Feb. 7, 1967 H. L. KOLSTER 3,302,797

DISPLAY RACK

Filed June 28, 1965

Fig. 1.

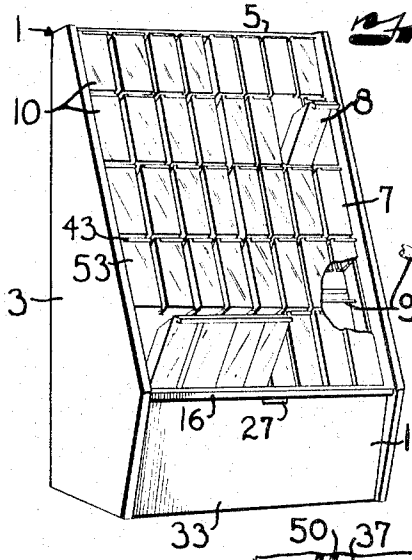


Fig. 3.

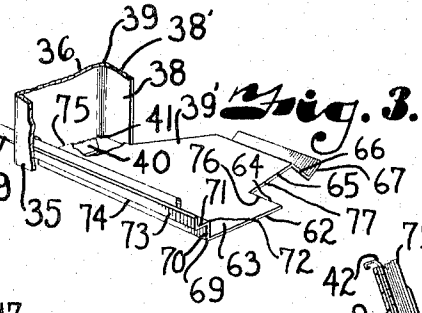


Fig. 2.

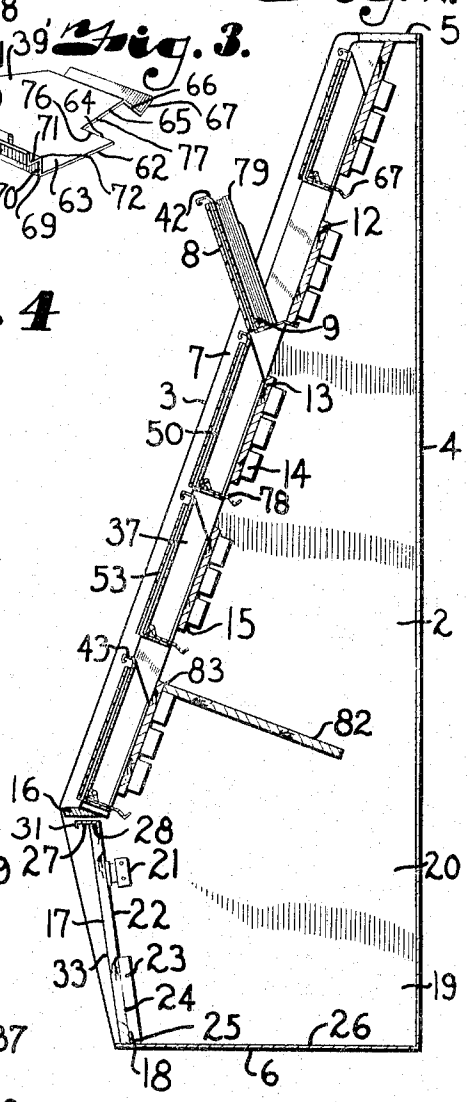


Fig. 4

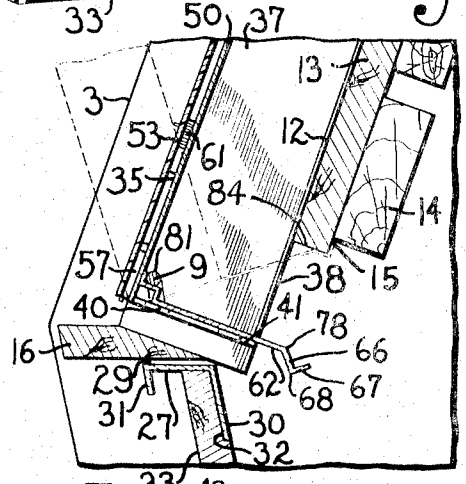
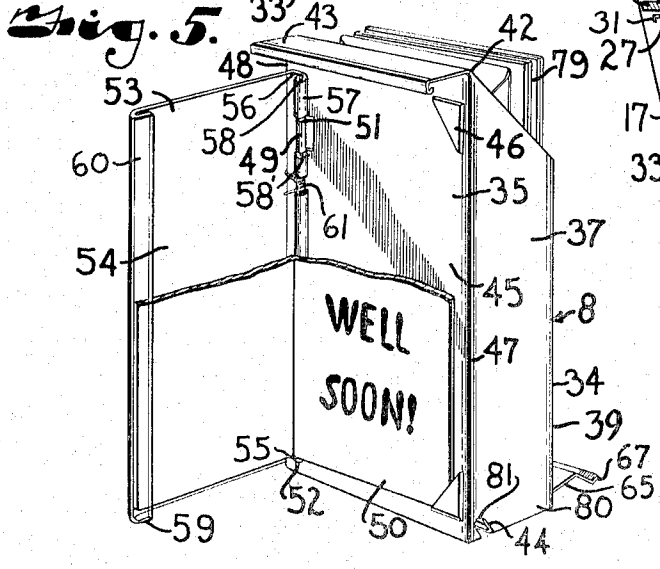


Fig. 5.



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DISPLAY RACK

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This invention relates to a display rack and, more particularly, to a combination of display and storage elements for use in merchandising of cards and similar articles.

The principal objects of the present invention are: to provide a merchandising facility for use in stores or the like; to provide a display rack having individual display elements with storage elements associated therewith; to provide a device having easily accessible storage elements to facilitate purchaser self-service; to provide a device for the display of cards wherein the interior as well as the exterior of the card is accessible for viewing by the consumer; to provide a device wherein the display and storage elements are pivotably mounted to the display cabinet; to provide a merchandising device which may be easily and inexpensively constructed and in which individual storage and display elements may be easily removed and replaced.

Other objects and advantages of this invention will become apparent from the following description taken in connection with the accompanying drawings wherein are set forth by way of illustration and example certain embodiments of this invention.

FIG. 1 is a perspective view of a display rack embodying the features of this invention.

FIG. 2 is a vertical sectional view through the display rack on an enlarged scale, particularly showing the individual storage and display elements in both an open and closed position.

FIG. 3 is a fragmentary perspective view of the bottom portion or merchandise supporting member of the individual storage and display unit.

FIG. 4 is a fragmentary sectional view on an enlarged scale showing the bottom portion of an individual display and storage unit and its supporting rod member. The dotted lines indicate the position of the elements when the display and storage unit has been opened to provide customer access to the storage element.

FIG. 5 is a perspective view of the display and storage unit showing merchandise in the storage element and a card in the open position in the display element.

Referring to the drawings in more detail:

The reference numeral 1 generally indicates a display rack embodying the features of this invention. In the illustrated example, the display rack has a housing 2 comprised of side walls 3 with a back panel 4 connecting said side walls 3 and secured thereto and a top panel 5 and bottom panel 6 secured to the side walls 3 and back panel 4 to provide an open front display rack housing 2 preferably enclosed on five of its six sides. The housing 2 is shown as free standing, but it should be recognized that said housing 2 need only be a framework having at least two opposed side walls or similar structure mounted on a wall. The remaining open side 7 of the display rack is supplied with individual storage and display units 8 mounted on support members, as for example rods 9 in an overlying series of horizontal rows 10, the support rods 9 extending between and connected to the side walls 3. The preferred embodiment shows the display and storage units 8 arranged so that when in a closed position they are at an angle to the vertical with the side walls 3 having an edge portion cut along a similar angle; however, this could be varied without departing from the invention. When a display and storage unit 8 is in its closed position, it lies against the forward surface 12 of a respective backing member 13 which is secured in place against supports 14, said supports 14 extending between and connected to side walls 3. Backing member 13 on supports 14 are disposed behind each row 10 of display and storage units 8. The rearward surface 15 of the backing member 13 is in contacting relation to the supports 14 and secured thereto. Side walls 3 are further secured together by a connector bar or bracing member 16 which extends between and is connected to said side walls 3 and is in underlying contacting relation to the lowermost row 10 of display and storage units 8.

Positioned below said bracing member 16 is door panel 17 hinged to the bottom panel 6 of the display rack 1 by hinge element 18 to provide access to a storage area 19 at the lower portion 20 of the display rack 1. A latch means 21 is provided on the interior surface 22 of the door panel 17 to hold the door panel 17 in a closed upright position, as shown in FIG. 2. Backing member 23 extends across the lower portion 24 of the interior surface 22 of the door panel 17, its lower edge 25 cooperating with the interior surface 26 of the bottom panel 6 to limit the pivotal rotation of the hinge element 18 to prevent the inward rotation of the door panel 17 beyond its upright closed position, shown in FIG. 2. The door panel 17 has a handle 27 at its upper edge 28 which is generally channel-shaped having a base portion 29 in overlying contacting relation to the upper edge 28 of the door panel 17 and an interior side portion or flange 30 and an exterior side portion or flange 31. The interior side portion 30 is received in a recess 32 in the interior surface 22 of the door panel 17 and is secured thereto. The exterior side portion 31 extends downward from the base portion 29 in opposed spaced relation to the exterior surface 33 of the door panel 17, thus providing a handle or lip to grasp and utilize in positioning of door panel 17.

The storage and display unit 8 is generally a box-like structure having an open upper end 34 for insertion and removal of merchandise. As shown in FIG. 5, the display and storage unit 8, is comprised of a front wall 35 and two side walls 36 and 37 with rear wall 38. As shown in FIG. 3, the rear wall 38 is divided into two spaced apart sections 38′ and 38″ (not shown on drawing) which extend generally perpendicularly from the outer edge 39 of the side walls 36 and 37 and inwardly toward the opposite side wall thereby defining an open slot 39′ in the rear wall 38 of the storage and display unit. The side walls 36 and 37 each have tabs 40 extending from their lower edge 41. As shown in FIG. 3, the tab 40 on side wall 36 is bent inward toward the opposite side wall 37 in a plane generally perpendicular to the plane of the side wall 37. The front wall 35 at its upper edge 42 has a flange 43 extending generally perpendicular to the plane of the front wall 35 and in a direction opposite to that of the extension of the side walls 36 and 37, then being flanged downward and inward toward the front wall 35 to provide a handle for opening and closing the storage and display unit 8. An oblique notch 44 is located at the lower edge 41 of each of the side walls 36 and 37 adjacent tabs 40, said notches extending upward from the lower edge 41 of each side wall 36 and 37 and angularly inward toward the front wall 35. These notches 44 receive support rods 9 which, in turn, provide a pivotal support for the display and storage unit 8.

The exterior side 45 of the front wall 35 has two outset tabs 46 secured thereto in spaced relation and adjacent edge 47 of the front wall 35. At the adjacent edge 48 of the front wall 35 opposite that having the outset tabs 46 and in spaced relation to edge 48, are two hook flanges 49 in spaced relation to one another struck out from the front wall 35, the lower hook flange 49 being hidden from view by the card 50 in FIG. 5. The flanges 49 provide openings 51 for insertion of hinge pin 52 which

is utilized to secure the transparent closure member 53 to the front wall 35.

The transparent closure member 53 is comprised of a body portion 54 being flanged at the edge 55 of said body portion 54 adjacent the channel-shaped member by means of a right angle flange 56 with a hook flange 57 extending from the outer edge of said right angle flange 56 to provide an opening 58 for insertion of the hinge pin 52. The opposite edge 59 of body portion 54 has a hook flange 60 extending therefrom to receive one edge of the displayed card 50. The hook flange 57 is notched in various locations to allow alignment of the openings 51 and 58 in hook flange 49 and hook flange 57 respectively for insertion of a hinge pin 52 through both openings 51 and 58 and the placement of spring clip 61 on hinge pin 52 which serves to return the closure member 53 to a closed position after opening pressure has been relieved. The hinge pin 52 is received in the opening 58' provided by the alignment of openings 51 and 58 defined by hook flanges 49 and 57 respectively to allow pivotal rotation of the closure member.

The bottom wall 62 of the display and storage unit 8 best shown in FIGS. 3 and 4, is removably mounted between side walls 36 and 37 of the storage and display unit 8 on tabs 40. The bottom wall 62, as illustrated, has a body portion 63 generally rectangular in plan view and has extending from its outer edge 64 a stem portion 65, the stem portion 65 having an oblique flange 66, said flange 66 extending downward and outward from the storage and display unit 8. The oblique flange 66 has a right angle flange 67 extending from its outer edge 68. At the opposite edge 69 of the bottom wall 62 adjacent the front wall 35 of the storage and display unit 8 are three flanged elements. The first of said elements 70 is flanged upward generally perpendicular to the plane of the body portion 63 of the bottom wall 62. The flange element 71 extends from the upper edge 72 of flange element 70 in a direction generally parallel to the plane of the body portion 63 of the bottom wall 62 and outward from said body portion 63. The flange 73 extends from the outer edge 74 of flange 71 in an upward direction generally perpendicular to the plane of flange 71 and parallel to the direction of the plane of flange 70. The flange 73 lies in contacting relation to the front wall 35 of the storage and display unit 8. The flange element 71 is in underlying contacting relation to the supporting rod 9, which is received in notches 44 of each of the side walls 36 and 37, thereby retaining rod 9 within the notches 44. The rod 9 also acts to prevent removal of bottom wall 62. The flange element 73, as illustrated, lies in contacting relation to both the supporting rod 9 and the front wall 35. The edges 75 of the body portion 63 of the bottom wall 62 lie in general contact with the side walls 36 and 37. The edge portions 76 of edge 64 of the body portion 63 of the bottom wall 62 adjacent each edge 77 of the stem portion 65 of the bottom wall 62 lies in general contact with the rear wall 38 of the storage and display unit 8. The edges 77 of said stem portion 65 are illustrated as extending outward from storage and display unit 8 and inward toward one another, thus reducing the width of the stem portion 65 toward its outer flanged end portion 78. The bottom wall 62 thus provides a surface upon which the stored merchandise 79 may rest as illustrated in FIG. 5.

The individual display and storage units 8 are installed in the display rack 1 by positioning the unit 8 such that rod 9 is received in the oblique notch 44. While holding the display and storage unit 8 in this position, the bottom wall 62 of the storage and display unit 8 is inserted in the lower portion 80 of said unit 8 by placing flange 73 between supporting rod 9 and front wall 35 of said unit 8 and resting the bottom wall 62 on tabs 40 of the storage and display unit 8. Supporting rod 9 is now in abutting relationship to flanges 71 and 73 and the top portion 81 of oblique notch 44, thus providing for a relatively firm mounting of the display and storage unit 8 on the supporting rod 9, yet allowing said unit 8 to pivot in relation to said rod 9.

As best shown in FIG. 4, the stem portion 65 of the bottom wall 62 extends outward from the side walls 36 and 37 of the storage and display unit 8 through slot 39' and is so dimensioned that when the display and storage unit 8 is opened, it swings into an abutting relation with the backing member 13 thereby preventing an excessive rotation of the unit 8. Rod 9 holds the bottom wall 62 in place when its stem portion 65 contacts the backing member 13. The flange 66 of said stem portion 65, as illustrated, lies in abutting relation to the lower edge 84 of the backing member 13. Flange 67 of said stem portion 65, as illustrated, lies in abutting relation to the rearward surface 15 of the backing member 13. The rotation of the display and storage unit is stopped by the contact of rear wall 38 of the storage and display unit 8 and forward surface 12 of the backing member 13 when said unit 8 is returned to its closed position. By installing the individual display and storage units 8 in the aforestated manner, damaged units 8 may be placed in the rack 1 with relative ease, as only a single unit 8 need be removed rather than removal of an entire row of units 10.

Partition member 82 extends between the side walls 3 of housing 2 and is secured thereto in a conventional manner. The front edge 83 of partition member 82 is secured to the backing member 13 and supports 14. The partition member 82 provides a ceiling partition for storage area 19.

It is to be understood that while I have illustrated and described one form of my invention, it is not to be limited to the specific form or arrangement of parts herein described and shown except insofar as such limitations are included in the claims.

What I claim and desire to secure by Letters Patent is:

1. A display rack comprising:
   (a) a housing means having at least two opposed side walls and an open front,
   (b) a support means extending between said side walls,
   (c) individual storage and display units pivotally mounted on said supporting means and exposed through the open front of the housing means, each unit being comprised of:
      (1) a front wall, side walls, rear wall and bottom wall,
      (2) means on said unit for pivotal mounting on the support means,
      (3) means on the front wall for display of cards and similar merchandise,
      (4) cooperative means on the storage and display unit and the housing means for limiting the rotation of the storage and display unit relative to the supporting means when moved to its open position,
   (d) means on said housing for limiting the pivotal rotation of the individual storage and display units, when said units are returned to their closed position,

2. A display rack as recited in claim 1 wherein the supporting means is comprised of a rod-like member extending between the opposed side walls.

3. A display rack as recited in claim 2 wherein the means attached to the storage and display unit for pivotally mounting said unit is comprised of notches in the side walls of the storage and display unit with the supporting rod received in said notches.

4. A display rack comprised of:
   (a) a housing means having at least two opposed side walls and an open front,
   (b) supporting rod members extending between and connected to said side walls,
   (c) means pivotally mounted on the supporting rod for display and storage of merchandise having a removable bottom wall and notches in said means, the

supporting rod members being received in said notches, and a means on said storage and display means for releasably supporting the removable bottom wall, said wall intersecting the notches in the storage and display means and lying in underlying contacting relation to the supporting rod member thereby retaining the supporting rod within the notches,

(d) means on said housing means for limiting the pivotal rotation of the storage and display means.

5. A display rack comprised of:

(a) a housing means having at least two opposed side walls and an open front,

(b) supporting rod members etxending between and connected to said side walls,

(c) backing members extending between and connected to the side walls of the housing means and alternately disposed with said rod members,

(d) individual box-like storage and display units pivotally mounted on each supporting rod and being comprised of:

(1) a front wall having an exterior side exposed through the open front of the housing means and having a means on said exterior side for the display of merchandise,

(2) side walls having a lower edge with a notch in the lower edge of each side wall with the supporting rod received in each notch,

(3) a rear wall having a longitudinal slot therein,

(4) a removable bottom wall having a body portion and a stem portion, said body portion disposed between the front, side and rear walls, and intersecting the notch in the lower edge of the side wall and in underlying contacting relation to the supporting rod, the stem portion extending outwardly from the storage and display unit through the slot in the rear wall and being adapted to contact the backing member to limit the rotation of the storage and display unit relative to the supporting rod.

6. A display rack as recited in claim 5 wherein the means for display of cards and similar articles of merchandise is comprised of:

(a) two outset tabs on the front wall of the storage and display unit whereby the corner portions of a card or other flat article may be secured,

(b) a transparent closure member hingedly mounted on the front wall of the storage and display unit and having a means on said closure member for securing the edge of a card or similar merchandise.

7. A display rack as recited in claim 6 wherein:

(a) the card securing means on the transparent closure member is comprised of a hooked flange which receives the edge of a card or similar merchandise.

8. A display rack comprised of:

(a) a housing having at least two opposed sides and an open front,

(b) supporting rod members extending between and connected to the side walls of said housing,

(c) backing members extending between and connected to the side walls of said housing and disposed between adjacent supporting rods and rearwardly inset from said rods,

(d) individual storage and display units pivotally mounted in overlying series of rows on each supporting rod, said individual units being comprised of:

(1) a storage means having an exterior side exposed through the open front of the housing,

(2) a means on the storage means for mounting said storage means on the supporting rod member,

(3) opposed outset tabs on the exterior side of the storage means wherein the corner of a card or other flat article may be secured,

(4) at least one hook flange struck from the exterior side of the storage means in opposed relation to the offset tabs whereby a transparent closure member may be hingedly secured,

(5) a transparent closure member hingedly secured to the hook flange struck from the storage means and having a means thereon for securing the edge of a card or similar merchandise.

9. A storage and display unit comprised of:

(a) a box-like member having a front wall with an exterior side, side walls and a rear wall having a slot therein,

(b) a removable bottom wall disposed between the front, side and rear walls of the box-like element,

(c) means on the box-like element for releaseably supporting the removable bottom wall,

(d) means on the exterior side of the front wall for display of merchandise.

10. A storage and display unit as recited in claim 9 wherein the bottom wall is comprised of a body portion and a stem portion, the body portion being disposed on the supporting means between the front, side and rear walls, the stem portion extending outwardly from the box-like element through the slot in the rear wall.

11. A display and storage unit as recited in claim 9 wherein the means for display of cards and similar articles of merchandise is comprised of:

(a) two outset tabs on the exterior side of the front wall wherein the corner portions of a card or other flat article may be secured,

(b) a transparent closure member hingedly mounted on the back side of the base portion of the channel member on the opposite edge from the outset tabs and having a means at its edge opposite the hinge connection for securing the edge of card or similar merchandise.

12. A display and storage unit as recited in claim 11 wherein:

(a) the card securing means on the transparent closure member is comprised of a hooked flange which receives the edge of the card or similar merchandise thus allowing inspection of the interior of the card when the closure member is opened.

13. Individual storage and display units comprised of:

(a) a box shaped element having a front wall with an exterior side, side walls and a rear wall, said rear wall having a longitudinal slot therein,

(b) a notch for receiving a supporting member in each side wall,

(c) outset tabs on the exterior side of the front wall wherein the corner of a card or other flat article may be secured.

(d) at least one hook flange struck from the front wall of the box-like element in opposed relation to the offset tabs whereby a transparent closure member may be hingedly secured,

(f) a transparent closure member hingedly secured to the hook flange struck from the front wall of the channel-shaped member having a hook flange on the edge opposite the hinge connection wherein the edge of a card or similar article may be received,

(g) a removable bottom wall having a body portion and a stem portion, the body portion is disposed between the front, side and rear walls of the box-like element and intersecting the notch in the side walls, the stem portions extending outwardly from the box-like element through the slot in the rear wall,

(h) means on the box-like element for releasably supporting the removable bottom wall.

14. Storage and display units comprised of:

(a) a storage means having an exterior side,

(b) a means attached to said storage means for mounting the storage means on a supporting member,

(c) opposed outset tabs on the exterior side of the

storage means wherein the corner of a card or other flat article may be secured,

(d) at least one hook flange struck from the exterior side of the storage means in opposed relation to the offset tabs whereby a transparent closure member may be hingedly secured,

(e) a transparent closure member hingedly secured to the hook flange of the storage means, said closure member having a hook flange on the edge opposite the hinge connection wherein the edge of a card or similar article may be received.

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