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3,319,800

PILFER-DETECTING DISPLAY RACK

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FIG. 1

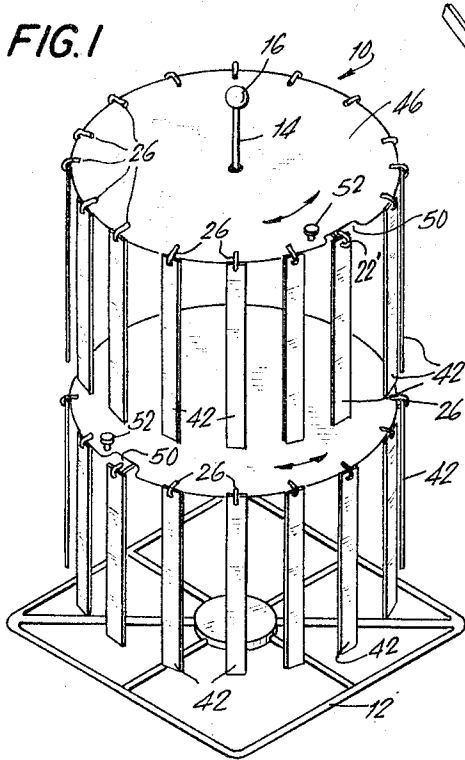


FIG. 3

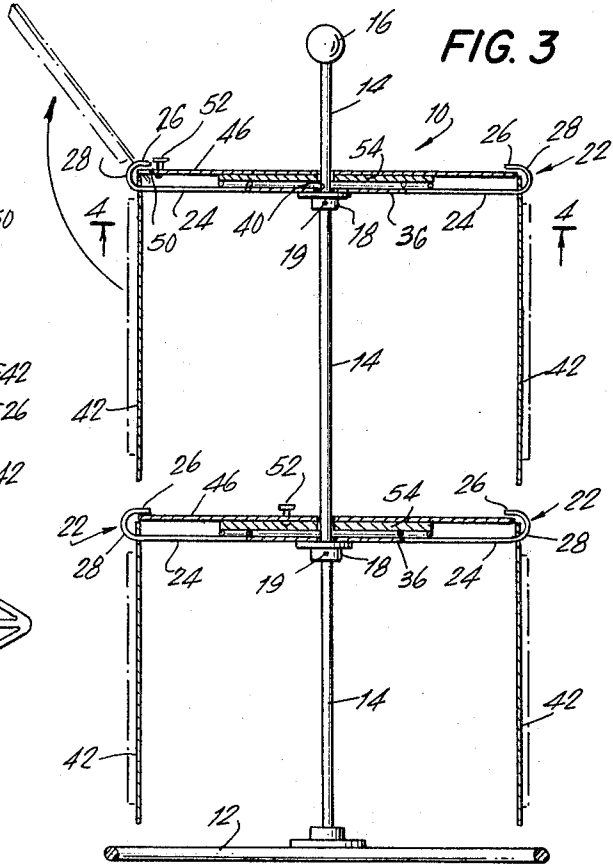


FIG. 2

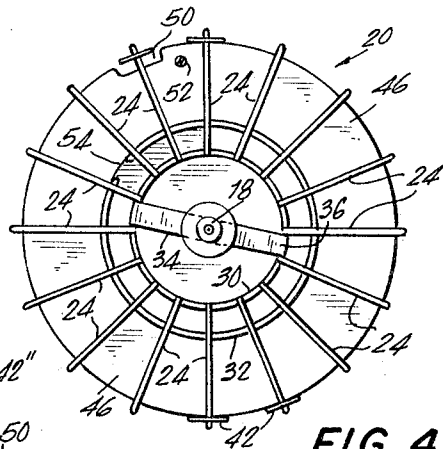
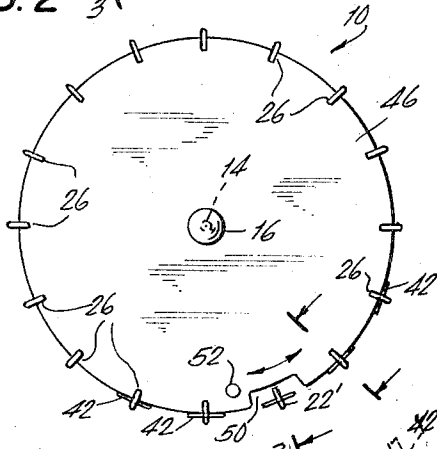


FIG. 4

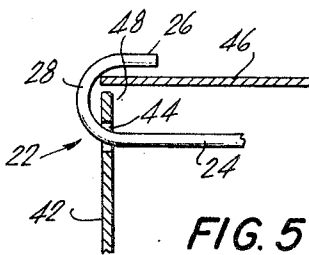


FIG. 5

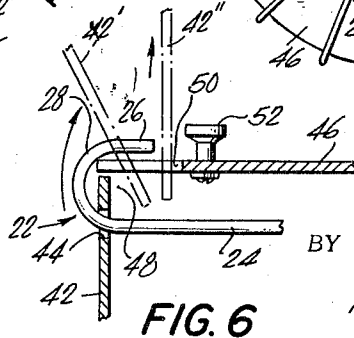


FIG. 6

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**PILFER-DETERRING DISPLAY RACK**

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3 Claims. (Cl. 211-163)

**ABSTRACT OF THE DISCLOSURE**

The display rack comprises a stand having a vertical central axis which rotatably mounts a circular plate. The circular plate is provided with a plurality of radially arranged hooks having substantially horizontal legs terminating in outer ends which are turned inwardly toward the central axis, defining a plurality of radially arranged bight portions. The circular plate extends within these bight portions and has a notch at the periphery thereof which can, by rotating the plate, be brought into registry with any one of the hooks to enable the removal of the article suspended on the hook.

This invention relates to a pilfer-detering display rack, and more particularly to a display rack for displaying articles mounted on rectangular display cards having a suspension hole near, but spaced from, one end of the card.

Display racks are known for exhibiting on a retail sales counter items such as watch bands, straps, jewelry, chains or the like, mounted on rectangular display cards provided with a suspension hole near one end of the card. However, in the customary type of display rack the card is suspended from an upwardly turned wire or hook, and removal of the display card with the particular item mounted thereon can be made from any of the radially-arranged hooks at any point around the circular periphery of the rack. As a result, stealing or shop-lifting can become a great problem, especially with relatively small flat articles which can be removed from the customer's side of the counter with great ease and quickly hidden from view in a pocket or shopping bag.

It is therefore an object of the present invention to provide a display rack which overcomes the above-mentioned difficulties.

Another object of the invention is to provide a display rack of relatively simple and inexpensive construction in which articles such as jewelry, watch bands, or other article mounted on a rectangular card can be displayed on a rotary display rack for easy viewing, selection and rotation of the rack, but from which the card can be removed only from a limited number of peripheral locations on the circumference of the display rack.

A further object of the invention is to provide a display rack with multiple tiers of suspension hooks adapted to engage a hole near, but spaced from, the end of a rectangular display card and to block removal of the display cards at all hooks except at one or a small limited number of locations, so that a customer or potential shoplifter who is not familiar with the operation of the display device would have to wait for the sales person to rotate the blocking means to a particular releasing location, which might normally be at the sales person's side of the counter.

To these ends, and in accordance with one feature of the invention, a display rack, preferably having a plurality of tiers, is provided with a stand which defines a vertical central axis. One or more suspension frames are provided having a locking plate mounted for rotation about said vertical axis. The suspension frame has a plurality

of radially arranged J-shaped hooks provided with substantially horizontal short and long legs. These hooks have outer ends turned upwardly and inwardly toward the central axis for receiving the suspension hole of respective display cards. The J-shaped hooks define leg-joining portions spaced equally radially from the central axis. The circular blocking plate extends horizontally into the bight formed between the short and long legs of the J-shaped hooks to normally block removal of a display card from a hook. Around the outer periphery of the blocking plate there is formed at least one releasing recess whose circumferential length is slightly greater than the width of one of the display cards. A handle is provided on the plate for rotating the plate about the vertical central axis to bring the releasing recess into peripheral coincidence straddling a selected one of the hooks, so that a card on the selected hook can be removed therefrom through the recess.

The novel features of this invention are set forth in the appended claims. The invention itself, together with additional objects, features and advantages thereof, will be more clearly understood from a reading of the following description in connection with the accompanying drawings wherein a preferred embodiment of the invention is illustrated and in which:

FIG. 1 is a perspective view of a display rack according to the invention having two tiers of suspension hooks and display cards;

FIG. 2 is a plan view of the device of FIG. 1;

FIG. 3 is an elevational cross section taken along the plane of line 3-3 of FIG. 2;

FIG. 4 is a transverse elevational cross section taken along the plane of line 4-4 of FIG. 3;

FIG. 5 is an enlarged fragmentary cross sectional view taken along the plane of line 5-5 of FIG. 2; and

FIG. 6 is an enlarged fragmentary detail view of the upper left corner of FIG. 3.

In the drawings, the same reference characters are used to illustrate the same elements throughout the several views.

As best shown in FIGS. 1, 2 and 3, the display rack, indicated generally by the reference numeral 10, comprises a base 12 supporting a vertical rod 14 on whose upper end may be mounted an ornament 16 or advertising display sign (not shown). The rod 14 is provided with one or more supporting hubs 18 for supporting respective suspension frames 20. The hubs are preferably provided with set screws 19 so that they may be moved up or down to a selected elevation on the rod 14.

The suspension frame 20 comprises a plurality of radially arranged J-shaped hooks 22 having longer legs 24 and shorter legs 26 and an intermediate leg-joining portion 28. The central vertical rod 14 defines a central axis for the display rack, and the leg-joining portions 28 are all equally spaced radially around a circle whose center is on the longitudinal axis of rod 14. The J-shaped hooks 22 have their longer legs 24 and shorter legs 26 each substantially horizontal. The radially arranged longer legs 24 are supported on two concentric rings 30, 32, to which each of the legs 24 is securely fastened, such as by welding, brazing or the like. A cross bar 34, having its outer ends 36, 38 respectively overlapping and welded to the inner circular ring 30, serves to rotatably support the frame 20 on the hub 18. A central hole 40 in the cross bar 34 is adapted to receive the rod 14 therethrough. Rectangular display cards 42 having a suspension hole 44 near, but spaced from, the upper end of the card are adapted to be suspended from the horizontally arranged J-shaped hooks 22. The display cards 44 may have mounted thereon various types of items, such as jewelry, watch bands, chains, necklaces and the like, preferably wrapped in a transparent film wrapper.

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The suspension frame 20 is also provided with a substantially circular plate 46 whose outer periphery extends horizontally into the bight space 48 formed between the horizontal long and short legs 24, 26 and the intermediate leg-joining portion 28 of the suspension hooks 22. At least one notch or releasing recess 50 is formed in the outer periphery of the plate 50. The circumferential length of the notch or recess 50 is adapted to be of a slightly greater dimension than the width in the same direction of the upper end of the widest rectangular card 42 so that said upper end of the card can readily pass vertically through the notch 50. A knob or handle 52 fastened to the plate 46 at a location near the recess 50 provides means for rotating the plate 46 about its central axis to bring a recess 50 into peripheral coincidence straddling a selected one of the J-shaped hooks so that a card 42 on the selected one hook can be removed therefrom through the recess 50.

A reinforcing disc 54, somewhat thicker than the plate 46 and of smaller diameter, is preferably used to help support the disc 46 and to space it from the plane of the circular ring 30, 32. In FIG. 4, the outer ring 32 has been cut away at the upper left to show the outer diameter of reinforcing spacer disc 54.

Operation of the device according to the invention is as follows. To fill the rack, the handle 52 is rotated until the recess or slot 50 straddles a selected hook 22 in its position 22', as shown in FIGS. 1 and 2. A series of display cards 42, by means of their openings 44, are slipped over the leg 26, around the connecting portion 28 and suspended from the longer leg 24 in the position 22' of the hook until a number of the cards 42 are placed along the leg 24 of the hook 22'. The handle 52 is then rotated to the next adjacent hook 22, and the process is repeated with additional cards 42 to fill the adjacent hook. These steps are repeated until all of the hooks 22 on the upper tier are filled. The same steps are then repeated on the lower tier of hooks 22.

As thus shown in FIG. 5, the display cards 42 are normally blocked by means of plate 46 from being lifted up around the leg-joining portion 28 and over the short leg 26. However, when the notch 50 becomes positioned so as to straddle a respective hook 22, as best shown in FIG. 6, the card 42 may be lifted to position 42' and removed from position 42'', because the locking means or plate 46 will no longer prevent lifting of the card, and when in position 42'' within the recess 50, the card 42 can be lifted off of the short leg 26 and raised vertically, since it is no longer blocked.

It will be obvious to those skilled in the art, upon a study of this disclosure, that this invention permits of various modifications and alterations with respect to the individual components and arrangements disclosed, and hence can be embodied in apparatus other than as particularly illustrated and described herein, without departing from the essential features of the invention and within the spirit and scope of the claims annexed hereto.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

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1. A display rack comprising a stand having radially and horizontally arranged hook means having bights and hooks for suspending a plurality of rectangular articles of a maximum given width, plate means rotatably mounted on the stand and extending into the bights of said hook means for blocking removal of a suspended article from said hook means, said plate means having at least one notch formed in its periphery of a width slightly greater than said given width for selectively releasing a respective suspended article when said notch coincides peripherally with one of said hook means.

2. A pilfer-detering display rack comprising a stand defining a vertical central axis, at least one suspension frame having a substantially circular plate mounted for rotation about said vertical axis, said suspension frame having a plurality of radially arranged hooks provided with substantially horizontal legs, said hooks having outer ends thereof turned upwardly and inwardly toward said central axis, said hooks defining bight portions spaced equally radially from said central axis, said circular plate extending within said bight portions and having at least one notch formed in the periphery thereof, and handle means for rotating said plate about said axis to bring said notch into coinciding position with a selected one of said radially arranged hooks.

3. A pilfer-detering display rack for displaying articles mounted on rectangular display cards having a suspension hole near but spaced from one end of the card, said display rack comprising a stand defining a vertical central axis, at least one suspension frame having a circular plate mounted for rotation about said vertical axis, said frame having a plurality of radially arranged J-shaped hooks provided with substantially horizontal short and long legs, said hooks having outer ends thereof turned upwardly and inwardly toward said central axis for receiving the suspension holes of respective display cards, said hooks defining leg-joining portions spaced equally radially from said central axis, said circular plate extending horizontally into the bight space between said short and long legs to normally block removal of a card from a hook, said plate having at least one recess formed in its outer periphery of a circumferential length slightly greater than the width of one display card, and handle means on said plate for rotating said plate about said axis to bring said recess into peripheral coincidence straddling a selected one of said hooks so that a card on said selected one hook can be removed therefrom through said recess.

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