Jan. 5, 1960 H. C. BERKOWITZ 2,919,814

DISPLAY RACK FOR BOTTLES

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Fig. 1.

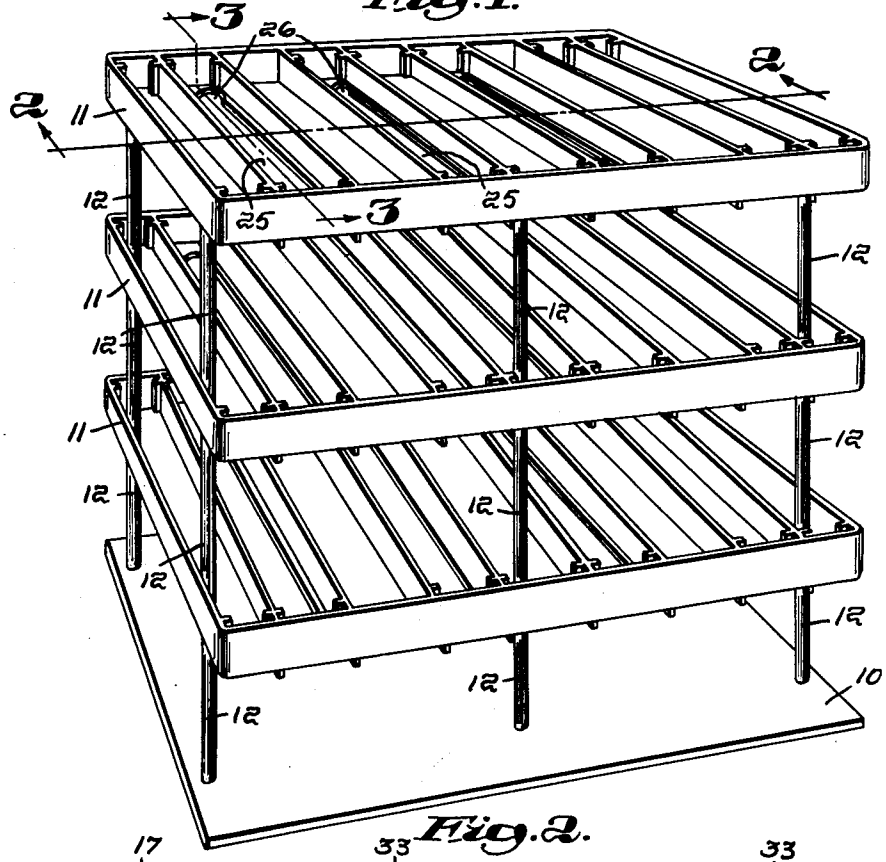
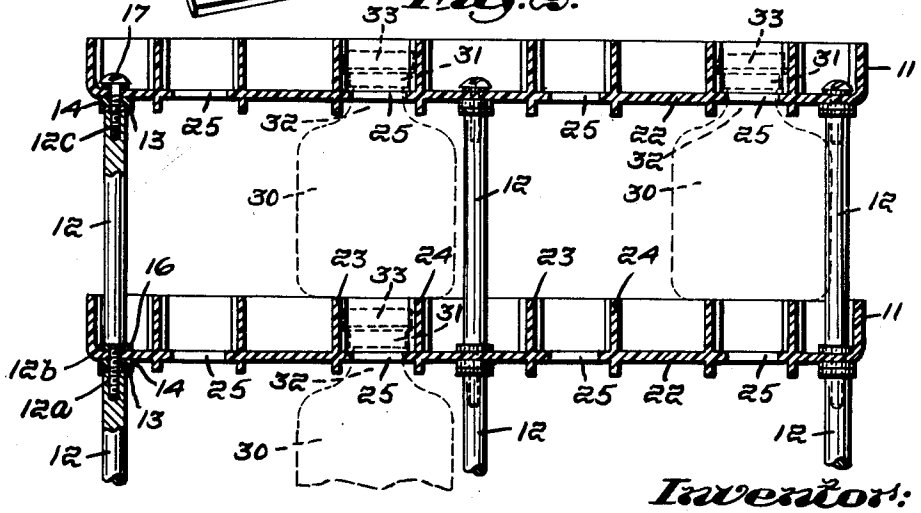


Fig. 2.



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Fig. 3.

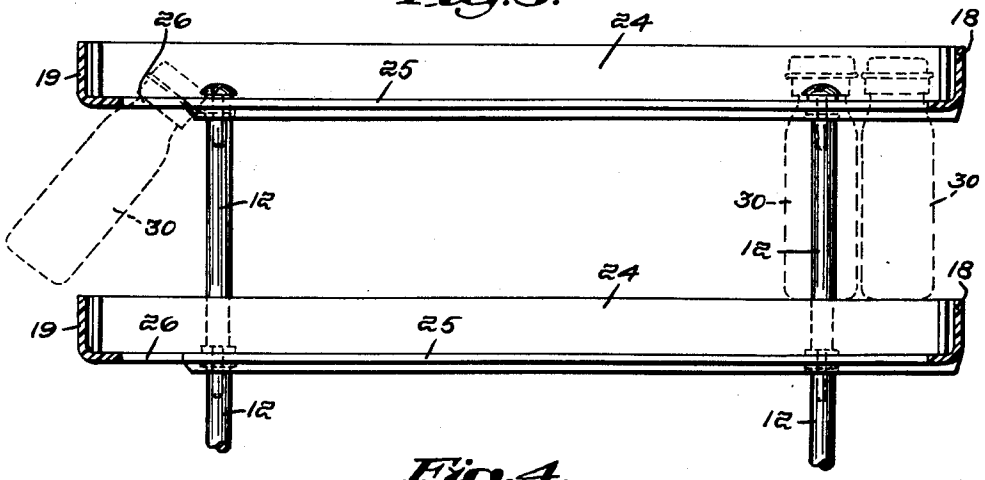
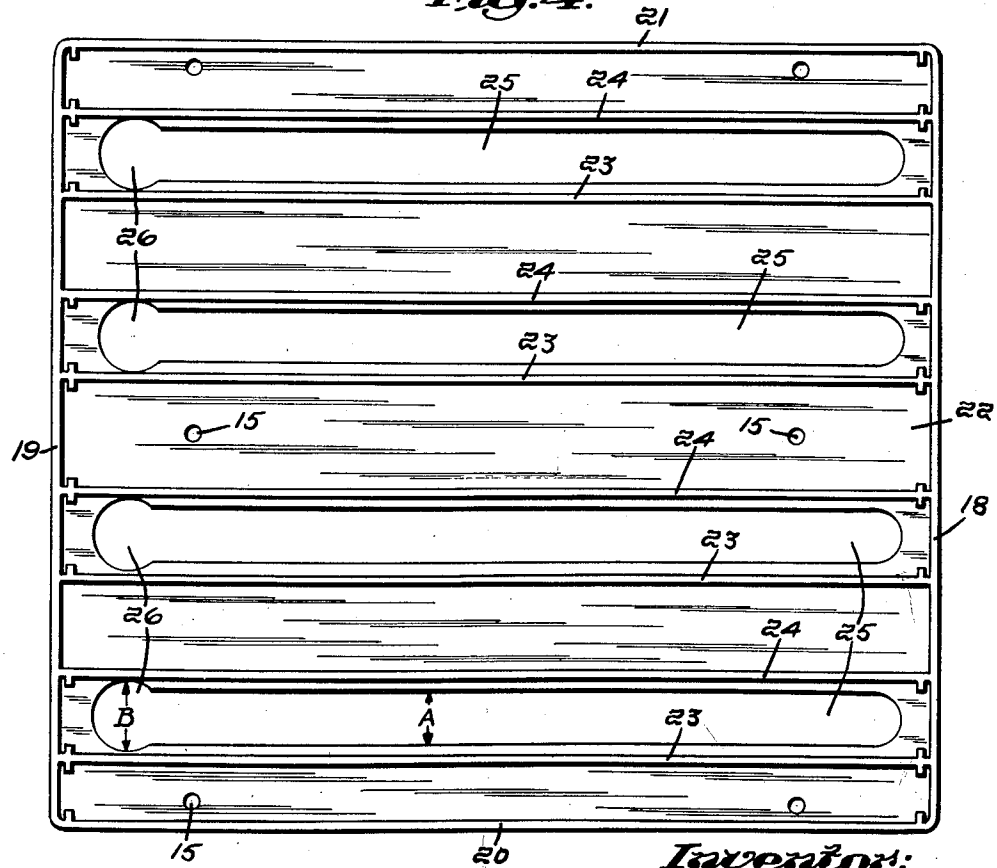


Fig. 4.



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DISPLAY RACK FOR BOTTLES

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Application January 2, 1957, Serial No. 632,200

2 Claims. (Cl. 211—74)

This invention relates to display racks for displaying bottled goods, the rack here disclosed being particularly useful for displaying such wares as bottled liquors.

In small liquor stores, a proprietor finds it advantageous to display bottles of various brands of liquor within easy reach of the salesman, and yet wishes to prevent pilferage by customers. In markets of the self-service type, on the other hand, liquors must be displayed in such a manner that the customer can readily select and remove a bottle. The principal object of this invention is to provide a rack which serves equally well for pilfer-proof display under control of a salesman behind the counter or for customer self-service. Other objects are to provide a rack which can be inexpensively constructed and can be shipped in knocked down condition in compact form and readily set up by the storekeeper. Other objects and advantages will be apparent from the description which follows.

In the drawings illustrating the invention:

Fig. 1 is a perspective view of a display stand constructed according to the invention;

Fig. 2 is a fragmentary cross-section, somewhat enlarged, taken along line 2—2 of Fig. 1;

Fig. 3 is a fragmentary cross-section, somewhat enlarged, taken along line 3—3 of Fig. 1; and

Fig. 4 is a plan view of one of the trays of the rack.

The rack consists in general of a flat base **10**, above which a number of trays **11** are mounted in tiers and supported in spaced relationship by rows of posts **12**. The posts, preferably made of metal, are all constructed alike, and each has a lower shoulder **12***b*, a reduced threaded lower end **12***a*, and a threaded recess **12***c* in its upper end. The lower ends of the bottom row of posts are screwed into base **10**, which may be made of wood or other suitable material and has tapped holes **15** for receiving the posts. A metal washer **13** is placed on the upper end of each post and a rubber washer **14** is placed above each washer **13**. Each of the trays **11** rests on the washers **14** of the underlying posts. Each tray, as exemplified in Fig. 4, has holes **15**, and the lower ends of a row of posts above the tray are passed through these holes and screwed into the recesses **12***c* of the posts below the tray. A rubber washer **16** is placed under the shoulder **12***b* of each of the posts above the tray. The stand may be built up of any desired number of trays, secured one above the other, in this manner, and the top tray is secured to the posts underlying it by means of screws **17**.

Each of the trays **11** has upstanding front and rear walls **18** and **19**, respectively, side walls **20** and **21**, a bottom wall **22**, and pairs of vertical ribs **23** and **24** running from front to back and preferably connected to the front and rear walls. Between each pair of ribs **23**, **24**, the bottom wall is cut out to form an elongated slot **25**, lying parallel to the ribs and terminating in a circular notch **26**. The tray may be formed with a single pair of ribs and a single slot, or may have as many pairs of ribs and slots as desired, according to the number of bottles

to be accommodated. The tray is preferably molded from transparent plastic but can be made of any suitable material rigid enough for the purpose.

The rack is intended for bottles (indicated by dotted outlines **30**) of uniform size and shape, and of the type having a bead **31**, around the mouth, of greater diameter than the neck **32**. The width A of slots **25** is sufficient to provide a free sliding fit with the necks **32** of the bottles, but is less than the diameter of the beads. The diameter B of notches **26** is large enough to admit the beads **31** of the bottles, and also the corks **33**, if the latter are of larger diameter than the beads. The trays are so spaced with respect to the height of the bottles that the bottom of a bottle will rest on a pair of ribs **23** and **24** of one tray when the neck of the bottle is in the slot **25** of the tray above. It is understood that the trays are formed so that the pairs of ribs **23**, **24** and the slots **25** of all the trays are aligned. The bottles in the bottom rows rest on the base **10**.

To place a bottle in the rack, the neck of the bottle is inserted in one of the notches **26** of a tray with the bottle in slanting position, as illustrated in Fig. 3. The bottle is then swung into vertical position with its bottom resting on a pair of the ribs **23**, **24** of the tray below, and slid forward. When the rack is used for pilfer-proof display, the rack is placed with the back walls **19** of the trays, that is the walls nearest the notches **26**, facing the back of the counter, or the place where the salesman ordinarily stands. The bottles are placed with their labels facing walls **18**. Customers can easily see all the brands displayed but cannot remove the bottles from the front. The salesman can readily remove a bottle of the customer's selection from the back of the rack.

For use in a self-service store, the rack is placed with walls **19** of the trays facing the customers, and the bottles are inserted with their labels toward walls **19**. The customer removes the nearest bottle in the row containing the brand of his selection by sliding the bottle into notch **26** and then swinging it out. As the rest of the bottles are held securely there is no danger of a bottle falling out accidentally.

It is understood that the trays can be made with as many pairs of ribs **23**, **24** and as many slots **25** as desired, and any number of trays can be connected together in the manner here described according to the desired capacity of the rack and the number of brands which the dealer wishes to display. The rack will hold a large number of bottles securely and in orderly and attractive arrangement. The rack can be shipped in knocked down condition and readily assembled, without tools, by screwing the posts into each other with the trays placed as shown. The rack can also be readily taken apart and its capacity can be altered by adding or removing trays. As the rack involves only a few types of parts, it can be manufactured inexpensively.

What is claimed is:

1. A display rack for bottles of the type having a relatively wide bottom, a reduced neck and a projection overhanging the neck, comprising a plurality of trays of like construction mounted one above the other in spaced relationship, each tray having a pair of like parallel ribs spaced apart by less than the width of the bottom of a bottle of said type and adapted to support a number of such bottles and each tray having an elongated slot with a notch at one end, the ribs and slots and notches of each tray being in vertical alignment respectively with the ribs and slots and notches of the other trays, the slot of each tray being each disposed between a pair of said ribs and being of a width less than that of the projection of a bottle of said type and being adapted to slidably receive the necks of a number of such bottles

resting on a pair of ribs of the tray below, and the notches of each tray being of a size to admit the projection of a bottle of said type.

2. A display rack for bottles of the type having a relatively wide bottom, a reduced neck and a projection overhanging said neck, comprising a number of trays supported, one above the other, in spaced relationship, a number of posts disposed between and supporting the trays, each of said posts having a reduced, threaded lower end and an upper end provided with a threaded recess, the lower of each post passing through one of the trays and being engaged in the recess of a post below, the trays all being of the same construction and each tray having a pair of upstanding parallel ribs and an elongated slot with a notch at one end, the ribs and slot of one tray being vertically aligned respectively with the ribs and slot of another, the ribs of each pair being spaced apart by less than the width of a bottle of said type, the slot of each tray being of a width less than that of the projection of a bottle of said type and adapted to slidably receive the necks of bottles resting on the ribs of the tray below, and each notch being of a size to admit the projection of a bottle of said type.

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