article, operable upon movement of said article remover in the opposite direction to disengage the foremost article from the side edge abutments, and means for actuating said article remover.

7. Apparatus for successively delivering the foremost article from an assemblage of articles comprising a magazine for supporting the assemblage having a base abutment engaging an edge portion of the foremost article and abutments engaging the opposite side edge portions of the article, means for pressing successive foremost articles against said abutments, a pivotally mounted reciprocable article remover having means operable when moved toward the foremost article to engage and slidably move it upon the next adjacent article sufficiently to engage the foremost article from the base abutment, means overlying the article or articles next adjacent the foremost article acting to prevent displacement thereof by the sliding movement of the foremost article, and means on said article remover adapted

to extend over the opposite edge of the foremost article, then extending beyond said next adjacent article, operable upon movement of said article remover in the opposite direction to disengage the foremost article from the side edge abutments, and means for actuating said article remover.

8. Apparatus for successively delivering the foremost article from an assemblage of articles comprising a magazine for supporting the assemblage having a base abutment engaging an edge portion of the foremost article and abutments engaging the opposite side edge portions of the article, means for pressing successive foremost articles against said abutments, a pivotally mounted reciprocable article remover having means operable when moved toward the foremost article to engage and slidably move it upon the next adjacent article sufficiently to engage the foremost article from the base abutment, stop mechanisms located above and in proximity to said side edge abutments overlying the article or articles next adjacent the foremost article to prevent displacement thereof by the sliding movement of the foremost article, and means for adjusting said stop mechanism in accordance with the thickness of said foremost article to

enable the foremost article only to be slidably moved, and means on said article remover adapted to extend over the opposite edge of the foremost article, then extending beyond said next adjacent article, operable upon movement of said article remover in the opposite direction to disengage the foremost article from the side edge abutments, and means for actuating said article remover.

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