

Oct. 22, 1957

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DISPLAY AND MERCHANDISE SUPPORTS

2,810,539

Filed Dec. 23, 1953

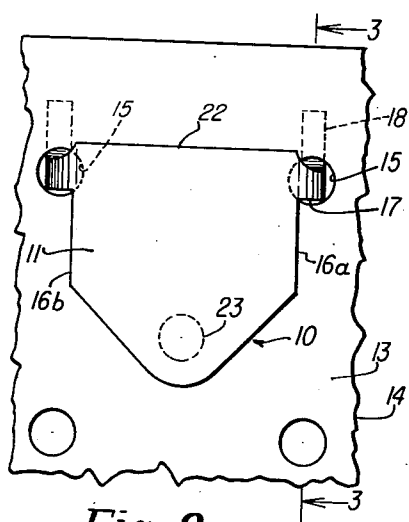


Fig. 2

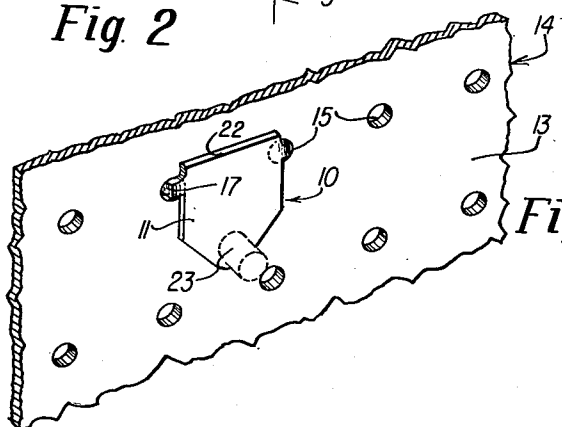


Fig. 1

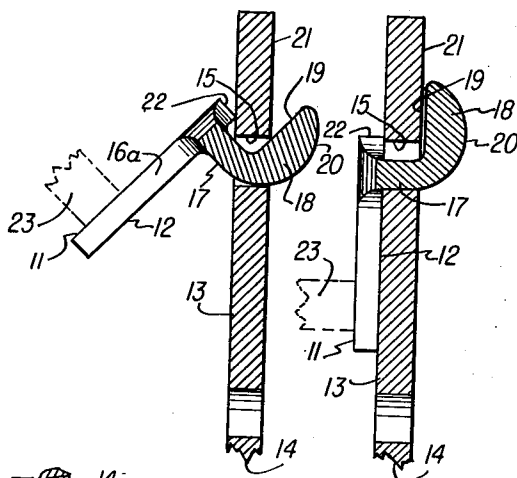


Fig. 4 Fig. 3

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DISPLAY AND MERCHANDISE SUPPORTS

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Application December 23, 1953, Serial No. 399,902

3 Claims. (Cl. 248—223)

The present invention relates to improvements in merchandise display fixtures and more particularly to improvements in a merchandise display supporting bracket of the type which is adapted to be demountably attached in a plurality of different positions on the face of an upright perforated panel to display and support various items of merchandise on racks, rods, or the like, secured to the bracket.

The present invention is a direct improvement over the display and merchandise supporting bracket disclosed in the copending Edward M. Levy application Serial No. 304,274, filed August 14, 1952 (Patent 2,766,958).

In the merchandising field, retail stores have been able to increase their sales volume by displaying the different items of merchandise in full view of the purchasing public on support brackets which may be demountably carried on upstanding perforated panels constructed of wallboard, wood, fiber board, metal, and other materials. These panels are provided with uniformly spaced holes or perforations therein in spaced-apart vertical and horizontal rows for the purpose of detachably receiving the merchandise supports, clips or brackets that have been specifically designed to display the different items of merchandise. The material from which the panels are made, the weight and size of the merchandise to be carried on the detachable supporting brackets, and the type of the hooks on the merchandise supporting brackets, normally governed the thickness of the panels. Generally, the perforated panels are approximately one-eighth inch thick, but this thickness may be varied as noted above. A merchandise supporting bracket used in combination with such panels is provided with off-set tongue means, hooks, or the like, having one or more horizontal off-set leg portions thereon of a length substantially equal to the thickness of the panel and having a cross-sectional area which is somewhat less than the diameter of the perforations in the panel. Also, the thickness of the material of the merchandise supporting bracket is normally less than the thickness of the panel. With this arrangement, the tongue means, hooks, or the like, on the merchandise supporting bracket may be inserted through cooperating perforations in the panel so that an upstanding leg portion at the rear end of each of the horizontal off-set legs will engage the rear surface of the panel with the front main supporting plate for the bracket in engagement with the front surface of the panel.

A merchandise supporting bracket of the type noted above is disclosed in the previously mentioned copending application. The supporting bracket disclosed in said application is quite satisfactory in that it performs the desired function of demountably supporting items of merchandise for display purposes on perforated panels of the type noted. It has been found, however, that each time this type of supporting bracket is mounted and subsequently removed from a perforated panel in order to alter a display thereon, the rearwardly and up-

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wardly projecting hooks carried by the bracket become jammed in the cooperating perforations and, consequently, considerable pressure or force must then be exerted to remove the bracket. This causes the rearwardly and upwardly projecting hooks to dig into the walls of the cooperating perforations and thereby distort and mutilate the walls of the perforation and disfigure the front surface of the panel. Also, the pressure exerted to remove a jammed bracket from the perforated panel at times bends the rearwardly and upwardly projecting hooks sufficiently to render the bracket useless.

In the fabrication of the supporting bracket disclosed in the above mentioned Levy application, each of the off-set, rearwardly and upwardly projecting hooks on the bracket are bent rearwardly from the top edge of the planar base plate thereof to provide first leg portions that extend through cooperating perforations in the panel. Also, the rear ends of these leg portions are bent upwardly to provide upstanding second leg portions so that they respectively engage the rear surface of the panel when the supporting bracket is mounted thereon. Since the leg portions of each of the hooks on the supporting bracket are formed from the same material as the base plate, the vertical thickness of each leg that passes through a cooperating perforation is equal to the thickness of the material of the base plate. Also, the horizontal thickness of each leg that passes through a cooperating perforation, as well as the above-mentioned vertical thickness, is somewhat less than the diameter of the cooperating perforations.

Whenever supporting brackets of the type noted above are supported on a perforated panel, the rearwardly projecting first leg portions of the hooks that extend through the cooperating perforations must be of sufficient strength to carry and support relatively heavy items of merchandise carried by the supporting bracket. In order to strengthen the rearwardly extending leg portions referred to above and thereby to reduce the tendency to bend upwardly from the sheer weight carried by the bracket, the entire longitudinal length of each of the leg portions is formed with a concave upper surface and a corresponding convex lower surface, the latter surface also cooperating with the lower curved wall portion of the perforation. The cost of manufacturing brackets of this character is relatively expensive due to the number of fabricating steps that are required to stamp out a bracket blank, bend the off-set hook portions and form the convex and concave surfaces of the leg portions of the hooks to produce a finished supporting bracket.

It is the main object of the present invention to provide an improved merchandise supporting bracket which may be readily mounted and subsequently removed from a perforated display panel without distorting the peripheral edges of the perforations therein and without disfiguring the front surface of the panel.

It is a further object of the present invention to provide an improved merchandise supporting bracket in which the hook members are simultaneously formed during the stamping operation that produces the bracket blank.

It is still another object of the present invention to provide in an improved merchandise supporting bracket of the type noted, a main upstanding front body portion having a top edge thereon extending above the hooks to provide a pivot point about which the bracket is rotated while it is in slidable engagement with the front surface of a perforated panel so that the hook members extending rearwardly from the side edges of the body portion can be rotated in or out of the cooperating perforations in the panel without binding or jamming on the walls of the perforations.

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It is still another object of the present invention to form the hooks along the side edges of the main body portion of the bracket so that the weight of the bracket, as well as the items of merchandise carried thereby, is in a direction parallel to the vertical bend along the side edges of said main body.

These and other objects and advantages of the present invention will best be understood from the following description thereof taken in connection with the accompanying drawings, in which:

Fig. 1 is a perspective view of the present merchandise display supporting bracket, the support being demountably attached to a fragment of an upright perforated panel;

Fig. 2 is an enlarged front elevation of the improved display supporting bracket of the present invention and shows a small portion of the perforated panel illustrated in Fig. 1;

Fig. 3 is a vertical section taken along line 3—3 of Fig. 2 and illustrates the manner in which the improved merchandise display supporting bracket of the present invention is detachably mounted on the perforated panel;

Fig. 4 is a vertical sectional view of the panel shown in Fig. 3 and shows the manner in which the rearwardly extending hook members of the improved merchandise display supporting bracket of the present invention are pivotally rotated in or out of the perforations in the panel without jamming or binding therein as the bracket is being attached to or removed from the panel.

Referring now to Figs. 1, 2, 3 and 4 of the drawing, it will be seen that the improved merchandise supporting bracket of the present invention is a unitary member, shown generally at 10, comprising an upstanding base plate 11 having a flat rear surface 12 of substantial area adapted to lie vertically against and bear upon the front surface 13 of an upright or vertically disposed panel 14 having a plurality of uniformly spaced-apart circular perforations 15 therein arranged in equally spaced-apart vertical and horizontal rows. The support member 10 is preferably stamped and formed from a single sheet of metal or the like, with a plurality of identical hook portions formed integrally upon and extending rearwardly from the respective side edges 16a and 16b of the base plate 11. The hook portions are spaced-apart a distance equal to the spacing between adjacent perforations 15, but it should be understood that the base plate 11 may be further extended so that the hook portions thereon are spaced-apart a distance equal to any multiple of the spacing between adjacent perforations 15. Although the hook portions on the base plate 11 have been shown at the sides of the plate, it should be understood that they may also be formed from the base plate between the sides thereof.

Each of the two hook portions extending rearwardly from each of the respective side edges 16a and 16b on the base plate 11 comprises a relatively straight first leg element 17 having one end formed integrally with the side edge and extending rearwardly therefrom at right angles to the plane of the base plate 11. The hook portion extending rearwardly from the side edge 16b of the base plate 11 is exactly the same as the hook portion extending rearwardly from the side edge 16a on the base plate. Each leg 17 on the oppositely disposed hook portions is of sufficient length to extend completely through any one of the perforations 15 and thus the length of each leg 17 is determined by the thickness of the perforated panel with which the support member 10 is to be used. Normally, the thickness of the panel will be at least one-eighth inch and the thickness of the material from which the merchandise support bracket 10 is fabricated will be less than the thickness of the panel with which it is used. The outer extremity of each leg 17 extends upwardly to provide a second upstanding leg element 18. The leg element 18 comprises a flat front

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edge portion 19 that is substantially parallel to the plane of the base plate 11 and is off-set with respect to the rear surface 12 of the base plate 11 a distance substantially equal to the thickness of the panel 14. The upstanding leg element 18 also includes a curved rear edge surface 20 that terminates at its lower end with the lower edge portion of the rearwardly extending leg element 17 and, at its upper end the curved edge portion 20 terminates in the upper end of the flat edge portion 19. As is clearly shown in Figs. 2 and 3, the upstanding second leg element 18 extends upwardly above the perforation 15 a sufficient distance so that the flat edge portion 19 thereof may bear upon the rear surface 21 of the panel 14 after the hook portions on the bracket 10 have been inserted through cooperating perforations 15.

The two hook portions referred to above each include the first leg element 17 and the second leg element 18 and these elements are preferably formed by a stamping operation with the respective hook members extending outwardly in opposite directions from the sides 16a and 16b and in the plane of the base plate 11. Thereafter, or as a separate step during the stamping operation, the hook members are bent rearwardly from the edges 16a and 16b on the base plate 11 to complete the fabrications of the supporting bracket 10, as illustrated in Figs. 1, 2, 3 and 4. By forming the hook portions on the base plate 11 so that the first leg elements 17 thereof are turned rearwardly from the respective side edges 16a and 16b considerably more weight may be supported by the supporting bracket 10 without bending the first leg elements 17 upwardly than has been possible in the prior brackets having the hook members turned rearwardly from the upper edge of the base plate 11.

To permit the improved merchandise supporting bracket 10 of the present invention, as shown in Figs. 1, 2 and 3, to be readily removed and replaced on the panel 14 without mutilating the perforations 15 therein, the base plate 11 has been formed so that the upper edge 22 thereof, between the side edges 16a and 16b, extends above the lower edge on the first leg elements 17 a distance substantially equal to the diameter of the perforations 15 and in the panel 14. Attention is directed to the fact that the vertical thickness of each of the first leg elements 17, from its lower surface to its upper surface, is greater than the horizontal thickness thereof and it is also somewhat less than the diameter of the perforations 15, also, the horizontal thickness between the sides thereof is also less than the diameter of the perforations 15 and is equal to the thickness of the material of the base plate 11. Although the upper edge 22 of the base plate 11 has been shown extending the full width of the base plate, it will be appreciated that it may also form the upper limits of one or more projections that extend upwardly from some desirable point below the upper edge 22. At the opposite ends of the upper edge 22, the bracket is curved outwardly and downwardly as seen in Fig. 2 to further increase the rigidity and strength of the rearwardly extending first leg elements 17 where they join and are bent rearwardly from the side edges 16a and 16b of the base plate 11.

In order to remove the improved merchandise supporting bracket 10 from the perforated panel 14, the lower portion of the base plate 11 is rotated upwardly and outwardly away from the front surface 13 of the panel 14 from the position illustrated in Fig. 3 toward the position illustrated in Fig. 4. The longitudinal rear edge of the upper edge 22 on the base plate 11 provides a pivot point in contact with the front surface 13 of the panel 14 about which the base plate 11 is rotated as it is removed away from the panel. During the rotary movement of the base plate 11, the rearwardly extending first leg elements 17 is in contact with the lower wall of the perforation 15 and causes the top edge 22 on the base plate 11 to slide upwardly along the front surface 13 on the panel until

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the curved edges 20 on the second leg elements 18 are in a position to pass through the perforation 15 without mutilating or binding in the wall of the perforation. During the rotary movement of the base plate 11 about the pivot point as described above, the upper surfaces of the respective first leg elements 17 are rotated out of the perforations 15 without mutilating the upper edges and walls of the cooperating perforations. Also, the flat edge portions 19 on the respective second leg elements 18, at their upper ends, rotate away from the rear surface of the panel 14 as the lower end of the flat edge portion 19 is rotated into and through the perforation 15. When the base plate 11 is rotated to a position that is substantially perpendicular to the front surface 13 of the panel 14, the hook portions, each including the first and second leg elements 17 and 18, secured to the respective side edges 16a and 16b may be withdrawn from the cooperating perforations 15. Thus, the merchandise support bracket 10 may easily be removed from the panel 14 without jamming, binding or mutilating the walls and peripheral edges of the cooperating perforations 15 or the hook portions on the bracket.

After the support bracket 10 has thus been removed, it may be relocated in any other desired position on the panel 14 by first inserting the second leg elements 18 of the respective hook portions into cooperating perforations 15, with the base plate 11 held in a position that is substantially perpendicular to the front surface 13 of the panel 14. Thereafter, the base plate 11 may be rotated or pivoted downwardly with the top edge 22 of the base plate acting as the pivot point in contact with the front surface 13 on the panel 14 to bring the base plate 11 into contact with the face of the panel 14. During this movement, the top edge 22 again provides the sliding pivot point with the front surface 13 to guide the respective second and first leg elements 18 and 17 in the order named through the associated perforations without jamming, binding or distorting the walls and peripheral edges of the cooperating perforations.

It should be noted, however, that during the removal and replacement of the bracket 10 on the panel 14 as described above, lower edges of the legs 17 and the curved rear edge portions 20 on the second leg elements 18 function as cam or guide members in contact with the lower wall surfaces of the perforations 15 and govern the sliding movement of the pivoting upper edge 22 along the front surface of the panel so that the first leg elements 17 and the flat edge portions 19 on the second leg elements 18 do not distort, jam or otherwise damage the walls and peripheral edges of the cooperating perforations.

In the form of the merchandise display supporting bracket 10 illustrated in the drawings, an outwardly extending rod 23, shown in dotted lines to represent any desired form or shape of rack for carrying merchandise, may be welded or otherwise secured to the front surface of the base plate 11. The particular size, shape, or character of the specific rack, rod or other device for carrying merchandise, which is secured or supported by the base plate 11 forms no part of the present invention and it is contemplated that the support bracket 10 may be universally employed in combination with all such racks, rods or the like, for carrying merchandise.

It will thus be apparent to those skilled in the art that the merchandise supporting bracket 10 may be constructed with racks which have numerous variations depending upon the particular character, size or shape of the items of merchandise to be displayed on the panel. It should be noted, however, that the weight of the merchandise to be carried by the supporting bracket 10 is transmitted to the perforated panel through the relatively straight rearwardly extending first leg elements 17. Inasmuch as the rearwardly extending straight leg elements 17 are bent rearwardly from the respective side edges 16a and 16b of the base plate 11, the downward force or pull of the

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weight carried on the bracket 10 is in a direction parallel to the bend in the legs 17 where they join the respective side edges of the base plate. If desired the lower surface of the respective first leg elements 17 may be slightly rounded so that lower surface will have the same general contour as the lower wall of the perforations 15.

It will thus be appreciated that the merchandise support bracket 10 of the present invention is so constructed that the force of the weight of the merchandise carried on the racks or the like secured to the base plate 11 is transmitted to the panel 14 at several places and over a substantial area of the panel, thereby making it possible for the support and panel to bear loads of considerable magnitude without distorting or otherwise damaging either the bracket 10 or a perforated panel constructed of relatively soft material for supporting the bracket.

In the construction of the supporting bracket 10 of the present invention disclosed in Figs. 1 to 4, inclusive, the hook members, including the first and second leg portions 17 and 18, are bent rearwardly from the side edges 16a and 16b of the base plate 11. By bending the hooks from the side edges as noted, the horizontal thickness of the material of the respective legs 17 is the same as the thickness of the base plate 11 material and the vertical thickness of the respective legs 17 is greater than the horizontal thickness. The downward force of the weight of the merchandise carried by such a bracket is perpendicular to the edge or vertical thickness of the rearwardly extending legs 17 and in a direction parallel to the bend at the junction of the sides 16a and 16b of the plate 11 and the legs 17. With this method of providing the rearwardly extending legs 17 on the base plate 11 considerable more weight may be carried by the bracket 10 without distorting or bending the hooks.

Although a specific embodiment of the invention has been shown and described by way of illustration, it will be understood that various modifications may be made therein which come within the true spirit and scope of the appended claims.

What is claimed is:

1. A merchandise supporting bracket demountably secured upon an upright panel having a plurality of vertically and horizontally spaced-apart perforations therein comprising, a vertically disposed base plate having a top edge and spaced-apart side edges and having a rear surface bearing against the front surface of said panel, a pair of rearwardly extending hook members respectively carried on said side edges of said base plate below said top edge thereof, each of said hook members including a leg extending rearwardly from one of said side edges of said plate and through one of the perforations of said panel and then upwardly on the rear side of said panel, the lower edges of said legs normally resting on said panel within said perforations so as vertically to support said base plate and the upwardly extending portions of said legs being adapted to bear against the back side of said panel to prevent withdrawal of said legs from said perforations while said base plate is vertically disposed on said panel, said top edge of said base plate being located well above the junctions between said rearwardly extending legs and the side edges of said base plate and being adapted to contact the front surface of said panel to provide an axis of pivotation about which said base plate may be rotated in a direction away from the front of said panel in order to remove said support bracket from said panel, the presence of said top edge at an elevation above said junctions causing a partial but substantial withdrawal of said legs from said perforations simultaneously with the pivotal movement of said plate, thereby tending to avoid binding of said legs in said perforations during removal of said support bracket from said panel.

2. The combination set forth in claim 1, wherein said hook members are integral with said base plate, and where-

in said base plate and said hook members are formed of a single piece of sheet metal.

3. The combination set forth in claim 1, wherein the lower and rear edges of said legs of said hook members are arcuately curved so as to slide across the lower interior surfaces of said perforations and function as cams in guiding said legs therein during said pivotal movement of said base plate.

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