

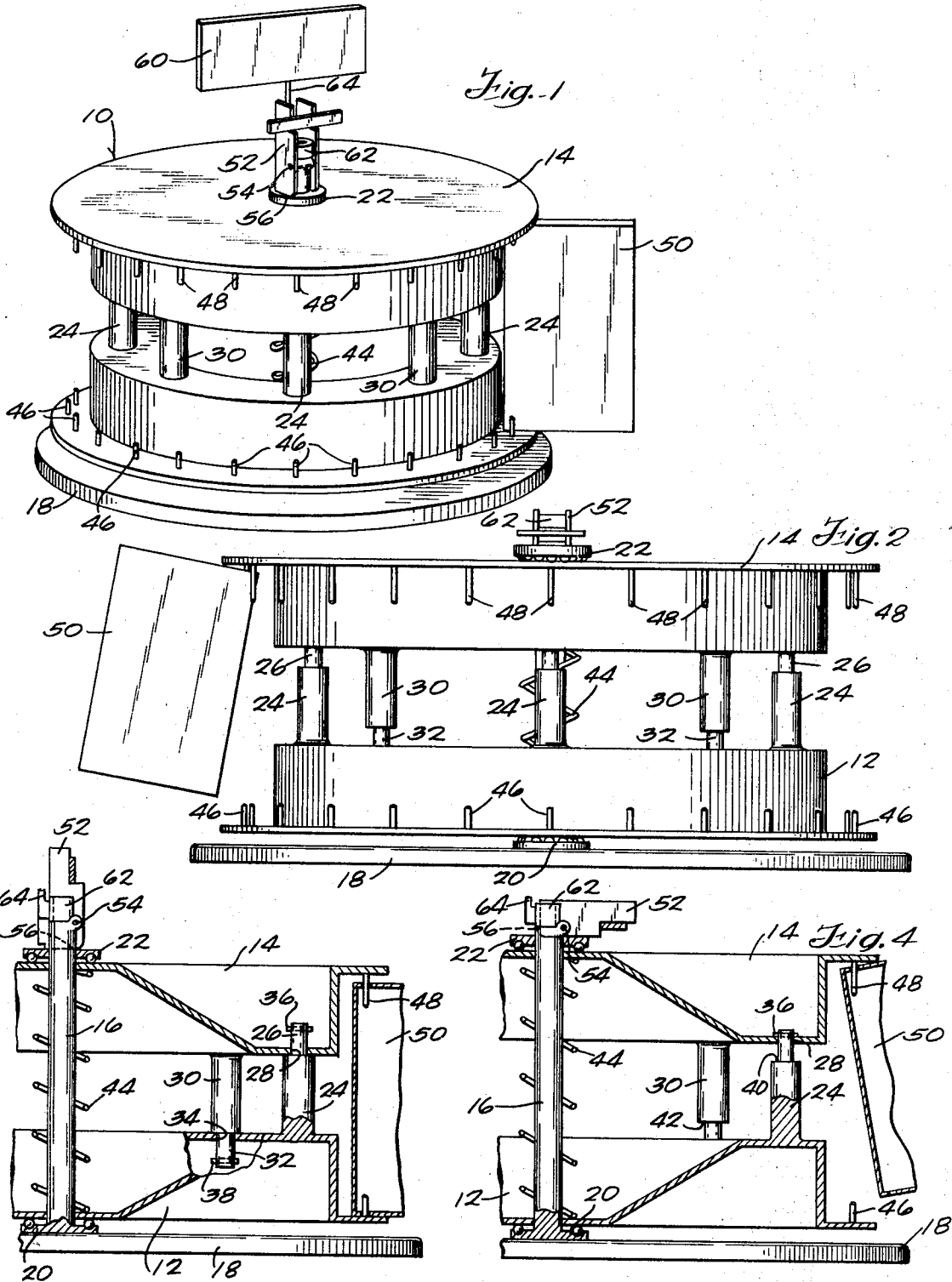
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THEFTPROOF MERCHANDISE DISPLAY

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THEFTPROOF MERCHANDISE DISPLAY

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11 Claims

ABSTRACT OF THE DISCLOSURE

A display device having a plurality of relatively movable support members provided with cooperable merchandise receiving and display spindle elements and adapted to be simultaneously locked against displacement by a common locking mechanism to prevent unauthorized removal of the merchandise from the spindles while being readily releasable for removal of the displayed merchandise by authorized personnel.

RELATED APPLICATIONS

The present application is related to co-pending U.S. patent application Ser. No. 680,174, filed Nov. 2, 1967 in the name of Louis John Crosslen and entitled Theft-proof Merchandise Display.

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 check-out.

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 the above identified co-pending application, 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 such device, the merchandise is received by and supported on a plurality of spindles, each of which is independently axially displaceable, and these spindles accordingly required separate hand assembly operations of a variety of parts.

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 of separate axially displaceable spindle assemblies while retaining such advantages as either being adapted for support on a floor pedestal or on a counter or other surface 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, means for supporting a plurality of cooperable support members for relative axial movement, means on the support members providing axially spaced and aligned spindle elements for receiving articles of merchandise to be displayed, means for urging the support members axially away from each other to a position whereby the articles of merchandise may be placed on and removed from selected aligned pairs of spindle elements, and means operable to move the support members axially toward each other and thereby prevent removal of the articles of 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 carousel type merchandise display embodying the invention and showing an article of merchandise secured between and locked on an axially aligned pair of spindle elements;

FIG. 2 is a side view of the display with the locking device released and the support members urged apart to permit removal of the article from the spindle elements as shown;

FIG. 3 is a fragmentary transverse section through the display device in locked position as in FIG. 1; and

FIG. 4 is a similar fragmentary section through the display but with the device unlocked as in FIG. 2.

DETAILED DESCRIPTION

While the invention has been shown and described herein as being embodied in a carousel-type merchandising display consisting of only a single tier adapted for display on a counter or the like, it is to be understood that the novel features are applicable to displays of different types comprising a plurality of axially aligned tiers and adapted for mounting on a pedestal or the like for displaying a variety of merchandise, and it is not intended or desired to unnecessarily limit the invention by reason of the specific embodiments shown. It is also contemplated that the broadest possible interpretation consistent with the disclosure shall be given to descriptive terminology as used herein.

Referring to the drawings, the merchandise display shown therein as embodying the invention comprises generally one or more tiers of axially aligned merchandise

display racks indicated generally by the numeral 10. Each of the tiers 10 consists of a pair of axially spaced support members 12, 14 shown herein as being of disc shape and each having a central aperture for reception on an upright shaft 16. The shaft 16 is secured to and extends upwardly from a suitable base 18 and may be of any desired length for receiving one or more tiers or pairs of the support members 12, 14 disposed one above the other on the shaft. Also, the pedestal formed by the base 18 and shaft 16 may be either of the type shown herein which is adapted for counter display or of the floor type wherein the shaft is of any desired length and is provided with an abutment for properly positioning the members 12, 14 at the desired height.

The support members 12, 14 are preferably rotatably received on the shaft 16, and for this purpose, suitable anti-friction bearings 20, 22 may be provided below the lower member 12 and above the upper member 14 of each pair respectively. Each pair of members 12, 14 are also spaced axially from each other a minimum predetermined distance while being relatively axially movable to a limited extent beyond such predetermined minimum. For this purpose as well as to key the members 12, 14 of each set together and thereby prevent relative rotational movement thereof, the member 12 is provided with an annular series of spaced upwardly directed spacer and guide posts 24 each having a reduced end portion 26 slidably received in an aligned aperture 28 in the other member 14, and the member 14 is formed with a similar annular series of alternately spaced downwardly directed spacer and guide posts 30 each also having a reduced end portion 32 slidably received in an aligned aperture 34 in the member 12.

Axial displacement of the members 12, 14 is prevented by means of pins 36, 38 or the like adjacent the ends of the reduced portions 26, 32 of the respective posts 24, 30, and these pins 36, 38 cooperate with the shoulders 40, 42 formed by the respective reduced portions to permit limited relative axial movement of the members 12, 14 within predetermined limits. The members 12, 14 are furthermore constantly resiliently urged apart by means of a spring 44 or the like to the fullest extent permitted by the stops 36, 38, the coil spring 44 being compressed between the adjacent faces of the support members 12, 14.

Each of the members 12, 14 is also formed with an annular series of equally spaced and axially aligned spindle shafts 46, 48 respectively for receiving articles of merchandise 50 to be displayed. As shown, the spindle shafts 46 project upwardly from the lower member 12 toward the downwardly projecting spindle shafts 48 of the upper member 14 of each set, and the articles 50 to be displayed are provided with aligned apertures for reception and retention on selected pairs of aligned spindle shafts. Also, as shown, the upper spindle shafts 48 are somewhat longer than the lower spindle shafts 46 to thereby prevent free displacement of the articles 50 therefrom whenever the members 12, 14 are spread apart to their fullest extent while permitting removal thereof by first raising the selected article and then angularly displacing the same from the lower spindle shaft as shown in FIG. 2.

To simultaneously lock the articles 50 against displacement from the spindle shafts 46, 48, it is only necessary to move the support members 12, 14 axially toward each other to the extent permitted by the shoulders 40, 42 of the reduced portions 26, 32 of the guide posts, and for such purpose, a cam lever 52 is provided on the shaft 16 above the upper member 14. This cam lever 52 may be pivotally secured to the shaft 16 as by means of a pivot pin 54 and has a cam surface 56 coacting with the upper bearing 22 to further compress the spring 44 and move the members 12, 14 axially toward each other when swung to one position as shown in FIGS. 1 and 3 while permitting the spring 44 to spread the members 12, 14

apart when swung to another position as shown in FIGS. 2 and 4.

If desired, any appropriate advertising or promotional sign 60 may be readily attached to the display without interfering with the cam lever 52 or the support members 12, 14. For this purpose, the upper end of the shaft 16 is provided with a sleeve 62, and the sign 60 is formed with a supporting leg 64 secured in a suitable manner to the sleeve 62. It should of course be understood that the sleeve 62 and sign supporting leg 64 must be sized and designed to permit free swinging movement of the cam lever 52 selectively to and from locking and released positions. Also, appropriate means may be readily provided for positively locking the cam lever in its article locking position as shown in FIGS. 1 and 3.

From the foregoing detailed description, it is believed apparent that the present invention contemplates the provision of a merchandising display device which provides for ready application and/or removal of merchandise by authorized personnel familiar with the locking action afforded by the cam lever 52 while also affording protection against tampering and/or pilferage by unauthorized personnel not familiar with the locking action. The improved display is extremely flexible in its adaptations, and permits expansion to any desired number of tiers 10 of display supports. The lever 52 obviously not only serves as a common tamperproof locking mechanism for the display supports, but also permits ready release of the members 12, 14 for removal of any selected articles from the spindle shafts. In addition, the locking lever 52 is so designed as to permit advertising or promotional material to be displayed above the display device, and the tiers 10 may be individually rotated about the common support shaft 16 for aid in consumer selection of the desired articles. If it is desired to provide means for positively preventing tampering, it is only necessary to lock the shank of the lever to the shaft 16, and to provide only authorized attendants with a key. The improved display comprises a minimum of parts and may be fabricated of any suitable material such as plastic for quick and easy assembly by a novice. It is also apparent that the cam and lever arrangement 52, 54, 56 may be modified without departing from the spirit of this invention, and this cam and lever may be placed either above the upper plate member 14 or below the lower member 12 so as to provide for relative movement of these members.

Various modes of carrying out the invention are contemplated as being within the scope of the following claims particularly pointing out and distinctly claiming the subject matter which is regarded as the invention.

We claim:

1. A merchandise display comprising, central shaft means for supporting a plurality of cooperable support members in axial alignment with at least one of said support members being axially displaceable relative to an adjacent support member, means on said support members providing opposed axially spaced and aligned spindle shafts cooperable to receive articles of merchandise to be displayed, said support members being axially displaceable from each other a predetermined distance whereby selected articles of merchandise may be placed on and removed from selected axially aligned pairs of said spindle shafts, and swingable lever means mounted adjacent the top of said shaft means and operable to move said support members toward each other to thereby prevent removal of the articles of merchandise from said spindle shafts.

2. A merchandise display according to claim 1, wherein the support members are vertically spaced and the spindle shafts of the upper support member extend downwardly while the spindle shafts of the next adjacent lower support member extend upwardly.

3. A merchandise display according to claim 2, wherein the downwardly directed spindle shafts of the upper sup-

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port member are longer than the upwardly directed spindle shafts of the next adjacent support member.

4. A merchandise display according to claim 2, wherein the support members are rotatably mounted on a vertical shaft.

5. A merchandise display according to claim 1, wherein the support members are urged axially away from each other by a spring compressed between adjacent support members, and the means operable to move the axially displaceable support member toward the adjacent support member is a cam operable to further compress the spring.

6. A merchandise display according to claim 5, wherein the support members are rotatably mounted on a vertical shaft and each pair of adjacent upper and lower support members cooperate to provide a tier for receiving and displaying articles of merchandise.

7. A merchandise display comprising, a vertical support shaft, a pair of cooperable support members in vertically spaced relationship and rotatably mounted on said shaft, one of said support members being axially displaceable relative to the other support member, spindle shafts mounted on said support members, the shafts of the upper support member extending downwardly and the shafts of the lower support member extending upwardly to thereby provide opposed and aligned pairs of spindle shafts which cooperate to receive articles of merchandise to be displayed, one of said support members being axially displaceable from the other a predetermined distance whereby selected articles of merchandise may be placed on and removed from said aligned pairs of spindle shafts, means to vertically move said one support member toward the other to thereby prevent removal of the articles of merchandise from said spindle shafts, and means for keying said support members together for simultaneous rotation.

8. The display according to claim 7 further characterized in that said means for keying said support members together comprises a plurality of posts between said members which also permits limited axial movement of the said one member relative to the other member.

9. A merchandise display comprising, a vertical support shaft, a pair of cooperable support members in vertically spaced relationship and rotatably mounted on said shaft, spindle shafts mounted on said support members, the shafts of the upper support member extending downwardly and the shafts of the lower support member extending upwardly to thereby provide opposed and aligned pairs of spindle shafts which cooperate to receive articles of merchandise to be displayed, one of said support members being axially displaceable from the other a predetermined distance whereby selected articles of merchandise may be placed on and removed from said aligned pairs of spindle shafts, and swingable lever means mounted between the upper end of said shaft and said one support member to vertically move said one support member toward the other after said articles have been inserted on the spindles, to thereby prevent removal of the articles of merchandise from said spindle shafts.

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10. A merchandise display comprising, a vertical support shaft, a pair of cooperable support members in vertically spaced relationship and rotatably mounted on said shaft, spindle shafts mounted on said support members, the shafts of the upper support member extending downwardly and the shafts of the lower support member extending upwardly to thereby provide opposed and aligned pairs of spindle shafts which cooperate to receive articles of merchandise to be displayed, said downwardly extending spindles being longer than said upwardly extending spindles, one of said support members being axially displaceable from the other a predetermined distance whereby selected articles of merchandise may be placed on and removed from said aligned pairs of spindle shafts, and swingable lever locking means on said shaft to vertically move said one support member toward the other after said articles have been inserted on said spindle shafts to thereby prevent removal of the articles of merchandise from said spindle shafts.

11. A merchandise display comprising, a vertical support shaft, a pair of cooperable support members in vertically spaced relationship and rotatably mounted on said shaft, bearing means located beneath said lower member for supporting the weight of said members for rotation on said shaft, spindle shafts mounted on said support members, the shafts of the upper support member extending downwardly and the shafts of the lower support member extending upwardly to thereby provide opposed and aligned pairs of spindle shafts which cooperate to receive articles of merchandise to be displayed, said downwardly extending spindles being longer than said upwardly extending spindles, one of said support members being axially displaceable from the other a predetermined distance whereby selected articles of merchandise may be placed on and removed from said aligned pairs of spindle shafts, and swingable lever locking means on said shaft and engageable with said one support member to vertically move said one support member toward the other after said articles have been inserted on said spindle shafts to thereby prevent removal of the articles of merchandise from said spindle shafts.

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