United States Patent

[11] **3,570,676**

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[54] **THEFTPROOF MERCHANDISE DISPLAY**
8 Claims, 7 Drawing Figs.

[52] **U.S. Cl.** **211/4,**
40/104.04, 70/62, 211/169, 312/107.5
[51] **Int. Cl.** **E05b 73/00**
[50] **Field of Search** 211/4;
248/203; 194/(Inquired); 70/62, 63; 109/50—52;
40/72, 102, 73, 4 (U.S.), 104.12, 104.17, 104.13,
104.18, 104.04; 281/46; 312/216, 107.5

[56] **References Cited**

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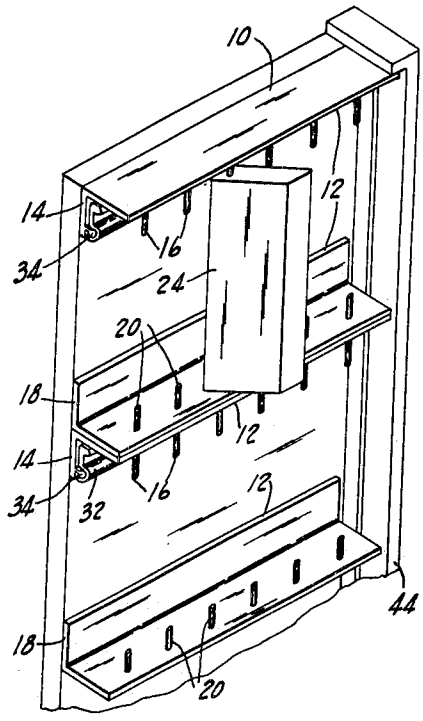
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Attorney—James E. Nilles

ABSTRACT: A display device having at least one pair of support members provided with cooperable merchandise receiving and display spindle elements and means movable relative to said support members and the spindle elements thereof and adapted to lock merchandise received thereby to prevent unauthorized removal thereof from the spindles while being readily releasable for removal of the displayed merchandise by authorized personnel.



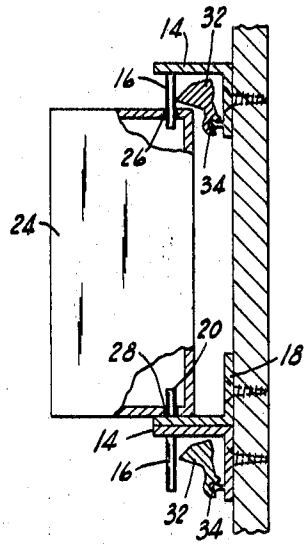


Fig. 3

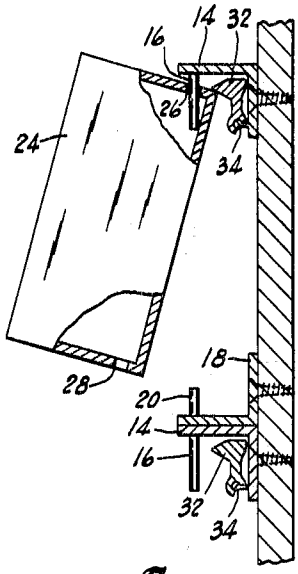


Fig. 2

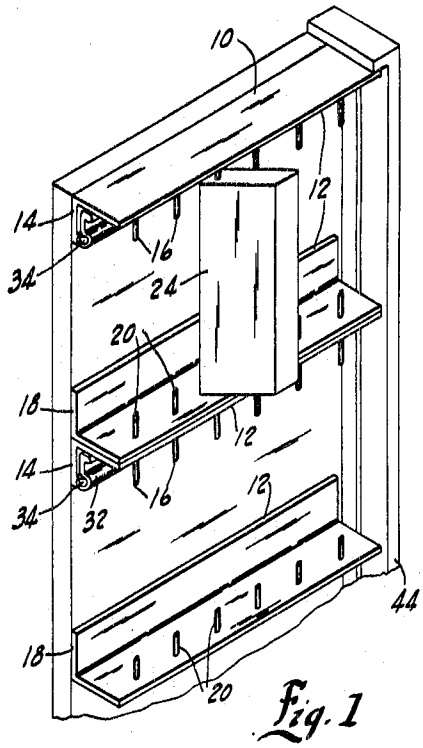


Fig. 1

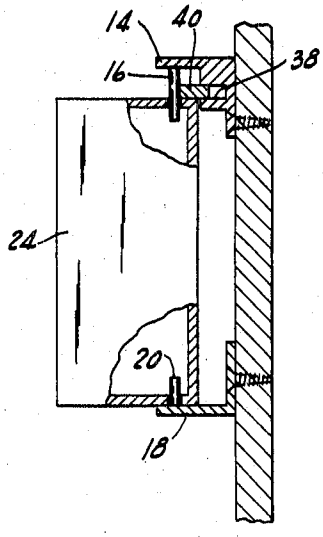


Fig. 5

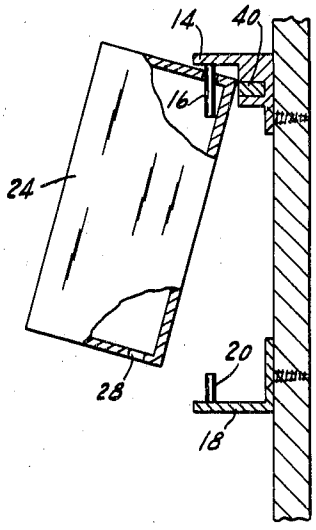


Fig. 4

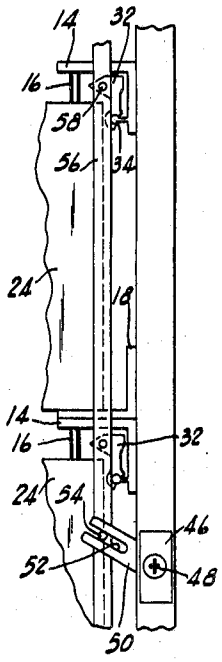


Fig. 6

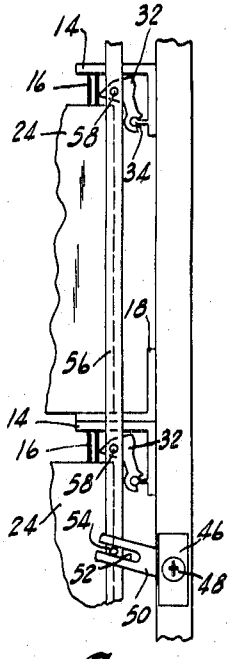


Fig. 7

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THEFTPROOF MERCHANDISE DISPLAY

RELATED APPLICATIONS

The present application is related to copending U.S. Pat. application Ser. No. 680,174, filed Nov. 2, 1967 in the name of Louis John Crosslen and entitled Theftproof Merchandise Display, now issued as U.S. Pat. No. 3,478,893 of Nov. 18, 1969, and U.S. Pat. application Ser. No. 730,454, filed May 20, 1968 in the names of John Louis Crosslen and Elio Vicenzi and also entitled Theftproof Merchandise Display now issued as U.S. Pat. No. 3,517,827 of Jun. 30, 1970.

BACKGROUND

In the promotion and display of merchandise in retail stores and the like, it is generally acknowledged that maximum sales appeal is generated by displaying the merchandise in a manner whereby it may be handled by the potential customer.

However, whenever merchandise is displayed for free handling by the general public either on counters or on special display racks or the like, the problem of pilferage or thievery is present, and especially with present help shortages, it is extremely difficult to control the loss of merchandise displayed in this manner.

It is also highly desirable to display the merchandise in an attractive manner which affords the potential customer as much room as possible while permitting expansion and while still conserving valuable floor and counter space for the display of other merchandise and for clerical work and checkout.

In addition, it adds greatly to the sales appeal and product promotion to utilize signs and placards of an informative nature in direct conjunction with the merchandise in order to direct the interested customers to the display area while effectively advertising the product and its origin.

In each of the above identified copending applications, a merchandise display is disclosed which satisfactorily meets all of the foregoing requirements with regard to attractiveness, space conservation, informative advertising, customer comfort, individuality of display, ready expansion, and relative safety from pilferage and thievery. However, in one of these devices, the merchandise is received by and supported on a plurality of spindles, each of which is independently axially displacable, and these spindles accordingly required separate hand assembly operations of a variety of parts, while in the other device the support members are movable relative to each other and accordingly require a number of guide elements. Then too, neither of these prior assemblages are readily adaptable for mounting on a wall or other flat surface.

SUMMARY

It is accordingly an object of the present invention to provide a merchandise display which obviates the disadvantages attendant prior available display devices and which may be produced at low cost with a minimum number of parts.

Another object of the invention is to provide an extremely attractive unitary display device which eliminates the need for separate axially displacable spindle assemblages as well as multiple guide means for the support members while retaining such advantages as being adapted for support on a floor pedestal or on a counter or other surface as well as against flat surfaces such as a wall and which may be readily expanded to meet display requirements without impairing its effectiveness.

A further object of this invention is to provide a merchandise display which is an improvement over prior devices of this type and which affords the customer an opportunity to carefully examine a large number of individual articles of merchandise at a single station without need for close clerical supervision and without any appreciable danger of unauthorized removal and/or loss of the displayed merchandise.

The present invention contemplates the provision of a merchandise display which comprises, a frame, a plurality of spaced support members secured within said frame, means on the support members providing axially spaced and aligned

spindle elements for receiving articles of merchandise to be displayed, the support members being spaced from each other a sufficient distance to permit the articles of merchandise to be placed on and removed from selected aligned pairs of spindle elements, and means movable relative to one of the support members and cooperable with the articles of merchandise received on the spindle elements to prevent removal of the merchandise from the spindle elements.

These and other objects and advantages of the invention will become apparent from the following detailed description.

THE DRAWINGS

A clear conception of the features constituting the present invention and of the mode of constructing and utilizing a typical merchandise display embodying the invention, may be had by referring to the drawing accompanying and forming a part of this specification wherein like reference characters designate the same or similar parts in the several views.

FIG. 1 is a perspective view of a typical wall-type merchandise display embodying the invention and showing an article of merchandise secured between an axially aligned pair of spindle elements;

FIG. 2 is a transverse section through a portion of the display with the locking device released to permit removal of the article from the spindle elements as shown;

FIG. 3 is a similar fragmentary transverse section through the display device but showing the same in locked condition;

FIG. 4 is a fragmentary section through another embodiment of the display with the device unlocked to permit removal of merchandise as in FIG. 2;

FIG. 5 is another fragmentary section through the embodiment of FIG. 4 but with the locking mechanism in locked condition;

FIG. 6 is a fragmentary end view illustrating a typical lock and its attendant actuating mechanism; and

FIG. 7 is a similar fragmentary end view illustrating the lock of FIG. 6 in locked condition.

DETAILED DESCRIPTION

While the invention has been shown and described herein as being embodied in a wall-type merchandising display consisting of two tiers of article supports, it should be understood that the novel features are also applicable to displays of different types comprising any desired number of tiers or pairs of article receiving and display supports, and it is not intended or desired to unnecessarily restrict or limit the invention by reason of the specific embodiments shown and described. It is also contemplated that the broadest possible interpretation consistent with the disclosure shall be given to the descriptive terminology used herein.

Referring to the drawings, the improved merchandise display shown therein as embodying the invention comprises, in general, a main frame 10 having a plurality of vertically spaced parallel article receiving and supporting members 12, each pair of which constitutes one tier. The upper supporting member 14 of each of the pairs or tiers of supports is provided with a series of laterally spaced depending spindle shafts 16 and the lower supporting member 18 of each pair or tier is formed with a similarly spaced series of upwardly projecting spindle shafts 20.

As shown, the upper and lower spindle shafts 16, 20 respectively are axially aligned, and the upper spindle shafts 16 are somewhat longer than the lower spindle shafts 20 for purposes hereafter more fully described. The articles 24 to be displayed are provided with aligned apertures 26, 28 in corresponding corners of their upper and lower walls respectively for reception and retention on selected pairs of aligned spindle shafts. Thus, as long as reception of the articles on the spindle shafts remains unimpaired, each article may be placed on or removed from selected pairs of the spindle shafts 16, 20 as by upward movement of the article on the upper spindle shaft and subsequent swinging movement accompanied by vertical

movement of the article toward or away from the lower spindle shaft as shown in FIGS. 2 and 4.

Since the upper spindle shafts 16 are somewhat greater in length than the lower spindle shafts 20, the articles received on these spindle shafts 16, 20 will seat by gravity on the lower support element 18 of each tier or pair of elements 12 while the upper spindle shafts prevent displacement thereof. Thus, the spindle shafts 16, 20 cooperate to retain the articles 24 in position on selected pairs thereof while permitting swinging movement of the article 24 about the vertical spindle axis for examination by prospective purchasers or the like, and the upper spindle shaft 16 in each instance prevents free lateral displacement of the articles 24 by virtue of the fact that these upper spindle shafts 16 are longer than the lower spindle shafts 20.

To simultaneously lock the articles 24 against displacement from the spindle shafts 16, 20, locking mechanism has been provided in the present instance which includes an element movable relative to each of the upper support members 14 and the spindle shafts 16 thereof for cooperation with the upper ends of the articles 24 to prevent upward displacement thereof. Such prevention of upward displacement of the articles 24 on their respective spindle shafts confines the articles to the shafts and prevents lateral displacement of the lower ends thereof from the short spindles 20. In other words, the locking means provided in the present instance limits the upward movement of the articles 24 on their respective spindle shafts 16, 20 to such an extent that removal of the lower end of the articles from the lower spindle shaft 20 in each instance is prevented.

In the embodiment shown in FIGS. 1 to 3, this article locking means consists of an elongated cam or lever 32 pivotally mounted as at 34 on or adjacent each of the upper supports 14 for swinging movement toward and away from the upper spindle shafts 16. Thus, with the cam levers 32 in vertical position as shown in FIG. 2, removal of the articles of merchandise 24 as hereinabove described remains unimpaired and any selected articles may be freely removed from their respective receiving spindles 16, 20. However, with the cam levers 32 swung toward the upper spindles 16 and into the path of upward movement of the articles 24 received thereon, upward movement of the articles is restricted so that the lower ends thereof cannot be removed from their respective lower spindle shafts 20, such condition being illustrated in FIG. 3.

As an alternative to the cam levers 32 for article locking purposes, the upper support member 14 of each pair or tier 12 may be formed with a horizontal outwardly open slot 38 within which is received an elongated slide 40 as shown in FIGS. 4 and 5. In this embodiment, free removal of selected articles 24 in the manner hereinabove described is not impaired when the slide 40 is confined substantially entirely within the recess or slot 38 as shown in FIG. 4. However, when it is desired to lock the articles in position on the spindle shafts 16, 20, it is only necessary to move the slides 40 outwardly from within their respective slots 38, as shown in FIG. 5, so that the slides 40 will oppose upward movement of the articles 24 and consequently prevent displacement thereof from the spindle shafts 16, 20.

For purposes of simultaneously moving either the cam levers 32 or the slide members 40, as the case may be, from inactive to locking positions, one or the other of the side rails 44 of the frame 10 may be provided with a lock 46 having a rotatable barrel 48 provided with a radially extending arm 50. The arm 50 may be secured to the barrel 48 for rotation therewith and is formed with an outwardly open elongated slot 52 or the like adapted to receive a pin 54 projecting radially from an actuating rod 56 or the like. In turn, the rod 56 is connected to each of the cam levers 32 or slides 40 as by means of pins 58 or the like, and rotation of the barrel 48 of the lock 46 is thus transmitted through the slotted lever 50 and actuating rod 56 to the locking members 32, 40, as the case may be, to cause the locking members to move either to inoperative or to effective locking positions.

From the foregoing detailed description, it is believed apparent that the present invention provides a merchandising display which permits ready application and/or removal of merchandise by authorized personnel provided with a suitable key or the like for actuating the lock 46. The improved display device is shown as being in the form of a rectangular rack, and this rack may either be provided with feet for supporting the same on a counter or the like or it may be affixed directly to a wall or other flat supporting surface.

It is believed obvious that the article display rack may be expanded to any desired number of tiers or pairs 12 of display supports, and these racks may furthermore be fabricated in any desired lengths. The end standards 44 as well as the support members 14, 18 may be formed of any suitable material such as plastic, aluminum or other metal, and as shown, the members 14, 18 may conveniently be of angle stock. The frame 10 may moreover be designed so as to receive advertising or promotional material, and the improved display is believed to comprise a minimum of parts.

I claim:

1. A merchandise display comprising, a frame, a plurality of vertically spaced support members secured upon said frame, means on said support members providing vertically disposed and axially spaced and aligned spindle elements for receiving articles of merchandise to be displayed, said support members being spaced from each other a sufficient distance to permit the articles of merchandise to be placed on and removed from selected aligned pairs of said spindle elements, said articles resting on the lower support member, and means mounted on and movable relative to the upper of said support members and adjacent the spindle elements of said upper support member for abutting engagement with the articles of merchandise received on said spindle elements to prevent movement in an axial direction on said elements and consequent removal of said articles of merchandise from said spindle elements.

2. A merchandise display according to claim 1, wherein the support members are vertically spaced in fixed parallel alignment.

3. A merchandise display according to claim 2, wherein the spindle elements of opposed pairs of support members are opposed vertically aligned stub shafts with the downwardly directed shafts of the upper support member being longer than the upwardly directed shafts of the lower support member of each pair.

4. A merchandise display according to claim 1, wherein the means for preventing removal of the merchandise comprises a pivotally mounted elongated locking member.

5. A merchandise display according to claim 4, wherein the locking member is pivotally mounted adjacent the upper support member for swinging movement toward and away from the spindle elements of said upper support member.

6. A merchandise display according to claim 1, wherein each pair of opposed support members comprise a merchandise display tier with each tier having a locking member adjacent its respective upper support member, and means being provided for simultaneously actuating all of said locking members to and from effective merchandise locking position.

7. A merchandise display according to claim 1, wherein the means for preventing removal of the merchandise comprises an elongated slide member.

8. A merchandise display according to claim 7, wherein the slide member is confined within an outwardly open slot in the upper support member for sliding movement toward and away from the spindle elements of said upper support member.