

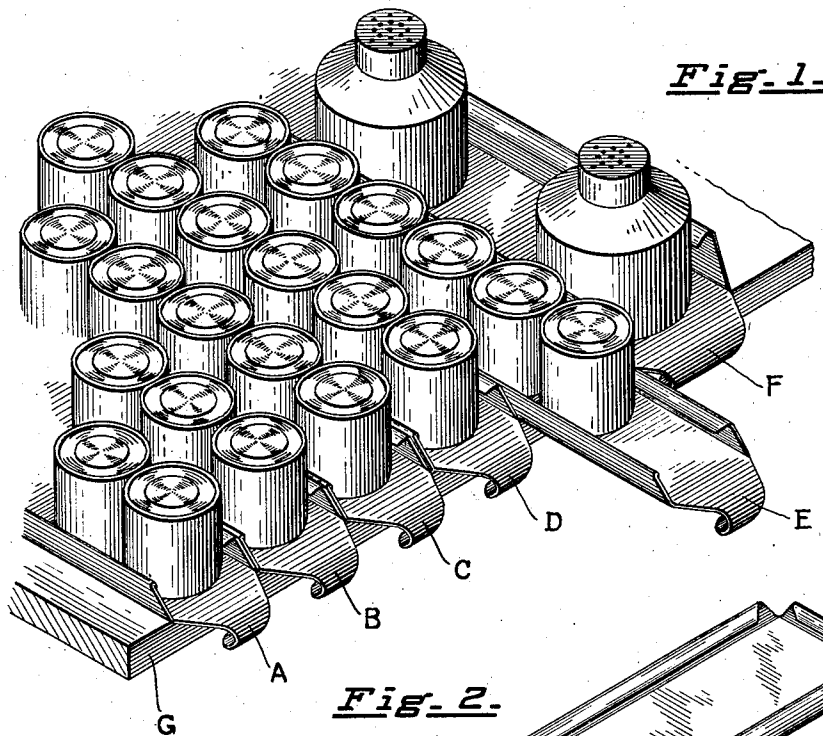
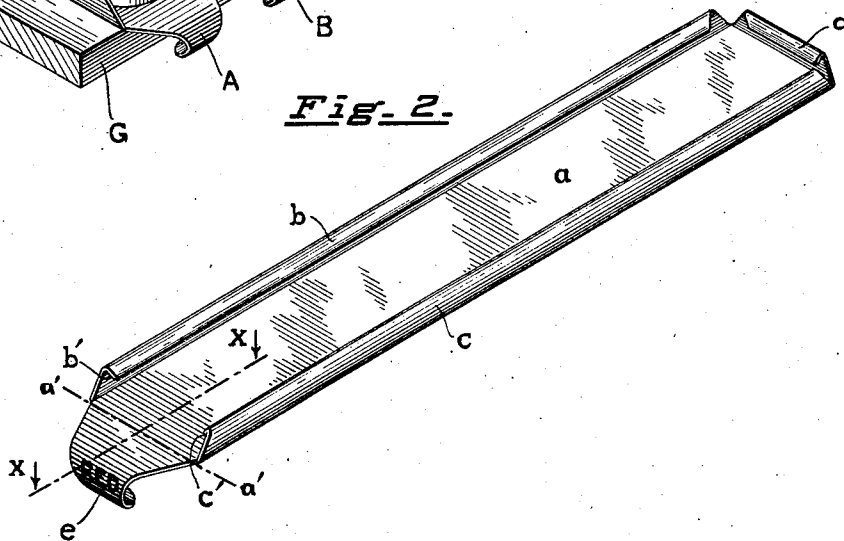
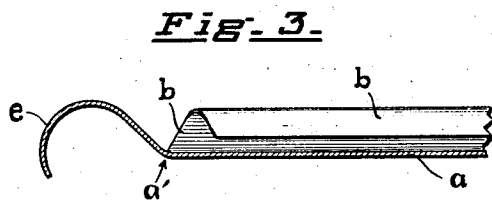
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DISPLAY TRAY SYSTEM AND TRAYS THEREFOR

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DISPLAY-TRAY SYSTEM AND TRAYS THEREFOR

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This invention relates to a system of displaying classified merchandise upon open shelves, and with regard to certain of its more specific features, to trays forming part of such systems whereby such merchandise can be most effectively classified, displayed and delivered for sale or use.

It is common practice, in hardware stores, groceries, and other shops, to store canned goods and other merchandise on open shelves where its display tends to stimulate purchase by the public and also to make it easy for salesmen and clerks in charge of such stores to select and deliver to the customers the goods ordered. In carrying out this practice, the storekeeper seeks to arrange the goods in classes according to their different character, as for example, by placing on one shelf a single file of cans of red paint, extending from the front to the rear of the shelf, next a second file of cans of blue paint, and next to these similar files of cans containing paint of other colors. In filling the shelves with these cans, it is frequently necessary for the storekeeper to push the cans back from the front of the shelf toward the rear, and in so doing the cans are apt to be pushed out of alignment so that cans of blue paint, for example, are crowded into the file which was intended to include only cans of red paint. The cans are also likely to be pushed out of alignment by the clerks or customers in reaching for merchandise. When this occurs the goods become intermingled by reason of the resemblance in size, shape and appearance of the cans, with the result that much time is lost in searching for paint of a desired color, mistakes occur in delivering orders, and the storekeeper is unable to make a correct inventory or know when it is necessary to reorder a supply of any particular paint. If the shelves have cracks or uneven places the practice of sliding the cans backward and forward is hindered and even prevented entirely. A further objection to this practice is the difficulty encountered in reaching merchandise at the rear of deep shelves.

The present invention seeks to overcome these difficulties and to furnish an efficient and convenient device for loading shelves of

any depth with merchandise of diverse character, keeping this merchandise segregated in a neat and orderly manner, assisting the selection and removal of any unit or class of merchandise desired, while at all times keeping the goods displayed to the public.

To accomplish these results my invention requires no alteration in the structure of the store or shelves but merely adds a device which is of cheap and simple construction and of positive operation.

Other objects of the invention will be in part obvious and in part pointed out hereinafter.

The invention accordingly comprises articles of manufacture possessing the features, properties and the relation of elements which will be exemplified in the articles hereinafter described and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention reference should be had to the following detailed description taken in connection with the accompanying drawing, in which:

Fig. 1 shows a perspective view of a shelf of conventional type upon which is arranged a series of the display trays embodying my invention, each tray containing a file of merchandise;

Fig. 2 represents a perspective view of one of the display trays of the type shown in Fig. 1;

Fig. 3 shows a fragmentary cross-section of the tray shown in Fig. 2, taken along the line $x-x$ but modified as to the shape of the member c as hereinafter described.

Referring now more particularly to Figs. 1 and 2, A, B, C, D, E, and F are display trays each having a length substantially equal to the depth of the shelf with which it is to be employed, and a width slightly greater than the diameter of each unit of merchandise to be placed therein. These display trays are preferably made of tin, galvanized iron, steel or other sheet metal, and are provided with a base a , having guide members b and c at its lateral edges, formed by bending up the blank from which the base is made at

right angles to that base and doubling over the portions *b'* and *c'* in order to make these lateral guides more rigid and to provide a smooth upper edge to the lateral guides. The rear wall *d* of the display tray is similarly formed by bending upwards and folding in a portion of the blank from which the base is formed. The tray is provided also with a handle or grasping means *e* which is preferably formed as an extension of the base *a* and is bent downwards as shown to provide a broad hook into which the user's finger will fit. The member *e* may be provided as shown in Fig. 2 with a marker indicating the character or price of merchandise contained in the tray. Both surfaces of the base *a* and of the lateral guides *b* and *c* are so smooth as to offer little friction when the tray is drawn over a wooden shelf or when an article of merchandise is moved within the tray, or when the side of one tray is moved past the adjacent side of another tray. The side walls *b* and *c* are of such height as in normal use to prevent the lateral escape from the tray of articles placed therein, but are preferably not so high as to conceal any substantial portion of such merchandise. The rear wall *d* may be of any desired height which is sufficient to prevent the escape of merchandise from the rear of the tray when the latter is used as hereinafter described. The space between the side walls *b* and *c* is slightly greater than the diameter of the cans or other articles to be placed in such tray, but preferably less than twice that diameter. *G* is any shelf having a substantially horizontal upper surface upon which said trays may be arranged as shown in Fig. 1.

A modification of my invention is shown in Fig. 3 which represents a tray similar in all respects to the tray A except that the grasping means *e* is bent sharply upwards along the line *a'-a'*, to form a stop, before it is curved downward to form the grasping hook.

It will be noted that the display trays shown in Figs. 1 and 2, either with or without the modification shown in Fig. 3, can be constructed of a single piece of sheet metal and are of cheap and durable construction.

In use the trays A, B, C, D, E, and F are placed side by side upon any horizontal shelf with the curved grasping members *e* projecting over the front edge of the shelf and serving to limit the rearward movement of the trays. Each tray is then separately filled with one class of merchandise, as for example, cans of paint of a particular color, corresponding to the indicating marker if such marker is used.

The filling operation may be performed either by removing from the shelf the empty tray, placing the merchandise therein, and then replacing it, or the tray may be more simply filled by placing one can after another

upon the base of the tray at its front edge and pushing each toward the rear of the tray until the can first inserted is stopped by the back plate *d* and the entire tray is filled.

When it is desired to remove a can from the type of tray shown in Figs. 1 and 2, this may be done without removing the tray by pulling or lifting a can from the front of the tray, if a can is already in that position, or if the front of the tray be empty, a can from the rear thereof can be propelled toward the front either by grasping the member *e* and tilting the rear of the tray slightly upward to cause the can to slide forward by gravity, or by giving the tray a slight forward jerk. Since the trays are not attached in any way to the shelf, the tilting operation mentioned above can be readily performed by pulling a tray forward to the position shown by tray E in Fig. 1 and then depressing the forward end of the tray. The smooth lower surface of the tray permits it to ride freely over cracks or minor irregularities in the shelf surface.

With the form of device shown in Figs. 1 and 2 it is necessary for the user to use his thumb or hand to check the can as it approaches the forward end of the tray. With the modified form shown in Fig. 3 the upward curve of the member *e* serves as a stop to limit the forward movement of the cans and a slight lifting motion is necessary to remove them therefrom.

The lack of attachment between the tray and the shelf serves also to permit the trays to be arranged in any desired order. For example, a wide tray such as that shown by F in Fig. 1, can be interposed between trays A and B without affecting the utility or mode of operation of any tray or requiring any change in the shelf construction.

Trays embodying my invention may be made of any desired width and the user will preferably select for his purpose a tray of a size to contain a single file of the particular merchandise which he desires to display therein.

By the construction and mode of operation above described it will be evident that merchandise placed in the trays will be kept in substantial alignment, thus presenting a neat appearance and preventing merchandise of one character from becoming mingled with that of another character. It will also be evident that merchandise may be placed upon and removed from the shelves without the necessity of reaching to the rear of such shelves or disturbing any merchandise, except that of the particular kind desired. It will also be seen that any person desiring to inventory merchandise can easily inform himself of the precise number of units of any particular kind of goods upon his shelves and is thus enabled to detect and correct a shortage as soon as it occurs. The use of my invention

will, therefore, serve to prevent errors both in the delivery of merchandise and in inventory, save time required in storing and removing goods, and at the same time assure a neat and attractive display of the goods.

5 A part of the advantages of my invention may be obtained, if desired, by making the trays narrow enough to be conveniently handled, but wide enough to accomodate more
10 than a single file of the merchandise. Also the lateral walls *b* and *c* may be made high enough to retain in single file a second or third tier of cans, if it is desired to pile the cans upon each other.

15 Since certain changes may be made in the above articles and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description
20 or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the
25 generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

Having described my invention, what I
30 claim as new and desire to secure by Letters Patent is:

1. A system for storing and displaying merchandise comprising a substantially horizontal open shelf and a series of display trays
35 on said shelf, each tray having a substantially open front and comprising a base adapted to slide upon said shelf and a smooth upper surface, side walls adapted to retain in single file a series of articles placed in said tray, a
40 rear wall and means by which each said tray may be moved and tilted upon said shelf for the purpose of causing said articles to slide forward upon said tray.

2. A system for storing and displaying
45 merchandise comprising a substantially horizontal open shelf and a series of display trays of various widths on said shelf, each tray having a substantially open front and comprising a base adapted to slide upon said shelf
50 and a smooth upper surface, side walls adapted to retain in single file a series of articles placed in said tray, a rear wall and means by which each said tray may be moved and tilted upon said shelf.

15 In testimony whereof I affix my signature.
DICK B. WILLIAMS.