

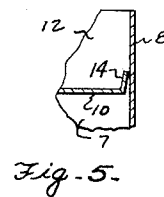
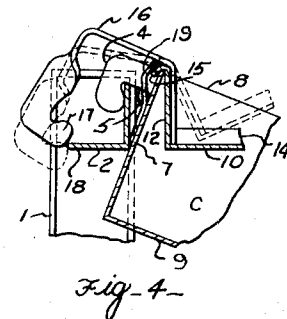
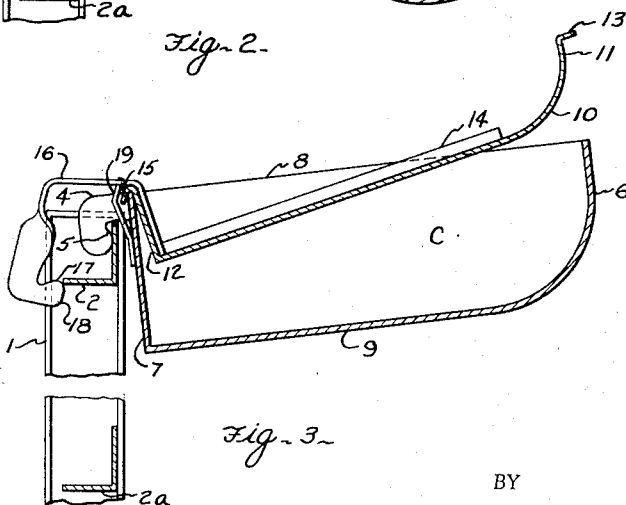
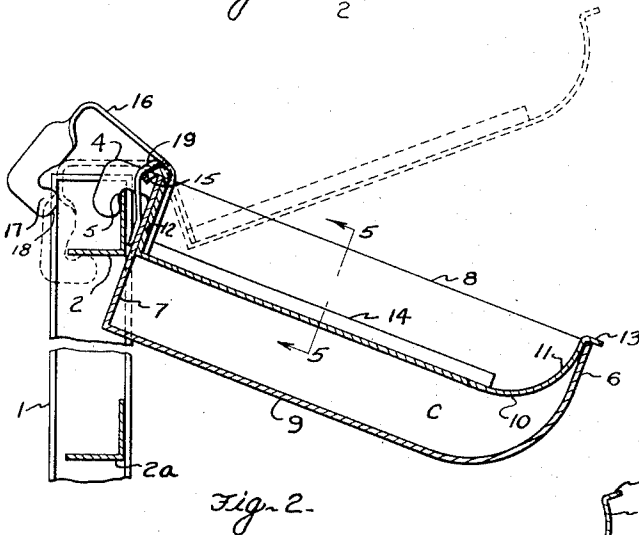
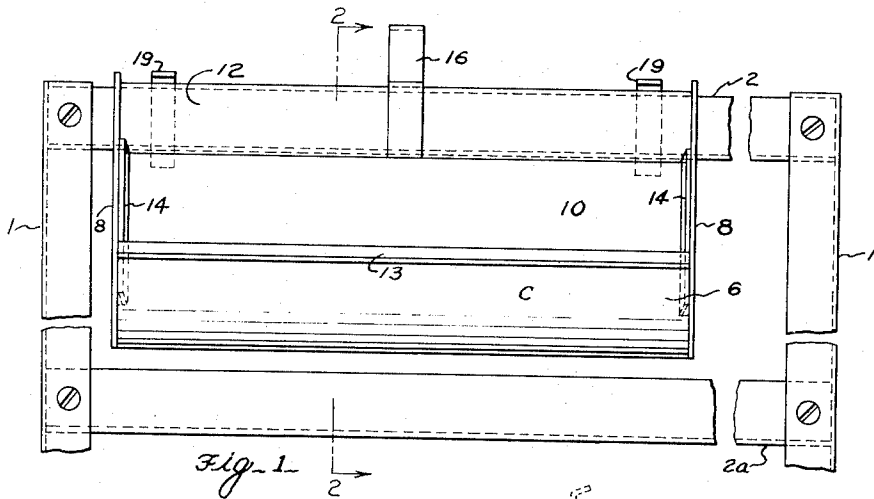
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MERCHANDISE CLASSIFYING AND STORAGE UNIT

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2,779,649

MERCHANDISE CLASSIFYING AND STORAGE UNIT

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7 Claims. (Cl. 312-245)

This invention relates to merchandise classifying and storage units, and particularly units including an open-topped container mounted on a horizontal supporting bar and pivotally carrying a plate serving in a lower position to cover a lower portion of the container contents and which must be raised to a signal position when such contents are depleted to the level of the lowered plate.

An object of the invention is to equip the pivotal plate of a unit of the aforementioned type with a latch element suited to engage said supporting bar responsive to pivotal actuation of the plate to a predetermined raised depletion-signaling position, and to so pivot the container that a predetermined upward pivotal actuation of the container will disengage the latch member from said bar, allowing the plate to drop to its lowered position.

Another object is to equip the described plate with side flanges bent upwardly adjoining the container side walls to minimize the possibility of small articles engaging between such plate and walls.

Another object is to equip the plate with an upwardly and rearwardly projecting resiliently flexible latch member notched to engage the supporting bar in the raised position of the plate, thus maintaining such position, said latch member having a cam edge extending downwardly from the notch and bearing against the bar as the plate approaches its raised position to resiliently stress the latch member and cause its snap engagement with the bar as the cam edge rides clear of the bar.

Another object is to form said plate with a rear wall having at its upper margin a flange downwardly and rearwardly divergent from such wall and seating pivotally on the top edge of a rear wall of the container to afford the required raised and lowered positions of the plate.

These and various other objects are attained by the construction hereinafter described and illustrated in the accompanying drawing, wherein:

Fig. 1 is a front elevation of my improved classifying and storage unit.

Fig. 2 is a cross-sectional view taken on line 2-2 of Fig. 1, showing the pivotal plate in dash lines in its raised latched position.

Fig. 3 is a cross-sectional view similar to Fig. 2 showing the container raised to release the latch.

Fig. 4 is a fragmentary vertical section showing how the latch element is stressed responsive to the cam portion of such element.

Fig. 5 is a fragmentary cross-sectional view of the interengaged ends of the container and its supporting rack.

In these views, the reference character 1 designates a pair of suitably spaced uprights rigidly interconnected by spaced horizontal angle bars 2 and 2a to form an upright rack having any suitable base (not shown). Detachably mounted on the bars 2 and 2a are one or more open-topped containers, there being illustrated one such container C on the bar 2. Said container projects forwardly from the rack, preferably with a downward in-

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clination, being formed with a suitable pair of rearwardly projecting spaced lugs 4, upwardly notched at 5 to straddle the bar 2. The notches 5 have a width affording a desired pivotal actuation of the container, the rear end of which abuts the lower margin of the bar 2 to establish its normal tilted position.

The container comprises front and rear walls 6 and 7, side walls 8 and a bottom 9, all formed preferably of sheet metal, the front and bottom walls preferably merging in an arcuate curve facilitating removal of merchandise.

Pivotally mounted on the container is a plate 10, having alternative lowered and raised limiting positions illustrated respectively in full and dash lines in Fig. 2. Said plate has front and rear walls 11 and 12, the front wall merging into the main body of the plate and being curved through an arc approximating ninety degrees and the rear wall forming a right angle with said body. In its lowered position the plate 10 lies fully within the corresponding container parallel to and predeterminedly spaced above the container bottom with its rear wall 12 closely adjoining that of the container. In said position a flange 13, forwardly projecting from the wall 11 at its top margin seats on the front wall of the container. Side flanges 14 on the plate bent upwardly and slightly relatively divergent, resist engagement of small articles between the plate and the walls 8 of the container.

The top marginal edge of the wall 12 is uniformly bent rearwardly and downwardly to form a flange 15 acutely divergent to such wall and seating pivotally on the top edge of the container wall 7. The width of the described plate is sufficient to afford only pivotal clearance from the walls 8, the lowered plate thus fully covering any underlying portion of the container contents and preventing access thereto. In its raised limiting position a major portion of the plate is exposed above the container, such position signaling depletion and further affording ready access to such merchandise as is covered when the plate is lowered. The curvature of the plate at its forward end facilitates removal of overlying merchandise when the plate is lowered and increased access to remaining merchandise when the plate is raised.

The rear wall of the pivotal plate rigidly carries a latch arm 16 projecting upwardly and rearwardly and having a forwardly projecting head 17 at its free end portion to releasably engage beneath the bar 2, such head having a cam edge 18 confronting said bar. As the plate approaches its intended raised position the cam edge travels downwardly across the rear edge of the bar 2, springing the latch arm rearwardly and thus affording a snap engagement of the latch arm with the bar 2, when the cam edge has cleared such bar. The latch arm may be released by upwardly swinging the container C about its pivot on the bar 2, as appears in Fig. 3, thus carrying the plate and latch arm rearwardly.

The cam edge 18, as it bears on the bar 2, during lifting of the plate 10, tends to act as a fulcrum for lifting the flange 15 clear of the wall 7. To overcome this tendency, the container C exteriorly carries on its rear wall 7 a pair of spaced vertically elongated resiliently flexible retainers 19 having their upper ends forwardly bent above and adjacent to the flange 15 and restraining the latter from upward movement.

The normal inclined position of the container facilitates observation and removal of merchandise by an attendant, and it will be readily seen that the plate in its lowered position prevents access to the lower portion of the container contents until the attendant raises the plate to its signal position. Thus there are eliminated any failures to properly set the signal due to carelessness or haste of the attendant.

Although only one container is shown it is understood that any suitable number of containers may be mounted on the supporting rack.

What I claim is:

1. In a merchandise classifying and storage unit, the combination with a substantially horizontal bar and an open-topped container having a bottom and front and rear walls, and means pivotally mounting the container on said bar in a forwardly projecting relation to the bar to swing about an axis substantially parallel to the bar, of a plate having a rear wall and having a lowered position within the container and spaced above said bottom, to cover in such position a predetermined lower portion of the container contents, and having an upper position largely disposing said plate above the container as a depletion signal, means pivoting the rear portion of said plate on the rear wall of the container about a second axis substantially parallel to said bar to afford travel of the plate between its lowered and raised positions, and a latch element rearwardly projecting from the rear wall of said plate and engaging said bar in the raised position of the plate to maintain such position.

2. A merchandise classifying and storage unit as set forth in claim 1, said latch element being resiliently flexible to afford a snap engagement thereof with said bar.

3. A merchandise classifying and storage unit as set forth in claim 1, said latch element being notched to engage said bar.

4. A merchandise classifying and storage unit as set forth claim 1, said latch element projecting upwardly and rearwardly and having a head at its free end and a cam edge extending downwardly on said head, such cam

edge bearing against said bar as the plate approaches its raised position and springing the latch element to effect a snap engagement of said head with said bar as said edge clears the bar.

5. A merchandise classifying and storage unit as set forth in claim 1, said plate-pivoting means comprising a flange downwardly and rearwardly divergent to the rear wall of the plate and pivotally seating the plate on the rear wall of the container.

6. A merchandise classifying and storage unit as set forth in claim 1, said plate-pivoting means comprising a flange downwardly and rearwardly divergent to the rear wall of the plate and pivotally seating the plate on the rear wall of the container, and said rear wall of the container carrying an upwardly projecting retainer having its upper end forwardly bent above and adjacent to the flange to maintain the pivotal position of the flange.

7. A merchandise classifying and storage unit as set forth in claim 1, the axis about which the container is pivoted on the bar being spaced downwardly and rearwardly from the axis about which said plate is pivoted on the container, whereby upward swinging of the container shifts the last-mentioned axis rearwardly to release said latch element from the bar.

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