July 29, 1952 A. H. SHEARER 2,604,868

THEFTPROOF DISPLAY STAND

Filed June 4, 1951 2 SHEETS—SHEET 1

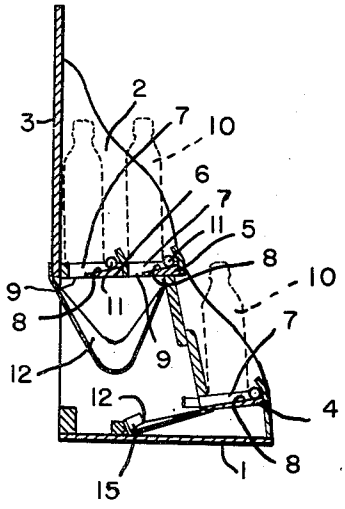


FIG. 3

FIG. 2

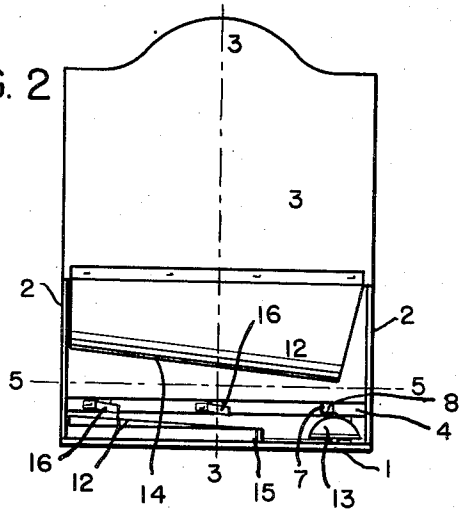
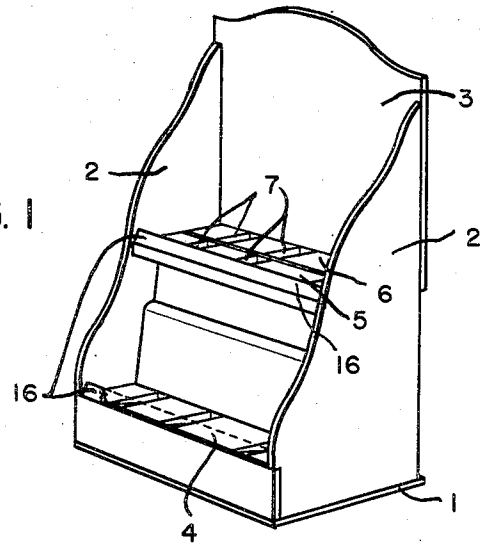


FIG. 1



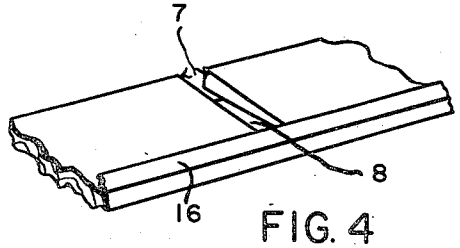


FIG. 4

INVENTOR.

ARTHUR H. SHEARER

BY

Richard P. Cardew

AGENT

July 29, 1952 A. H. SHEARER 2,604,868

THEFTPROOF DISPLAY STAND

Filed June 4, 1951

2 SHEETS—SHEET 2

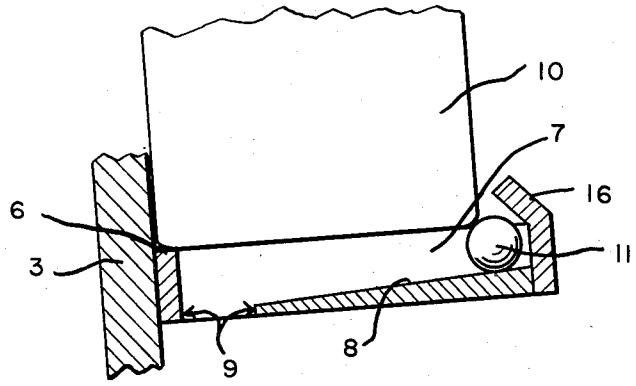


FIG. 6

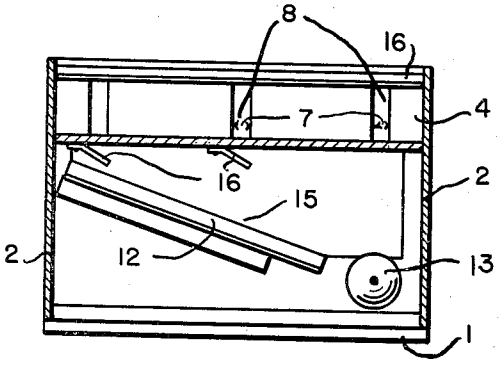


FIG. 5

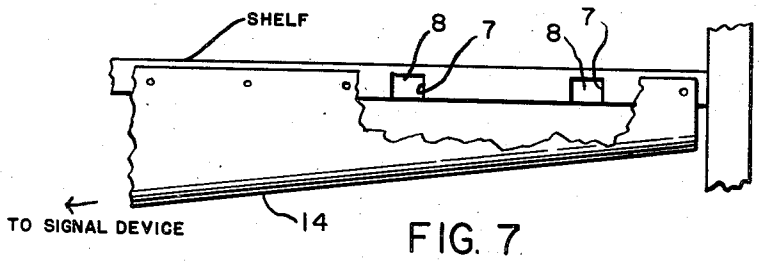


FIG. 7

INVENTOR.

ARTHUR H. SHEARER

BY

Richard P. Cardew

AGENT

Patented July 29, 1952

2,604,868

UNITED STATES PATENT OFFICE

2,604,868

THEFTPROOF DISPLAY STAND

Arthur H. Shearer, Duluth, Minn., assignor of one-third to Joseph S. Vertelney and one-third to Lance Liberty, both of St. Louis County, Minn.

Application June 4, 1951, Serial No. 229,740

4 Claims. (Cl. 116—75)

1

This invention relates to a display shelf or stand and has special reference to such a shelf or stand having means incorporated therewith to render articles displayed thereon substantially free from the possibility of being stolen.

It is well known, in retail establishments, that a good counter or shelf display, within close proximity to prospective purchasers, is of great value in creating a large turnover of the particular item displayed. It seems that when people can pick up an item and handle it, they will usually buy the article. However, there are some people who pick up and depart with articles this displayed without paying for same. In certain classes of stores where relatively expensive items are thus displayed, the loss of one such item can mean the loss of a considerable amount of money. For example, in a liquor or perfume display, even one bottle may represent a sizable investment, and the loss of one bottle will cut into the day's profit considerably.

Retailers, knowing the value of counter displays and the like, are very reluctant to use them because of the theft problem. It is, therefore, one of my principal objects to provide a display shelf which substantially eliminates the possibility of displayed articles being stolen from the display.

Another object is to provide a counter display which, while having the theft-proof qualities, is relatively inexpensive to manufacture and sell, and which may be readily produced in quantity.

Another object is to provide such a theft-proof display shelf with means whereby an audible signal will be heard when a displayed article is removed from the shelf.

Another object is to provide means whereby the sounding of the audible signal, when a displayed article is removed from the shelf, will not be objectionable to would-be-purchasers, and which may even enhance their desire to buy the displayed article.

These and other objects and advantages of the invention will become more apparent as the description proceeds.

In the accompanying drawing forming a part of this application:

Figure 1 is a perspective view of a counter display stand made in accordance with my invention.

Figure 2 is a rear elevational view of Figure 1.

Figure 3 is a sectional view on the line 3—3, Figure 2.

Figure 4 is an enlarged fragmental perspective view showing a channel in a display shelf for use in practicing my invention.

2

Figure 5 is a sectional view on the line 5—5, Figure 2.

Figure 6 is an enlarged sectional view of a shelf showing the structure of the ball-holding and guiding channel.

Figure 7 is a rear view of a single shelf equipped with the invention.

In the drawing, the reference numeral 1 indicates the base member of a counter display stand, 2—2 indicate side members or supports, and 3 indicates the back of the stand, all parts being made of any suitable material such as cardboard, if the display stand is to be cheap and expendable, or wood if the stand is to be relatively a permanent fixture of the establishment using same.

The display stand may be provided with one or more shelves, three separate shelves being shown in the drawings, the single lower shelf 4, the front or outer upper shelf 5, and the rear or inner upper shelf 6. All of the display shelves are preferably of substantially identical construction; therefore, they will be described as one.

Each of the shelves has a groove or channel 7 in the upper face thereof for each article to be displayed, the channels preferably extending from the front end of the shelf toward the rear end thereof. The channel length is not critical and it may extend to the rear end of the shelf if desired, or it may be relatively short and still function in the desired manner, as will become apparent.

As seen in the drawings, the channels have an inclined bottom 8, the rear end of the channel preferably being at a lower elevation than the front end thereof. The bottom wall 8 preferably does not extend the entire length of the channel but is cut off as shown to provide an opening 9 through the bottom of the channel.

In operation, an object to be displayed, such as a bottle 10 or the like, is placed over a channel 7 in slightly rearwardly spaced relation to the front end of the channel, and a round ball 11, such as a marble or the like, is placed in the upper or shallow end of the channel in front of the bottle, the marble being of such diameter as to extend slightly above the upper surface of the shelf, whereby it will engage the lower edge of the bottle and be held from rolling down the inclined channel bottom. However, when the bottle 10, or other displayed object, is raised, even if raised just slightly, the ball 11 is freed and released to run down the channel.

The ball is guided down the channel and passes through the opening 9 in the channel where suitable guiding or directing means 12 are

provided to direct the ball into engagement with a signal device 13, such as a bell or chime. While a bell is here shown, a chime may be preferred in some cases as it is difficult to tell just where the sound of the chime is coming from and a would-be thief may not be aware that he actuated the signal with his removal of the displayed article. It would then be possible to catch the thief with the goods.

Of course, the ball-guiding or directing means 12 may be of any suitable design to fit the particular shelf or support for the displayed article; however, I have shown the signal device 13 located on the base 1 adjacent one side wall 2 of the display stand, and the guiding means as an inclined channel member which extends from one end of the shelf toward the other end and ends adjacent the signal device, the channel members being inclined so that objects therein will roll toward the signal device and upon leaving the channel will engage the signal device and cause same to sound.

The instant display stand may be provided with channel members for its upper shelves comprising a depending arcuately shaped trough 14 made of paper or other inexpensive material to keep manufacturing cost down. The lower shelf may be provided with a channel member comprising a piece of cardboard set on an inclination and having one edge thereof turned up, as at 15, to guide the balls into engagement with the signal device. In addition, it is preferred that the balls be directed downwardly slightly as they leave the channels or grooves 7 of the lower shelves and enter the channel members 12 by a deflector 16 so that there will be no delay in a ball's engaging the signal device once it is released.

I prefer that the ball 11 be substantially hidden from view when the device is in operation; therefore, I have provided a shield 16 to cover the ball, whereby persons will not be aware of the signal arrangement, and whereby, if they are familiar with devices of this nature, they cannot hold the ball from traveling through the groove to do its appointed work.

It is to be understood that I have herein shown and described one specific embodiment of my invention, and that my appended claims are not necessarily limited specifically thereto, but should be construed as broadly as permissible in view of the prior art.

Having thus described my invention, what I claim is:

1. In a device for preventing the theft of articles displayed for sale, a shelf, a channel in the upper surface of said shelf under each of said articles, said channel extending from adjacent the front of said shelf toward the rear thereof and having a portion thereof open beyond the article displayed thereover, the opposite end of said channel having an opening therethrough to permit an article traveling in said channel to drop downwardly, the bottom of said channel being inclined and the shallow end of said channel being at said open portion, a ball carried in said shallow end and being of a size to extend out of said channel to engage and be held from rolling down said inclined bottom by said displayed article when the latter is in place on said shelf, a signal device below said shelf, and means to guide said ball from said opposite end of said channel to said signal device when said ball is released to roll down said channel by the raising of said article.

2. A theft-proof means for displaying an article of merchandise comprising a shelf on which said article is supported, a groove in the upper surface of said shelf beneath said article when the latter is supported on said shelf, said groove having an inclined bottom, a ball held in the shallow end of said groove by said article so as to tend to roll toward the deeper end of said groove, the deeper end of said channel having an opening therethrough permitting said ball to drop downwardly from said groove when it reaches said deeper end, a signal device carried at a lower level than the upper surface of said shelf, and means to guide said ball from said opening in said groove to said signal device to actuate the latter when said article is raised.

3. A theft-proof display for an article of merchandise comprising a shelf on which said article may be supported, a channel in the upper surface of said shelf over which said article is placed when on display, said channel having a bottom wall disposed at an inclination to the horizontal plane, said ball being of such a diameter as to extend above the upper surface of said shelf at the shallow end of said channel and a ball adapted to be held in the shallow end of said channel by said article when the latter is positioned over said channel in a condition tending to roll down said inclined wall, a signal device carried at a lower level than the upper surface of said shelf, and means to guide said ball from said channel to engage said signal device when said article is raised to release said ball.

4. A theft-proof display stand for an article of merchandise comprising a shelf having an upper surface on which said article is supported for display, a channel in said shelf and extending under said article when the latter is in normal display position, said channel having a bottom wall which is disposed at an inclination to the horizontal, a ball adapted to roll on said bottom wall and be guided by said channel to travel downwardly along the inclination of said bottom wall, said article when in normal position on display over said channel serving to hold said ball from rolling the full length of said bottom wall and to release said ball to roll the remainder of the length of said bottom wall when said article is removed from its normal display position on said shelf, said channel having an opening at the lowermost end of said inclined bottom to permit said ball to pass downwardly with increased speed over its travel in said channel, a signal device carried below said shelf, and means to lead said ball to said signal device to sound same as quickly as possible after said ball leaves said channel to indicate that said article has been moved from its normal display position.

ARTHUR H. SHEARER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,685,329	Lynch	Sept. 25, 1928
2,467,873	Weir	Apr. 19, 1949