

- [54] **PILFER-PROOF MERCHANDISE CARD HOLDING DEVICE**  
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[52] U.S. Cl. .... **211/7, 211/57, 221/85**  
[51] Int. Cl. .... **A47i 7/024**  
[58] Field of Search .... **221/312 A, 312, 85, 221/27, 28, 29, 295; 211/7, 57, 59; 194/40, 194/48, 64; 274/10, 5; 242/68.3**

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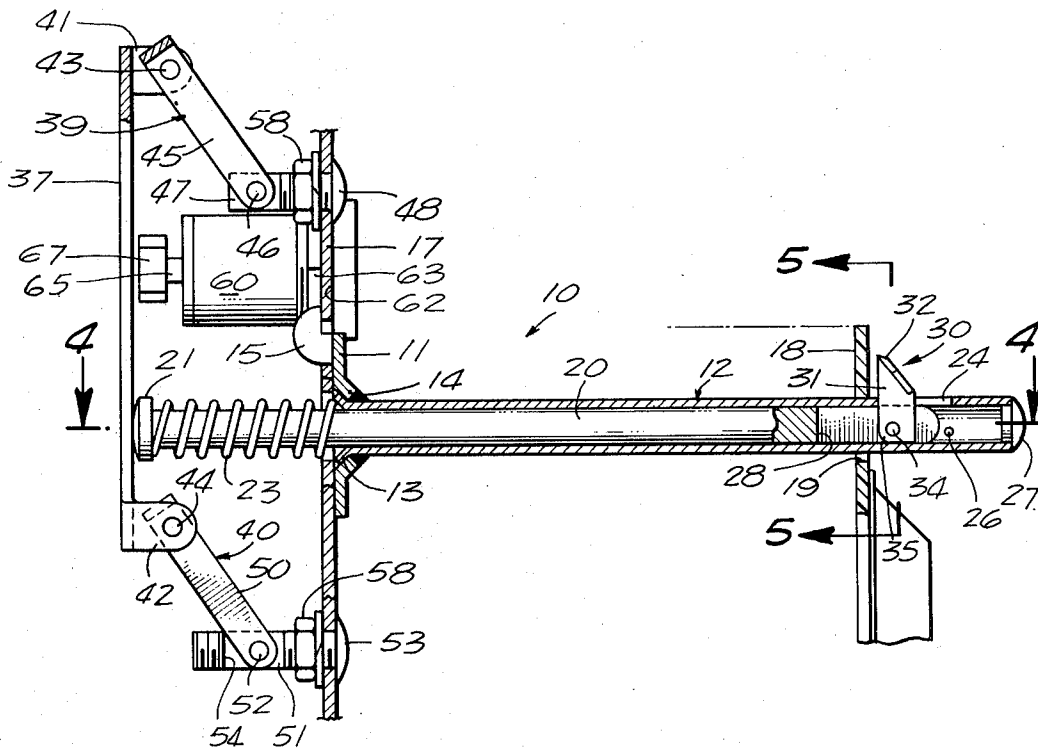
- [57] **ABSTRACT**  
A pilfer-proof merchandise card holding device is disclosed which supports the cards by an opening formed thereon for that purpose. The device provides for pre-

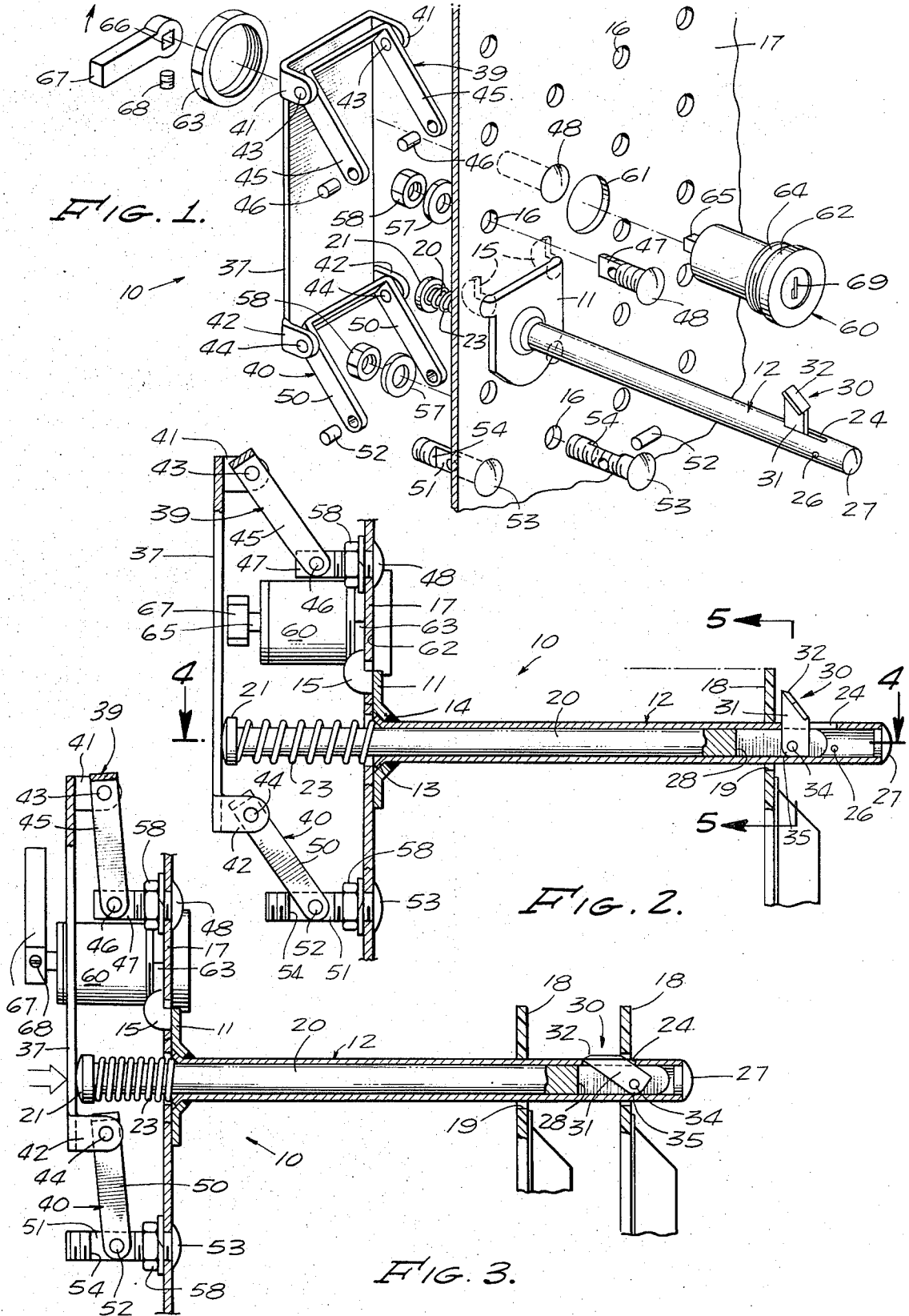
venting the removal of the cards until the merchandise is sold.

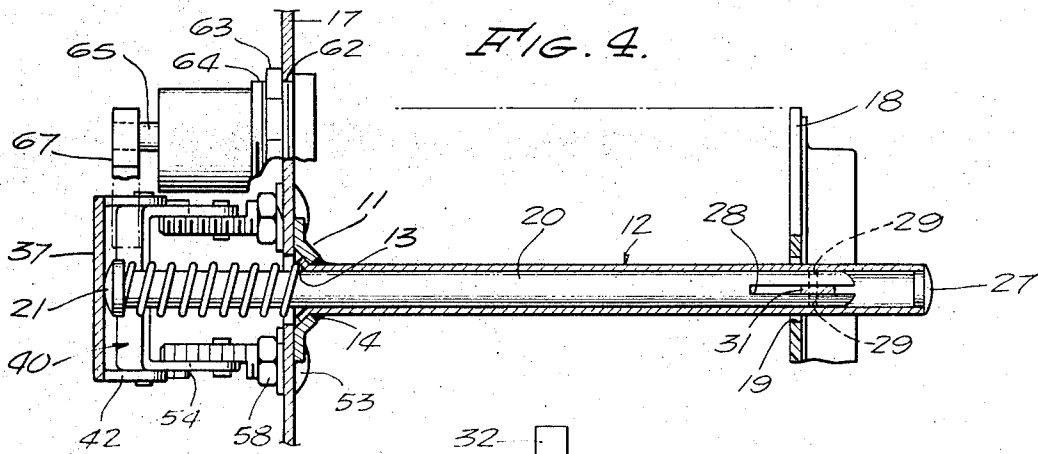
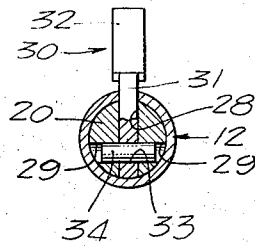
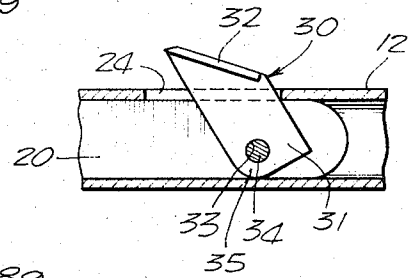
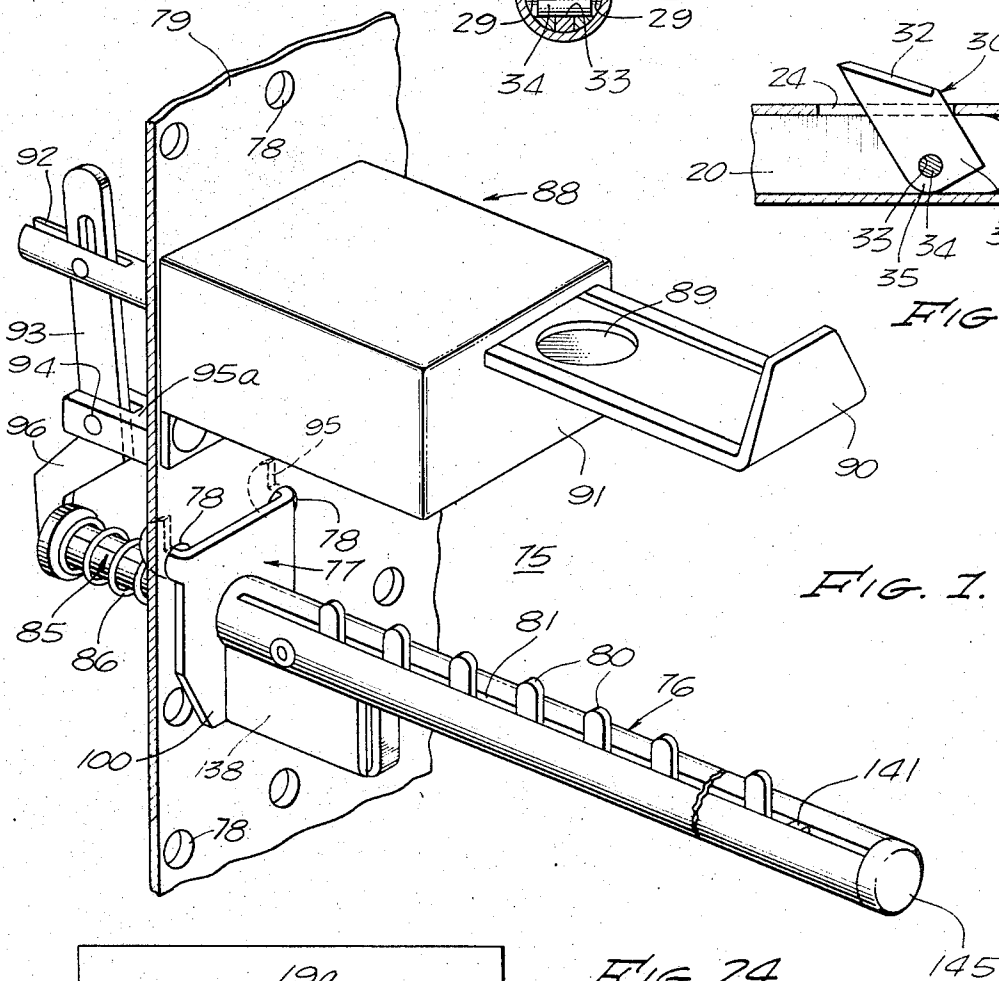
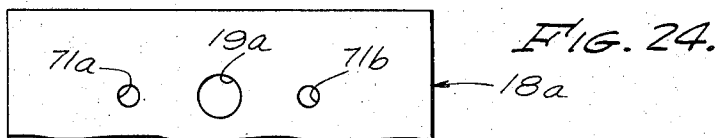
In one embodiment of the device an elongated tubular hanger for the cards is provided with a retaining post on the outer end thereof. A spring loaded actuating rod extending from the rear of the hanger maintains the retaining post in a vertical position to prevent the removal of the cards. When the actuating rod is depressed the post is adapted to be pivoted to a position aligned with the hanger to enable the removal of the cards. The device is provided with a locking mechanism which prevents the actuating rod from being depressed until unlocked by a sales clerk.

In another embodiment of the device a plurality of spaced vertical posts extend upwardly through a slot provided along the upper wall of the tubular hanger. A card is supported between each of the posts. The posts rest on a shelf within the hanger and are attached to a chain. When the actuating rod is depressed, the chain is adapted to be advanced causing the posts to be moved along the slot toward the front end of the hanger so that the forwardmost post is carried by the chain down into the hanger. The card that was being retained by that post can thus be removed from the hanger. The actuating rod is arranged to be depressed by the action of a lever which operates as a result of the insertion of a coin in a coin machine.

4 Claims, 24 Drawing Figures







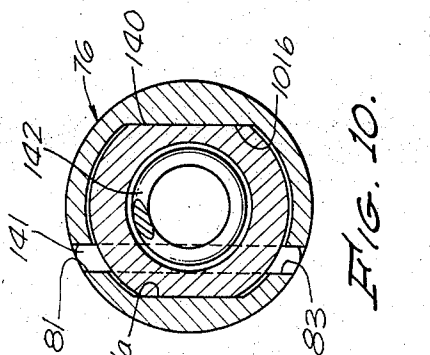


FIG. 10.

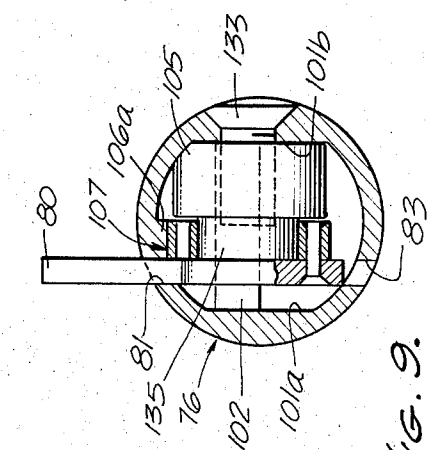


FIG. 9.

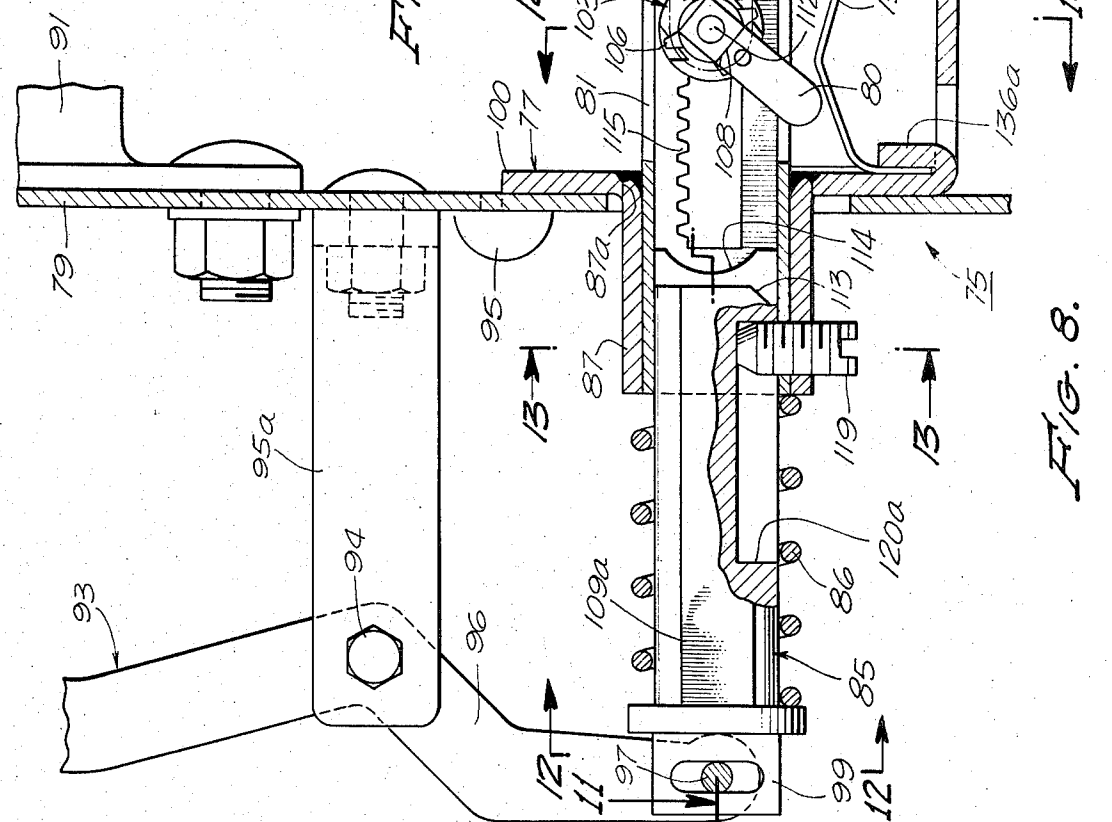


FIG. 8.

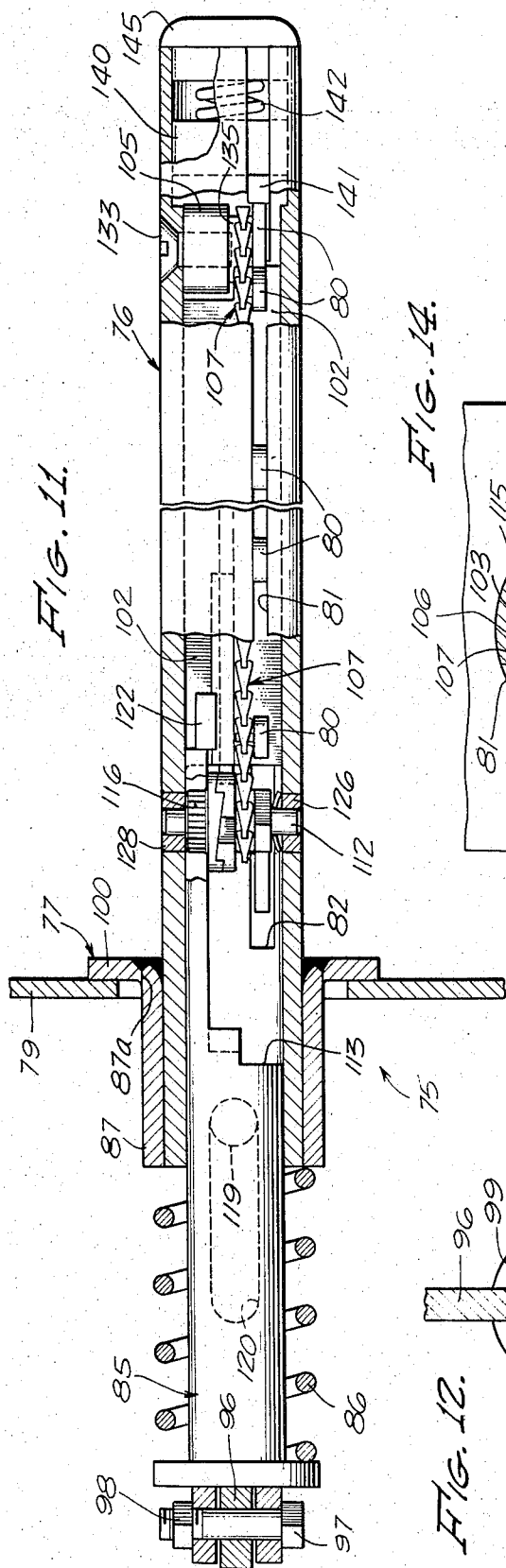


*FIG. 14.*

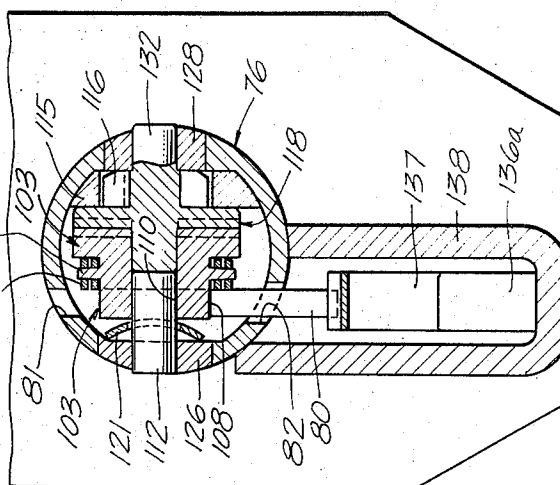


*FIG. 12.*

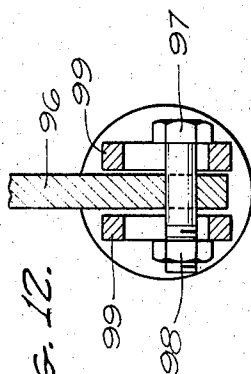
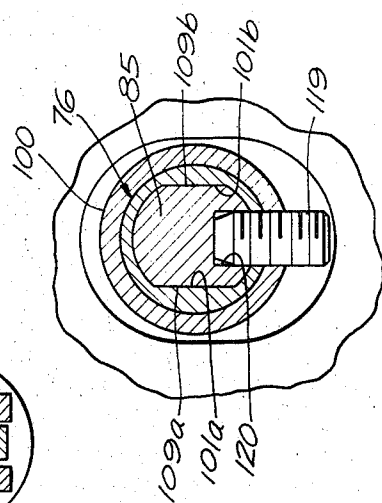


*FIG. 13.*

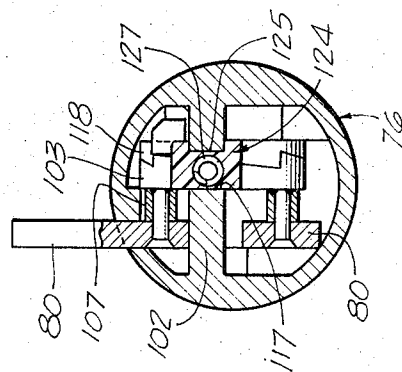


*FIG. 15.*





# **PILFER-PROOF MERCHANDISE CARD HOLDING DEVICE**

This invention relates to merchandise card holding devices and more particularly to structures for making such devices pilferproof.

It is well known to display merchandise cards in retail stores by supporting the cards on hangers. Each card is formed with an opening by which it is supported on the hanger. Displaying merchandise in this manner is very desirable since it enables the customer to view the merchandise and select the ones which he is interested in purchasing without taking up the time of the sales clerk. However, when the merchandise is displayed in this fashion, pilfering of the merchandise cards is quite common. Therefore, there is a need for a merchandise card holder which provides for securing the card on the holder until the merchandise is ready to be sold.

In one embodiment of the card holding device of the present invention, an elongated tubular hanger for the merchandise card is provided with a retaining post on the outer end thereof. The retaining post extends through a slot on the outer end of the tubular hanger and its lower end is pivotally attached to the end of an actuating rod which is slidably movable within the hanger. A rear portion of the actuating rod extending beyond the back of the hanger is provided with a spring which normally holds the rod withdrawn from the hanger. When the rod is in its withdrawn position the retaining post on the outer end thereof is maintained in its vertical position which prevents the cards from being removed off the end of the hanger. When the rod is depressed into the hanger against the action of the spring on the rear portion thereof, the retaining post is pivoted downwardly to a position aligned with the surface of the hanger which permits the cards to be removed from the end of the hanger. A locking mechanism is associated with the card holding device which prevents the actuating rod from being depressed into the hanger until unlocked by the sales clerk.

In another embodiment of the card holding device of the present invention the tubular hanger is provided with a slot along the length of its upper wall and an elongated horizontal shelf is formed within the tubular hanger below the slot. Within the tubular hanger a clutch and sprocket drive is rotatably supported adjacent the inner end of the shelf and a cylindrical guide is supported adjacent the outer end of the shelf. A continuous loop of chain encircles the shelf with one end of the loop fitted on the sprocket drive and the other end of the loop positioned about the cylindrical guide. A plurality of spaced retaining posts are attached to the sides of the chain with the posts attached to the portion of the chain below the shelf resting on their sides on the bottom of the tubular hanger and with the posts attached to the portion of the chain above the shelf resting with their bottoms on the shelf such that they extend vertically through the slot on the upper wall of the hanger. An actuating rod extending from the rear of the hanger and provided with a spring for holding it in its withdrawn position is provided with a rack on the inner end thereof which engages a pinion on the end of the clutch which drivingly engages the sprocket drive. Thus each time the actuating rod is depressed against its spring the chain is advanced in its path about the shelf to permit the forwardmost post resting on the shelf to be drawn by the chain into the tubular hanger below

the shelf, thus freeing a merchandise card for withdrawal from the end of the hanger. A coin machine is associated with the card holding device which operates to depress the actuating rod and thus free a merchandise card when a coin is inserted in the machine.

Accordingly, one of the objects of the present invention is to provide a pilfer-proof merchandise card holding device.

Another object of the present invention is to provide a locking mechanism for a merchandise card holding device which permits a sales clerk in a store to quickly unlock the holding device to permit it to be actuated for the purpose of removing a card therefrom.

Another object of the present invention is to provide a pilfer-proof merchandise card holding device which permits a single merchandise card to be released each time the card holding device is actuated.

It is another object of the invention to provide a merchandise card holding device which is actuated to permit a card to be removed therefrom by the use of a coin machine.

It is still a further object of the invention to provide a merchandise card holding device which is adapted for mounting on a standard pegboard.

Other objects and features of the present invention will become apparent from the following detailed description considered in connection with the accompanying drawings.

## **IN THE DRAWINGS**

FIG. 1 is an exploded view of the components forming a first embodiment of the merchandise card holding device of the present invention;

FIG. 2 is a cross-sectional assembly view of the embodiment shown in FIG. 1;

FIG. 3 is a view similar to FIG. 2 showing the card holding device in its unlocked position;

FIG. 4 is a plan sectional view of the card holding device as taken along line 4—4 of FIG. 2;

FIG. 5 is a cross sectional view taken along line 5—5 of FIG. 2;

FIG. 6 is a fragmentary, partly sectional view showing the locking post being rotated to a position generally aligned with the surface of the tubular hanger as a result of the movement of the actuating rod;

FIG. 7 is a perspective view of a second embodiment of the card holding device of the present invention;

FIG. 8 is a vertical sectional view of the card holding device shown in FIG. 7;

FIG. 9 is a cross-sectional view as taken along line 9—9 of FIG. 8;

FIG. 10 is a cross-sectional view as taken along line 10—10 of FIG. 8;

FIG. 11 is a plan view as taken along line 11—11 of FIG. 8 with portions of the upper half of the tubular hanger cut away;

FIG. 12 is a cross-sectional view as taken along line 12—12 of FIG. 8;

FIG. 13 is a cross-sectional view as taken along line 13—13 of FIG. 8;

FIG. 14 is a cross-sectional view as taken along line 14—14 of FIG. 8;

FIG. 15 is a cross-sectional view as taken along line 15—15 of FIG. 8;

FIG. 16 is a vertical sectional view of the card holding device similar to FIG. 8 but showing the actuating rod in its depressed position in the tubular hanger;

FIG. 17 is a vertical sectional view of the outer portion of the tubular hanger showing the path of the posts therein;

FIG. 18 is a vertical sectional view of the inner portion of the tubular hanger showing the path of the posts therein;

FIG. 19 is a top view of the intermediate portion of the tubular hanger with a portion of the top wall thereof cut away;

FIG. 20 is a vertical sectional view of the intermediate portion of the tubular hanger as taken along line 20—20 of FIG. 19;

FIG. 21 is an exploded view of the actuator rod and drive assembly used for advancing the chain to enable a card to be withdrawn from the outer end of the tubular hanger;

FIG. 22 is a fragmentary perspective view showing the manner of attaching the posts to the links of the chain;

FIG. 23 is a perspective view showing a modification of the embodiment of the card holding device shown in FIGS. 1 to 6; and

FIG. 24 is a view of a merchandise card for utilization on the card holding device shown in FIG. 23.

A first embodiment of a pilfer-proof merchandise card holding device in accordance with the present invention, as shown in FIGS. 1 to 6, inclusive, will first be described. The card holding device 10 there shown comprises a hanger support 11 having an opening 14 therein in which the flared end 13 of an elongated tubular hanger 12 is attached by welding, for example. Hanger support 11 is provided with a pair of spaced lugs 15 on the upper corners of the back surface thereof which are insertable in spaced holes 16 of a pegboard 17.

Positioned for sliding movement within tubular hanger 12 is an elongated actuating rod 20. The rear portion of the rod 20 is provided with a spring 23, one end of which contacts a head 21 on the end of the rod 20, and the other end of which contacts the back surface of the hanger support 11 so as to normally hold the rear portion of the rod 20 in its withdrawn position relative to the hanger 12.

The hanger 12 has formed on its upper wall, inward from the forward end thereof, a short longitudinal slot 24. Transversely aligned side holes 26 are provided on the sides of the hanger 12 below the front end of the slot 24. The forward end of the rod 20 is formed with a slot 28 provided with transverse holes 29. A card retaining post 30 is provided in the form of a flat vertical stem 31 having an angularly disposed transverse stop 32 on the top thereof. The post 30 is positioned with its stem 31 in the slot 28 of the rod. A hole 33 is provided in the lower portion of the stem 31 of the post 30.

To assemble the post 30 and the rod 20 within the tubular hanger 12, the rod 20 is positioned in the tubular hanger 12 with the slot 28 on the forward end thereof aligned with the longitudinal slot 24 on the hanger 12. The stem 31 of the retaining post 30 is then inserted into the slot 28 of the rod 20 with its hole 33 aligned with the holes 29 in the sides of the slot 28. With the post 30 and rod 20 so aligned, they can then be axially moved forwardly within the tubular hanger 12 so that the holes 29 line up with the holes 26 provided on the sides of the hanger 12, thus permitting a pin 34 to be inserted into the holes 29 to pivotally attach the stem 31 of the retaining post 30 within the slot 28 provided

on the end of the rod 20. When so assembled the stem 31 extends through the slot 24 on the upper wall of the tubular hanger 12 and the bottom of the stem 31 contacts the lower, inside surface of the tubular hanger 12.

When the rear portion of the actuation rod 20 is held in its withdrawn position by the spring 23, the stem 31 of the retaining post 30 is effectively secured in its vertical position. Merchandise cards 18 being supported by their openings 19 on the hanger 12 are thus prevented from being removed off the end of the hanger which is provided with a rounded end plug 27. The lower rear corner 35 of the stem 31 is rounded so that when the actuating rod 20 is pushed into the tubular hanger 12 against the action of spring 23, the contact of the front side of the stem 31 with the wall on the end of slot 24 causes the inclined transverse stop 32 on the upper end thereof to be pivoted downwardly. With the stop 32 resting on the surface of the tubular hanger in parallel alignment with the axis thereof, as shown in FIG. 3, the cards 18 of merchandise being supported by their openings 19 are able to be removed from or inserted on the outer end of the hanger 12.

A pusher plate 37 is attached on the back of the pegboard 17 by upper and lower U-shaped brackets 39 and 40. The pusher plate 37 is preferably formed from a rectangular sheet of steel with a pair of ears 41 extending inwardly from the upper corners thereof and a pair of ears 42 extending inwardly from the lower corners thereof. The closed end of the upper U-shaped bracket 39 is pivotally attached by pins 43 to the upper pair of ears 41 on the pusher plate 37, and the closed end of the lower U-shaped bracket 40 is pivotally attached by pins 44 to the lower pair of ears 42 on the pusher plate 37. The free ends of the arms 45 of the upper bracket 39 are attached by pins 46 to flat surfaces 47 machined on the bodies of upper round head screws 48 that extend through holes 16 located in the pegboard above the hanger support 11. The free ends of the arms 50 of the lower bracket 40 are attached by pins 52 to the flat surfaces 51 machined on the bodies of lower round head screws 53 that extend through holes 16 located in the pegboard 17 below the hanger support 11. The bodies of the lower screws 53 are each provided with a shoulder 54 on the end thereof. Each of the upper screws 48 and lower screws 53 is held in position in the pegboard 17 by a washer 57 and nut 58. The shoulders 54 on the end of each of the lower screws 53 limit the outward pivoting movement of the arms 50 of the lower bracket 40 when the spring 23 on the end of the actuating rod 20 urges the rod to be maintained in its withdrawn position with the head 21 of the rod abutting up against the front surface of the pusher plate 37. When in this position the stem 31 of the retaining post 30 on the end of the rod 20 is in its vertical position, as shown in FIG. 2, in which position the post 30 prevents the removal of a card 18 from the tubular hanger 12.

It should now be clearly understood that in order to remove a card 18 from the tubular hanger 12 it is necessary to pivot the post 30 to align the transverse stop 32 on the top of the post 30 with the axis of the tubular hanger 12 so as to enable the card 18 to be slid past the post 30 and off the end of the hanger 12.

A lock 60 is provided on the pegboard 17 for normally holding the pusher plate 37 in its outward position, in which position the cards 18 being held by their opening 19 on the hanger 12 are prevented from being

removed therefrom. The body of the lock 60 extends through an enlarged opening 61 in the pegboard 17 with the shoulder 62 thereof against the front surface of the peg board. A nut 63 engages the threaded portion 64 of the body of the lock extending through the pegboard 17 and contacts the back surface of the pegboard. The lock 60 is provided with a central rotatable shaft 64 having a rectangular cross section on the end thereof which fits in a similarly shaped opening 66 on the inner end of a lock arm 67 and is secured by a set screw 68. Upon inserting a key (not shown) in the keyhole 69 of the lock 60, the arm 67 can be swung to extend in front of and adjacent the front surface of the pusher plate 37 thus preventing it from being pushed inwardly.

When the key is rotated in the opposite direction the arm 67 is rotated away from the front surface of the pusher plate 37 thus permitting it to be moved forwardly by pivoting about the arms of the brackets 39 and 40 so as to advance the actuating rod 20 into the tubular hanger 12, as shown in FIG. 3. When so advanced the stem 31 of the retaining post 30 contacts the front end of the slot 24 causing the post 30 to pivot about its pin 34 connected to the end of the rod until the transverse stop 32 on the post 30 lies substantially flush with the upper surface of the hanger 12, thus permitting one or more of the cards 18 to be removed from the end of the hanger 12.

It is thus seen that the embodiment of the present invention shown in FIGS. 1-6 provides for retaining a plurality of merchandise cards 18 on a tubular hanger 12 by use of a retaining post 30 mounted on the end of the hanger. The card holding device 10 is normally in its locked condition with the post 30 held in its vertical position so as to prevent the cards 18 from being removed off the end of the hanger 12. By unlocking the lock 60 of the card holding device 10, the sales clerk can then push in the pusher plate 37 which causes the actuating rod 20 to advance into the hanger 12 and the post 30 on the forward end thereof to be pivoted downwardly so as to align the inclined transverse stop 32 with the hanger 12 thus permitting one or more of the cards 18 to be removed therefrom.

Upon the sales clerk releasing the pusher plate 37, the actuating arm 20 is again moved to its withdrawn position by spring 23 and the retaining post 30 again swings to its vertical position in which it prevents removal of the cards 18. Then when the shaft 65 of lock 60 is again rotated by a key so as to again position the locking arm 65 in front of the pusher plate 37, the card holding device 10 is again placed in its locked condition.

The lugs 15 on the hanger plate 11 have a size and spacing to accommodate spacing of the holes 16 in the pegboard 17. Furthermore, the spring 23 on the rear portion of the rod 20 holds the head 21 of rod 20 against the pusher plate 37 and thus serves to retain the hanger support 11 on the pegboard 17 after the pusher plate 37 has once been attached to the back of the pegboard 17.

As shown in FIG. 2 when the retaining post 30 is positioned in slot 24 with the rod 20 held in its withdrawn position by spring 23, the spring exerts enough force to prevent the post 30 from being manually depressed and thus pivoted to its aligned position, as shown in FIG. 3. It is only when sufficient pressure is applied against pusher plate 37, after the locking arm 67 has swung

free, that the actuating rod 20 is movable within the tubular hanger 12 so as to pivot the post 30 to its aligned position which permits removal of a merchandise card 18.

A variation of the merchandise card holding device 10 is shown in FIG. 23. Here a pair of side rods 70a and 70b are provided on either side of the tubular hanger 12. The ends of the rods 70a and 70b are securely attached to the hanger support 11a and extend therefrom parallel to the hanger 12. A merchandise card 18a, as shown in FIG. 24, includes a pair of openings 71a and 71b on the sides of the main opening 19a thereof. The card 18a is positioned on the card holding device with its opening 19a fitted over the tubular hanger 12 and its side openings fitted over the respective side rods 70a and 70b.

A second embodiment of the pilfer-proof card holding device 75 of the present invention will next be described. It should be noted that the cross sectional views of the holding device 75, especially as shown in FIGS. 9 and 10, for example, are greatly enlarged. As shown in FIGS. 7 and 8 the card holding device 75 includes an elongated tubular hanger 76 which extends outwardly from a hanger support 77 being held on a pegboard 79. The card holding device 75 differs from the embodiment shown in FIGS. 1-6 in that it provides a plurality of spaced retaining posts 80 along a slot 81 provided on the upper wall of the tubular hanger 76. Each retaining post 80 provides for retaining a merchandise card 84 on the hanger 76 (FIG. 8). An actuating rod 85 having its forward position extending into the rear opening of the tubular hanger 76 is provided with a spring 86 on the rear portion thereof. As will be described, each time the actuating rod 85 is depressed into the hanger 76 against the action of the spring 86, the posts 80 advance forwardly along the slot 81 of the tubular hanger 76 in such a manner that the forwardmost post 80 drops down into the interior of the tubular hanger 76, thus permitting one of the cards 84 to be removed from the front end of the hanger 76.

As shown in FIG. 7, the card holding device 75 is automatically operated by a conventional coin machine 88. Upon placing a coin in the opening 89 of handle 90 and pushing the handle into the coin box 91, a rod 92 on the back of the box 91 is released for outward movement to rotate a lever 93 about a pivot pin 94 on a fixed support 95a. As shown in FIG. 12, the lower arm 96 of the lever is attached by a bolt 97 and nut 98 to a clevis 99 on the end of the actuating rod 85. Thus when the coin machine 88 is actuated, the rod 85 is depressed into the hanger 76 against the action of spring 86.

FIG. 8 shows a vertical cross sectional view of the card holding device 75. Tubular hanger 76 is rigidly held by its inner end on the cylindrical portion 87 of hanger support 77. A vertical portion 100 of support 77 is provided with lugs 95 on the upper corners thereof which fit into spaced holes 78 on pegboard 79. The interior of tubular hanger 76, as shown by the cross section in FIG. 10, for example, is provided with flat opposing vertical side walls 101a and 101b. The slot 81 on the tubular hanger 76 extends along the entire length of the upper wall from just forward of the support 77 to the front end thereof. As viewed in FIG. 10, the slot 81 is located to the left of the vertical axis of the hanger 76. A short slot 82 extends along the portion of the bottom wall of hanger 76 in front of hanger support 77 and

a short slot 83 extends along the portion of the bottom wall on the outer end of the hanger 76.

As best shown in FIG. 16, a horizontal shelf 102 is formed within the tubular hanger 76. The shelf 102 extends from a point spaced inward from the support 77 to a point spaced inward from the forward end of hanger 76. Positioned on a pilot shaft 112 rotatably mounted in a bearing 126 on the side wall of hanger 76 and adjacent the inner end of the shelf 102, as viewed in FIG. 8, is a sprocket drive comprised of a drum 103 having an intermediate cylindrical portion provided with sprockets 106. Mounted within the hanger 76 adjacent the outer or forward end of the shelf 102 is a stationary, cylindrical guide 105. As shown in FIG. 9, the stationary guide 105 is fixed in position against the flat vertical side wall 101b of hanger 76 by a screw 133. The guide 105 includes a reduced diameter cylindrical surface 135. A loop of chain 107 is positioned within the tubular hanger 76 with the links on one end of the loop fitted on the sprockets 106 on the cylindrical portion of drum 103 and the links on the other end of the loop slidably positioned on the cylindrical surface 135 of the guide 105. It is thus seen that the chain 107 encircles the shelf 102. As shown in FIG. 9, a flat projection 106a extends along the top inner wall of the hanger 76 above the shelf 102. The projection 106a provides an upper surface against which the chain 107 bears. The retaining posts 80 are each held to be freely rotatable on a pin 111 insertable in an opening in the side of a link 136 of the chain 107 (FIG. 22). The end of pin 111 may be secured to link 136 by welding.

As shown in FIG. 8, the posts 80 attached to the portion of the chain 107 spanning the upper surface of the shelf 102 are vertically oriented with their flat bottoms resting on the top surfaces of the shelf 102, and posts 80 attached to the portion of the chain 107 spanning the lower surface of the shelf 102 are horizontally oriented with their sides resting on the inner lower wall of the tubular hanger 76. As described subsequently herein, when the actuating rod 85 is depressed into the hanger 76 a rack 115 formed on the inner end of the rod 85 engages a pinion 116 on the end of a clutch 118 which rotates the drum 103 and advances the chain 107 in a clockwise direction about the shelf 102 until the forwardmost post 80 on the end of the tubular hanger 76 advances to the end of the upper surface of the shelf 102 and is lowered down into the tubular hanger 76 and below the shelf whereat it is advanced in the opposite direction while in a horizontal position. This frees one of the cards 84 so that it can be removed from the forward end of the tubular hanger 76. The spring 86 on the rear portion of the actuating rod 85 provides for returning the rod to its withdrawn position after it has been actuated by placing a coin in the coin machine 88.

A set screw 119 passes through the bottom of the cylindrical portion 87 of support 77 and the tubular hanger 76. As shown in FIGS. 8 and 13, the set screw 119 extends up into a slot 120a extending along the bottom of the rear portion of the actuating rod 85 and limits the inward travel of the rod during which the rack 115 on the forward portion thereof rotates the pinion 116 and advances the chain 107 so that the posts 80 are advanced the proper amount to release one of the cards 84.

The hanger support vertical portion 100 and housing 138 may be formed from a single flat sheet of steel that

is stamped to provide the shapes of the lugs 95, the opening 87a for the cylindrical portion 87, the sides of the housing 138, and the cut for the spring support 136a. The upper corners of the vertical portion 100 are then bent back to form the lugs 95 and the lower portions of the sheet are bent horizontally and upwardly to form the sides of housing 138 and the support 136a for the end of a reloading leaf spring 137 enclosed within the housing. The housing 138 also functions as a support for the tubular hanger 76. The cylindrical portion 87 of the support 77 is then attached by welding, for example, to the wall of opening 87a on the vertical portion 100.

As best shown in FIGS. 13 and 21, the actuating rod 85 is provided with flat vertical sides 109a and 109b which slidably engage the flat vertical sides 101a and 101b on the interior of the tubular hanger 76. As shown in FIG. 21, the side of the forward portion of the actuating rod is cut away so that the remaining wall has a cross section in the form of a segment. A rectangular end opening 115a is then machined in the remaining wall and the upper surface of the opening is provided with teeth to form a rack 115. The forward end of the solid portion of actuating rod 85 is further provided with a side relief 113 for the posts 80 and a circular relief 114 into which the clutch 118 and drum 103 can be positioned when the actuating rod 85 is advanced into the tubular hanger 76.

A cross sectional view showing the clutch 118 and drum 103 rotatably supported in the tubular hanger 76 is shown in FIG. 14. The drum 103 which may be a molding is provided with recesses 104 on its face and notches 131 on its periphery (FIG. 21). The intermediate cylindrical portion of the drum 103 is provided with the sprockets 106 and the end portion of the drum 103 opposite the face is formed with flat side surfaces 108 and provided with a central opening 110 for receiving the pilot shaft 112. The central opening 110 extends through the drum 103. The clutch 118 which may also be a molding is provided with projections 120 on the face thereof and formed with a central shaft 132 which projects from either end thereof. One end of the central shaft 132 resides in the central opening 110 of the drum 103 and the opposite end of the central shaft 132 is rotatably mounted in a bearing 128 secured to the side wall of the hanger 76. Pinion 116 is secured on the end of central shaft 132 of the clutch 118 and is engaged by the teeth of the rack 115. Thus when the clutch 118 is rotated in a clockwise direction by the inward travel of the rack 115 formed on the front portion of the actuating rod 85, the projections 120 on the face of the clutch 118 mesh with the mating recesses 104 on the face of the drum 103 resulting in the chain being advanced an incremental distance along its path.

A conical spring 121 holds the face of drum 103 in engagement with the opposing face of the clutch 118. When the actuation rod 85 is returned by the spring 86, the conical spring 121 permits the faces of the clutch 118 and drum 103 to be separated as the walls of the projections 120 of the clutch slip relative to the walls of the recesses 104 on the drum 103. As viewed in FIGS. 19 and 20, a sliding member 124 provided with a groove 125 on the side thereof fits in a longitudinal slot 117 formed on the rear portion of the shelf 102 and thus straddles the wall of the slot. The sliding member 124 is provided with a dog 123 on the rear end thereof and with a stop 122 on the top thereof. The sliding

member 124 is urged in a forward direction by a spring 127, one end of which is fitted on a pin 129 held on the end of the slot 117 of the shelf 102. The other end of the spring 127 is positioned in an opening 130 in the end of the sliding member 124 opposite dog 123. Normally the dog 123 is urged to engage one of the notches 131 on the periphery of the drum 103 to thereby prevent the chain 107 and thus the posts 80 from being moved in a clockwise direction. Likewise the teeth of the rack 115 normally engaged the pinion 116 on the clutch 118 to thereby prevent the chain 107 from being moved in the counterclockwise direction. The cards 84 are thus secured on the hanger 76 by the posts 80.

As shown in FIGS. 16 and 17, in order to facilitate the movement of the posts 80 on the chain 107 about the stationary guide 105, a take up element 139 is positioned within the front end of the tubular hanger 76. The front end portion 140 of take up element 139 has a sliding engagement within the tubular hanger 76 and the opposite end portion of the take up element 139 forms a coming finger 141 which provides a ramp for the posts 80. The slot 83 is provided below the tubular hanger 76 to enable the coming finger 141 to be slipped on the end of the hanger 76. The take up element 139 is urged in a forward direction by a spring 142 which has one end seated in an opening 143 on the front end of the take up element 139 and its other end seated in an opening 144 on the rear end of cap 145 which is securely attached on the end of the tubular hanger 76.

In order to load the card holding device 75 with cards 84, it is necessary to reverse the direction of travel of the chain such that it rotates in a counterclockwise direction, as viewed in FIG. 8, after a card 84 has been placed on the front end of the tubular hanger 76. To accomplish this, which can be done by the shop keeper after hours, the actuating rod 85 is released from the lever arm 96 by removing the bolt 97. The set screw 119, which is used for retaining the actuating rod 85 in the tubular hanger 76 and for limiting its travel, is then removed. The actuating rod 85 is then withdrawn from the tubular hanger 76. Referring to FIG. 18, a tool (not shown) is then used for moving the sliding member 124 forward against its spring 127 by contacting the stop 122 on the top thereof, thus causing the dog 123 to be disengaged from a notch 131 of the drum 103. The chain 107 which is now free to be moved in either direction is moved in the counterclockwise direction, as viewed in FIG. 8, to enable the posts 80 to be loaded one at a time with cards 84. As each post 80 approaches the rotating drum 103, its movement is synchronized so that the bottom of the post rests on one of the flat side surfaces 108 on the end portion of the drum 103. As the posts continue to rotate counterclockwise about the drum 103, the leaf spring 137 enclosed in the housing 138 below the tubular hanger 76 provides for lifting and guiding the posts 80 into their horizontal positions on the bottom of the hanger 76 after they once leave the flat side surfaces 108 of the drum 103. Similarly, as shown in FIG. 17, as the posts 80 are advanced by the chain 107 about the stationary guide 105 the coming finger 141 of the take up element 139 functions to guide the posts 80 of their vertical position on the top of the shelf 102.

While in order to comply with the statute the invention has been described in language more or less specific as to structural features, it is to be understood that the invention is not limited to the specific features

shown but that the means and construction herein disclosed comprise a preferred form of putting the invention into effect and the invention is therefore claimed in any of its forms or modifications within the legitimate and valid scope of the appended claims.

What is claimed is:

1. A pilfer-proof holding device for merchandise cards comprising:

- a horizontal tubular hanger on which merchandise cards are hung by an opening provided on each of the cards for that purpose;
- said tubular hanger having an opening near the front end thereof;
- a support for said tubular hanger located on the back end thereof;
- an actuating rod slidably movable within said tubular hanger, said actuating rod having a slot on the front end thereof and having its rear portion extending from the back of said support;
- a retaining post pivotally carried in the slot on said actuating rod and extending through the opening on said hanger;
- a spring on the rear portion of said actuating rod for normally holding it in a withdrawn position relative to said tubular hanger;
- said spring on said actuating rod operating to apply an axially directed force on said retaining post to hold it in an outward vertical position in which it is fitted up against the rear of said opening on said hanger and the inner wall of said hanger opposite said opening to thereby provide a barrier to removal of said cards off the front end of said hanger; and

depressible means accessible from the rear end of said actuating rod and operable when manually depressed to advance said rod into said tubular hanger against the action of said spring and thereby force said retaining post upon contacting the front of said opening to be pivoted inwardly to a position substantially aligned with said hanger; whereby said merchandise cards can be freely removed off the front end of said hanger while said depressible means is being manually depressed.

2. The invention in accordance with claim 1 wherein said retaining post when in its vertical position includes a stem having an extended vertical side facing the cards being retained on the hanger; a shorter vertical side opposite said extended side; an inner horizontal side resting on the inner wall of said hanger; and an outer inclined transverse stop disposed at an angle sloping forwardly and inwardly from said extended vertical side toward said shorter vertical side; whereby when said actuating rod is advanced by said depressible means into said tubular hanger said transverse stop is pivoted inwardly so as to be substantially aligned with the outer surface of said tubular hanger.

3. The invention in accordance with claim 1 wherein said depressible means includes:

- a pusher plate; and
- brackets for pivotally supporting said pusher plate; whereby said pusher plate is moved to an outer position when said actuating rod is held in its withdrawn position by said spring; and
- whereby manual depressing of said pusher plate advances said actuating rod into said tubular hanger.

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4. The invention in accordance with claim 1 including:  
a lock having an arm rotatable in front of said pusher plate for holding it in its outer position when said lock is in its locked condition;  
said lock providing for rotating its arm away from the front of said pusher plate when in an unlocked condition;

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whereby said pusher plate can be moved to an inner position on said bracket to thereby depress said actuating rod into said tubular hanger against the action of said spring and permit the removal of said cards off the front end of the hanger while the pusher plate is being held in its inner position.

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