United States Patent

[11] 3,612,337

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[54] **CREDIT CARD BATCH CARRIER**
2 Claims, 7 Drawing Figs.

[52] **U.S. Cl.** **220/22.3,** 101/47, 206/74
[51] **Int. Cl.** **B411 47/16,** B65d 25/06
[50] **Field of Search** 206/74; 220/22.3, 22.4; 211/51; 101/47; 40/78; 271/61

[56] **References Cited**

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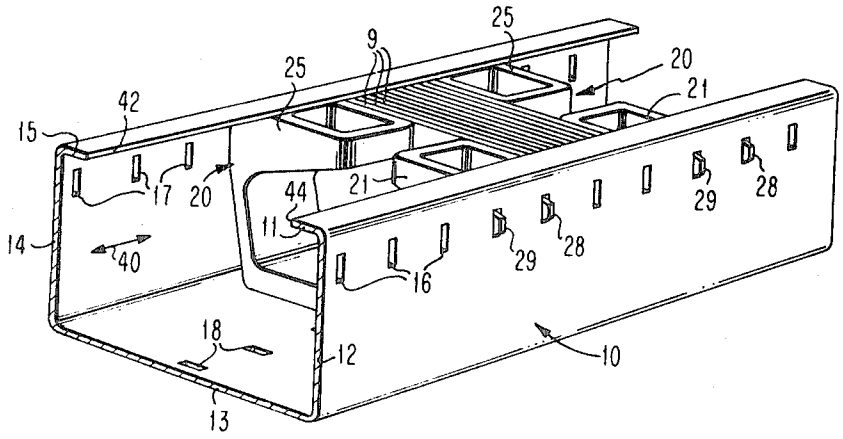
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Attorneys—Hanifin and Jancin and Shelley M. Beckstrand

ABSTRACT: A holder or tray for credit cards or the like. A generally U-shaped tray has open ends, and sides bent over the top to form a pair of rails. A pair of retaining clips hold the cards within the tray in a locked or sliding position. In the locked position, projections on the clip engage apertures in the sides and bottom of the tray. In the sliding position, channels in the clip engage the rails. Cards may be removed by separating the clips and turning the cards to clear the rails, or by sliding a clip and then the cards out of an open end.



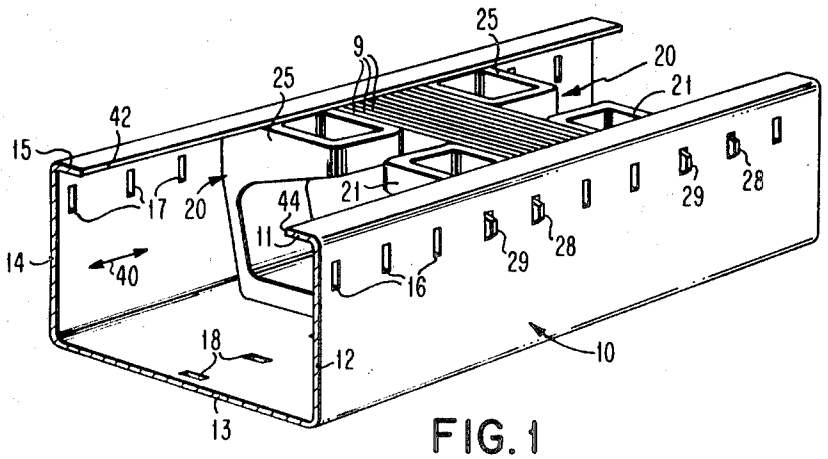


FIG. 1

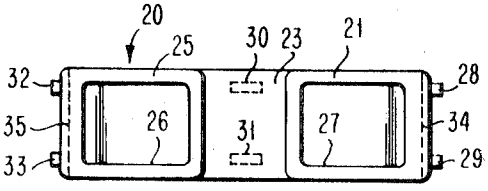


FIG. 2

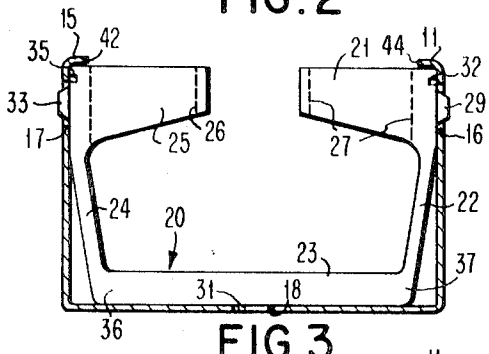


FIG. 3

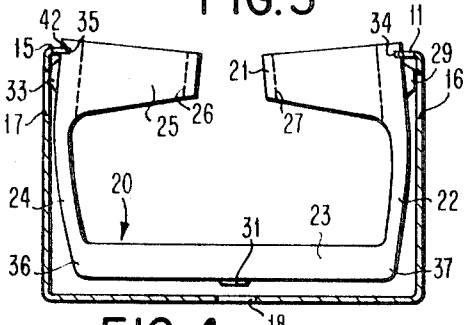


FIG. 4

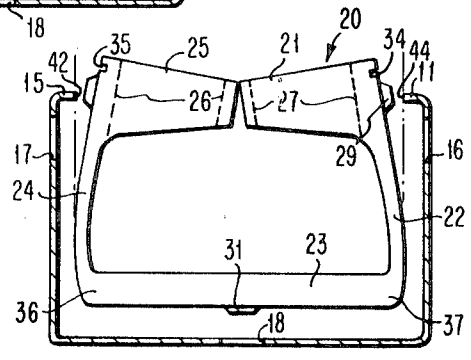


FIG. 5

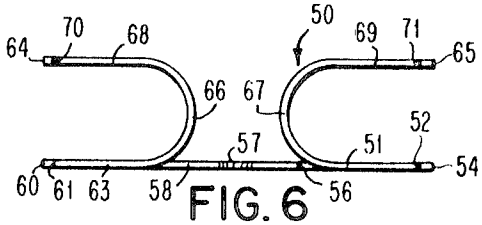


FIG. 6

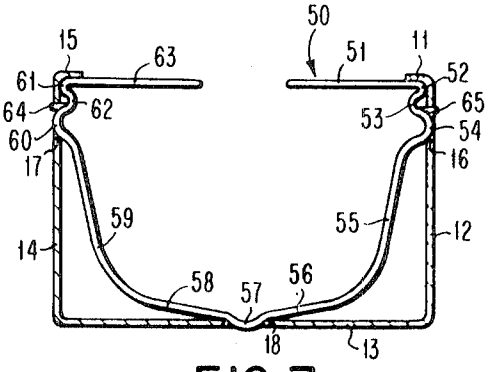


FIG. 7

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CREDIT CARD BATCH CARRIER

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to means for carrying and storing credit cards or the like, and for loading such cards into a work station.

2. Description of the Prior Art

Heretofore, credit cards, address plates, and the like, have been stored in trays and drawers and transported in similar devices between loading stations for embossing, printing, and various operations involving the use of the cards.

A number of problems are encountered when a large number of such cards are to be stored, transported, or loaded into various types of machines. Some of the more serious problems are those of fanning, spilling, unauthorized removal, loading, and identification.

Spilling occurs when a tray of cards is dropped, or otherwise disturbed so as to cause the cards to spill from the container.

The problem of fanning occurs especially in embossed credit cards held in a large stack. That portion of the card which is embossed is wider than the unembossed portions. Thus, when a large number of embossed cards are stored one on top of the other, the tendency is for the stack to assume the general shape of a fan, with the embossed portions of the card representing the open edge of the fan and the unembossed portions of the card representing the apex of the fan. In this configuration, the cards on top often slide down one edge of the stack, thus disturbing the order of the cards and preventing further processing where the order must be maintained.

The problem of unauthorized removal, facilitating fraudulent use of a credit card, occurs when the cards are exposed to easy and secret removal from the batch being processed, as is the case with trays having open tops.

The loading problem is associated with transferring cards from storage into an embossing or other mechanical operation unit. Often the cards must be manually removed from their storage trays and placed into the input hopper of the machine and then removed from the output hopper and placed once again into the storage tray. Some trays, having elaborate locking means which may be removed so as to permit loading of the cards directly into the machine work station through an open end, present the further problem of preventing the stacking of one tray on top of the other because of protuberances of the locking means above the level of the top of the tray.

Another problem is that of identifying a given batch of cards. Often a tag must be placed upon the cartridge identifying its contents. These tags are prone to contain errors and are costly to provide.

SUMMARY OF THE INVENTION

It is, therefore, an object of the invention to provide means for storing a plurality of credit cards in such a secure manner as to not permit fanning of the stacked credit cards within the tray.

It is a further object of the invention to provide a holder for credit cards which will not permit said cards to spill if the holder is dropped or otherwise disturbed.

It is a further object of the invention to provide a credit card holder from which it is difficult to remove cards in a manner which may not be readily detected.

It is a further object of the invention to provide a credit card holder which may be used both for storing and for directly loading the credit card into an embosser or other such work station.

It is a further object to provide a credit card holder and hopper from which cards may be readily removed through the end thereof and which may be stacked on top of each other.

It is a further object of the invention to provide a credit card holder where the logo or printed information on the cards at the ends of the stack is visible.

It is a further object of the invention to provide a credit card holder which may be loaded and unloaded from either end and through the top.

The apparatus of the invention solves the above problems in the art of card storing and handling. A generally U-shaped tray or holding means is provided having open ends, the sidewalls of the tray being bent over slightly to provide a sliding rail and to provide a flange preventing removal of cards through the top of the tray without their being turned sideways. The tray has a plurality of apertures arranged in its bottom and sidewalls. Credit cards are held within the tray by a pair of clips or retaining means. The clips have a plurality of lock projections cooperating with the apertures in the tray for preventing sliding of the clips within the tray when in the locked mode. The clips are further adjustable to a sliding mode in which sliding channels cooperate with the rails to permit the clip to be slid along the length of the tray for adjusting to various sizes of stacks of credit cards or for removal of individual cards from the tray. The clip may be removed from the tray by being compressed and lifted through the top, or slid along the rails and out an end.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects, features and advantages of the invention will be apparent from the following more particular description of the preferred embodiments of the invention, as illustrated in the accompanying drawings.

In the drawings:

FIG. 1 is a perspective view of the credit card holder of the invention showing the tray (holding means), two clips (retaining means), and a stack of cards.

FIGS. 2, 3, 4 and 5 are various views of the retaining means in various positions. FIG. 2 is a top view. FIG. 3 is a view of the retaining means when in a locked mode; FIG. 4 is a view of the retaining means when in the sliding mode; and FIG. 5 is a view of the retaining means as it is being removed through the top of the tray or holding means.

FIGS. 6 and 7 are the top and front views, respectively, of a spring clip embodiment of the retaining means.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIGS. 1 through 5, a preferred embodiment of the invention will be described. In FIG. 1, in perspective view, a plurality of cards 9 are held with their flat surfaces in contiguous relationship by holding means 10 and a pair of retaining means 20.

Cards 9 may be blank or embossed credit cards, address plates, punched cards, photographic slides, or any relatively flat object of any shape. The objects need not be perfectly flat, as is the case with embossed cards, nor need they be rectangular as shown, but may be square or any other shape.

Holding means 10 comprises a tray having a cross section of similar dimensions and shape to that of cards 9. Holding means 10 may have closed ends (not shown), one open end (not shown), or both open ends as shown in FIG. 1. An open end is defined as one from which a card may be removed while the flat surface of the card is maintained essentially perpendicular to the longitudinal axis of the holding means. Holding means 10 further comprises a first sidewall 12, a bottom wall 13, and a second sidewall 14. The top wall is partially cutaway, leaving a first flange 11 having a rail surface 44 and a second flange 15 with a rail surface 42.

First sidewall 12 has a plurality of apertures 16, second sidewall 14 has a plurality of apertures 17, and bottom wall 13 carries a plurality of apertures 18. The apertures are evenly spaced and arranged parallel to slide rails 42 and 44.

As will be seen more fully hereafter, apertures 16, 17, and 18 cooperate with the locked projections on the card retaining means 20 in the locking mode, and rails 42 and 44 cooperate with the slide channels of the retaining means 20 when in the sliding mode.

Referring now to FIGS. 2 and 3, the card retaining means 20 will be described. As shown, FIG. 2 is a top view and visible in FIG. 3 is a front view of a retaining means 20.

As shown in FIG. 3, retaining means 20 has top portions 21 and 25, side portions 22 and 24, and bottom portion 23. Top portion 21 includes finger aperture 27, and top portion 25 includes finger aperture 26. On the outside surface of top portion 21 are positioned lock projections 28 and 29. Bottom portion 23 has lock projections 30 and 31, and top portion 25 has lock projections 32 and 33. Furthermore, top portion 21 has on its outside surface sliding channel 34 and top portion 25 has sliding channel 35.

While lock projections 28 and 29 are shown positioned below sliding channel 34 in FIGS. 3, 4 and 5, slide channel 34 in top portion 21 may be positioned below lock projections 28 and 29. Similarly, slide channel 35 could be positioned in top portion 25 beneath lock projections 32 and 33. It is only necessary that sliding channels 34 and 35 be in the same relationship to each other as rails 42 and 44 are to each other. Generally, that will be a parallel relationship. Similarly, when the card retaining means 20 is assembled into the card holding means 10, lock projections 28 and 29 lie in a line parallel to apertures 16, lock projections 30 and 31 lie in a line parallel to apertures 18, and lock projections 32 and 33 lie in a line parallel to apertures 17. While apertures 16, 17 and 18 are shown as holes through walls 12, 13 and 14, depending upon the thickness of said walls 12, 13 and 14, and the dimensions of the lock projections 28–33, apertures 16, 17 and 18 may be bottom holes of a depth sufficient to accept the lock projections 28 through 33.

Referring now to FIG. 3, the cooperation between the card holding means 10 and the card retaining means 20 will be described when in the locked position. In the locked position, lock projections 28 and 29 fit into apertures 16 of sidewall 12, lock projections 30 and 31 fit into apertures 18 of bottom wall 13, and lock projections 32 and 33 will fit into apertures 17 of sidewall 14. Furthermore, top portion 21 fits under flange 11, and top portion 25 fits under flange 15. The lock projections 28, 29, 32 and 33 are securely held within apertures 16–17 by spring action in retaining means 20. Lock projections 30 and 31 are secured in apertures 18 by flanges 11 and 15 acting on top portions 21 and 25.

With a pair of card retaining means 20 positioned in locked position within card holding means 10, a plurality of cards 9 may be held with their flat surfaces in contiguous relationship. The sidewalls 12 and 14, the bottom wall 13, and top flanges 11 and 15 cooperate to prevent rotation or translational movement of the cards 9 in a plane parallel to the surface of the cards. Retaining means 20 restrain the cards against movement along the longitudinal axis of holding means 10 (normal to the plane of the surface of the cards). Referring to FIG. 1, an end wall (not shown) of holding means 10 may be substituted for one of the retaining means 20.

With the retaining means 20 in the locked position within holding means 10, no portion of retaining means 20 protrudes between the flanges 11 and 15 or above holding means 10. Therefore, a plurality of holding means 10 may be stacked on top of each other with the bottom wall 13 of one holding means 10 resting securely on top of the flanges 11 and 15 of the holding means 10 just below it. Also, with the lock projections 28–33 and sidewalls 12, 13, and 14 of suitable dimensions, there need be no protrusion of the lock projections 28–33 through the side and bottom walls of holding means 10. In this embodiment (not shown) a plurality of holding means 10 could be stacked next to each other in abutting relationship with no interference between the lock projections 28–29 and 32–33 of adjacent trays, such that one holding means 10 could be slid easily past the adjacent holding means 10.

Referring now to FIG. 4, a description will be given of the sliding mode of operation of the invention. To move from the lock position shown in FIG. 3 to the sliding position shown in FIG. 4, the operator may insert his fingers into finger apertures 27 and 26 and squeeze. This causes side portions 22 and 24 to further bend such that lock projections 28 and 29 clear apertures 16, and lock projections 32 and 33 clear apertures 17. In addition, top portion 25 clears flange 15, and top portion 21 clears flange 11. Then, retaining means 20 is lifted such that lock projections 30 and 31 are withdrawn from apertures 18, top portions 25 and 21 slide past top flanges 11 and 15 until the slide channels 34 and 35 fit over the rails 42 and 44. The spring action in side portions 22 and 24 of retaining means 20 serves to hold the sliding channels 34 and 35 securely in place on sliding rails 44 and 42. Note that bottom portion 23 is significantly thicker than side portions 22 and 24 of the retaining means 20. Thus, bottom portion 23 remains relatively straight; bending due to finger pressure in finger apertures 26 and 27 occurs mostly in side portions 22 and 24 above fulcrum portions 37 and 36. In this position, retaining means 20 may be slid along rails 42 and 44 in the direction of arrows 40. In the sliding mode, a retaining means 20 may be completely removed from holding means 10 through one of the open ends, or it may be moved sufficiently in the direction of arrows 40 to permit a card 9 to be rotated within the holding means 10 and lifted out through the open portion of the top wall between flanges 11 and 15. Both retaining means 20 may be lifted into the sliding mode shown in FIG. 4 and the entire stack of cards 9 moved in the direction of arrows 40 within holding means 10 while maintaining their flat surfaces in contiguous relationship.

Referring now to FIG. 5, the manner in which retaining means 20 is removed vertically through the open portion of the top wall of holding means 10 will be described. Again, the operator may insert his fingers in finger projections 26 and 27 and squeeze. This causes side portions 22 and 24 to bend even further. Bottom portion 20 between fulcrums 37 and 36 is of a sufficiently small length such that it will clear the open portion of the top wall between flanges 11 and 15. Thus, the retaining means 20 may be lifted vertically through the open part of the top wall. The retaining means 20 may also be removed, as described above, from the holding means 10 by placing it in the sliding mode and sliding it out of one of the open ends of the holding means 10.

As shown in FIGS. 1 through 5, the retaining means 20 is of a molded plastic material. Referring now to FIGS. 6 and 7, a second embodiment of the retaining means will be described wherein the retaining means comprises a bent spring wire 50 formed from a single length of wire having ends 64 and 65. FIG. 6 shows a top view, and visible in FIG. 7 in the locked mode, is a front view of the retaining means or spring clip 50.

Referring first to FIG. 7, spring clip 50 comprises a top portion 51, a top bend 52, and a first side bend projection 54. The first half of slide channel 53 is formed by the bend between portions 52 and 54. Spring clip 50 is further formed to provide side portion 55 and bottom portion 56. Bottom projection 57 separates the right-hand portion of the spring clip 50 from the left-hand portion thereof. Continuing, bottom portion 58 and side portion 59 are shown between side bend projection 60 and bottom bend projection 57. Above side projection 60 and beneath top bend 61 the first half of slide channel 62 is shown. The top portion 63 completes that portion of spring clip 50 visible in FIG. 7 and lying within the plane of portions 60, 63, 57, 51 and 54 shown in FIG. 6.

Referring now to FIG. 6, top finger loop 66 connects top portion 63 and offset top portion 68. Similarly, finger loop 67 connects top portion 51 and offset top portion 69 of spring clip 50. Offset top portion 68, as shown in FIG. 6, is bent downwardly around offset top bend 70, thence outwardly to form offset side end projection 64. An offset bend portion between offset top bend 70 and offset side projection 64 forms a bend similar to that between top bend 61 and side projection 60 and forms the second half of slide channel 62. Similarly, offset top portion 69 is bent over offset top bend 71 and outwardly into offset side projection 65. Similarly, the bend between offset top bend 71 and offset end projection 65 forms the second half of slide channel 53.

In FIG. 7, the retaining means 50 is shown in locked position within holding means 10. In this position, side projection 60 and offset end projection 64 fit in apertures 17 of holding means 10. Similarly, side bend projection 54 and offset end projection 65 fit within apertures 16 of holding means 10. Finally, bottom bend projection 57 fits within one of the apertures 18 in the bottom wall 13 of the holding means 10.

The retaining means 50 may be placed in a sliding position within holding means 10 by placing fingers within finger bend 66 and 67 squeezing towards the center. As side projection 60 and offset end projection 64 clear apertures 17, and as side projection 54 and end projection 65 clear apertures 16, top bend 61 and offset top bend 70 will clear flange 15, and top bend 52 and offset top bend 71 will clear flange 11. By moving the retaining means 50 upward as shown in FIG. 7, bottom bend projection 57 is withdrawn from bottom apertures 18, and slide channel 62 engages rail 42 on flange 15, and side channel 53 engages rail 44 on flange 11. The spring clip 50 is maintained in the sliding position by spring tension in the wire portions 55–59. In this position, spring clip 50 may be moved along rails 42 and 44 in the direction of arrows 40 in a manner similar to that discussed above for retaining means 20.

In a manner similar to that discussed for retaining means 20, spring clip 50 may be removed through the open portion of the top wall of holding means 10 by further compressing the spring wire such that side bend projection 60 and offset end projection 64 and side bend projection 54 and offset end projection 65 clear flanges 15 and 11, respectively.

While the invention has been particularly shown and described with reference to preferred embodiments thereof, it will be understood by those skilled in the art that the foregoing and other changes in form and details may be made therein without departing from the spirit and scope of the invention.

What is claimed is:

1. A combination card file and hopper comprising:

card holding means and card retaining means for maintaining a plurality of cards with their flat surfaces in contiguous contact,

said card holding means having

wall means for engaging the edges of said cards,

at least one open end,

a partially open wall,

the edges of said partially open wall forming two parallel rails, and

a plurality of apertures spaced in said wall means along two or more lines parallel to the longitudinal axis of said card holding means;

said card retaining means being bodily adjustable between a locked and a sliding position and having

at least a pair of slide channels for guiding said retaining means along said rail in the sliding position, and

a plurality of lock projections for engaging said apertures in the locked position; and wherein said card retaining means is contained entirely within said holding means in the locked position, whereby said retaining means does not project through the partially open wall of said card holding means, for permitting the stacking of a plurality of trays.

2. An apparatus for storing, holding and dispensing rectangular cards, comprising:

card holding means and card retaining means for maintaining a plurality of cards with their flat surfaces in contiguous contact, said card holding means having

two sidewalls, a bottom wall, a partially open top wall, and two open ends,

the edges of said partially open wall forming two parallel rails, and

a plurality of apertures spaced in each of said sidewalls and said bottom wall parallel to the longitudinal axis of said card holding means:

said card retaining means being of unitary resilient construction and bodily adjustable between a locked position and a sliding position, and removable through either end or the top, and having

at least a pair of slide channels for engaging said rails in the sliding position, and

a plurality of lock projections for engaging said apertures in the locked position.