March 15, 1960 G. L. FREEDMAN 2,928,553

ADJUSTABLE DIVIDER FOR DISPLAY RACKS

Filed June 6, 1958

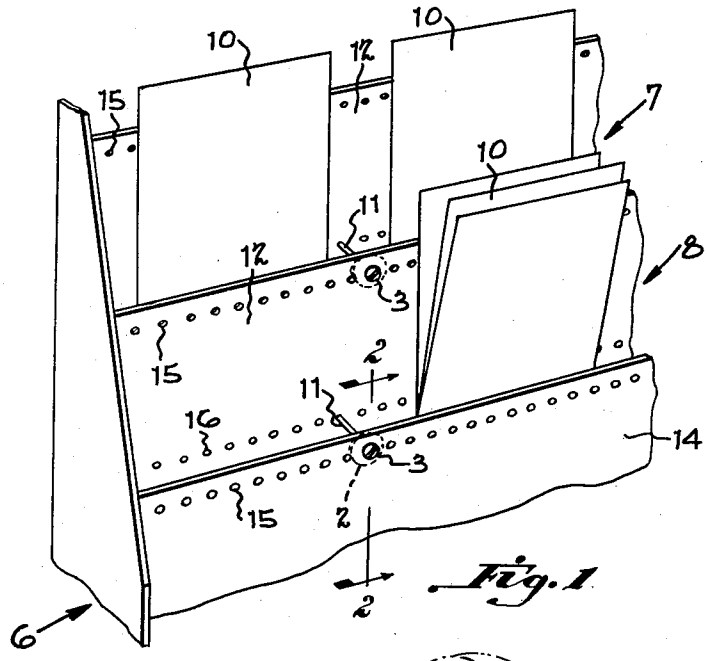


Fig. 1

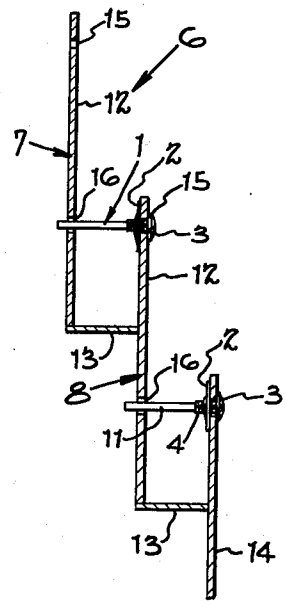


Fig. 2

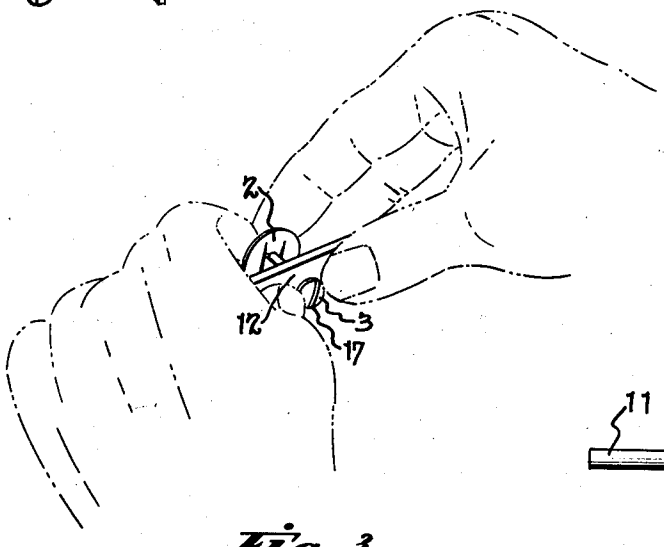


Fig. 3

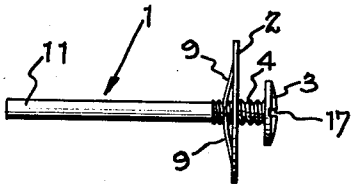


Fig. 4

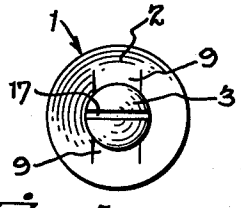


Fig. 5

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United States Patent Office 2,928,553
Patented Mar. 15, 1960

2,928,553

ADJUSTABLE DIVIDER FOR DISPLAY RACKS

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Application June 6, 1958, Serial No. 740,238

6 Claims. (Cl. 211—137)

This invention relates to display racks and is particularly directed to a divider for use in separating the long shelves of magazine and record display racks into transverse sections of adjustable lengths.

Display racks of the type to which the present invention is generally directed are commonly found in record and novelty stores and comprise a bank of horizontal shelves arranged in parallel, offset, or staggered relationship one above the other. The rear wall of each shelf extends upwardly from its associated base to a point above the base of the adjacent higher shelf so as to simultaneously provide a back wall for the lower shelf and a front wall for the adjacent higher shelf. Each shelf unit thus includes a base, a front wall, and back wall defining a rectangular trough in which records or other articles rest on edge. Many stores include a department which specializes in the sales of records, magazines, and similar thin, flat merchandise which can be displayed to best advantage when on edge.

The function of the display rack is threefold, first, to provide an attractive, economical method of filing and storing items so that they may be easily located; secondly, to create "impulse sales" by allowing a potential customer to view the articles involved as he moves through the store; thirdly, to provide a means for customer self-service.

The "impulse sales" feature is extremely important as the kind of articles generally sold in racks of the type described are of the low priced variety which the customer may purchase from visual contact alone, without having had the intention of making the purchase before entering the store. Therefore it is most important for the store owner to facilitate selection by arranging the records or merchandise in an orderly manner for the customer's convenience.

Self-service racks of the class referred to have long posed a problem in regard to the arrangement or display of articles in the racks since most customers are very careless in removing and replacing articles and in a short time the display becomes completely disarranged with the articles haphazardly placed in the racks, many of them overlapping one another. This constant customer shuffling not only makes a display less neat and decorative, but also destroys a main function of the display rack which is to display as many of the complete articles as possible side by side in a readily accessible position. In addition, the merchandise may become scuffed or marred if no means are utilized to keep the public from scraping and shuffling it up and down the entire length of a long display rack. For instance, should a carboard record jacket become scuffed or bent at the corners, it immediately appears "used" or "old" and will be ignored by potential customers even though the record inside is in perfect condition.

In the past, various permanent and temporary divider means have been utilized to keep the articles separated so that the customers will not be able to "shuffle" the articles along the length of the shelf but instead will be

confined to browsing and inspecting the articles in individual, transversely divided compartments. The permanent or fixed divider means are relatively expensive and are disadvantageous since they cannot be adjusted to varying inventories. The temporary dividers which have previously been proposed have also been less than satisfactory because they have been difficult to install or change or because they do not stay in place after installation.

This invention is directed to a divider consisting of the combination of a channel shaped rack having a bottom and apertured front and back walls, an elongated pin for selective insertion through a pair of the apertures (one of the pair being formed in the front wall and the other in the back wall) and a means to lock the pin in place after being so inserted. The pin must be of sufficient length to reach through an aperture in the front wall of the rack and extend transversely across the width of the bottom of the rack and through a corresponding aperture in the rear wall of the rack so as to divide the rack into transverse sections. The preferred embodiment of the invention discloses a threaded pin member with a screw head. This member is inserted in the rack in the manner discussed above, and a Tinnerman nut is used to lock the pin into the rack. A more exact description of this operation will be discussed in detail in the specification.

The advantage of the instant combination is that the resulting divider may be quickly installed but requires a comparatively long time for removal thereby effectively discouraging pilfering or loss. Moreover, by providing a plurality of apertures in the rack walls, the divider spacing can readily be varied by selection of the pair of apertures through which the divider is to be inserted.

The adjustable feature of the device provides a greater utility for the display racks by allowing for them to be used interchangeably for tape, 45, 33⅓, and 78 r.p.m. records, all of which are different sizes.

As mentioned before, the divider may also be used in a rack used for displaying any rectangular articles of medium width such as magazines, books, newspapers, etc.

Another object of this invention is to provide a divider means which occupies a minimum amount of space so as to allow a maximum area for distribution of articles to be displayed.

A further object of this invention is to provide a divider means which is sturdy and long lasting in construction and will not become deformed or rendered useless by repeated usage.

Other purposes of this invention are to provide a cheap yet attractive and modern looking means for dividing display rack shelves into transverse sections.

For the attainment of these and such other objects as may appear or be pointed out, I have shown an embodiment of my invention in the accompanying drawing, wherein:

Figure 1 is a perspective view of a display rack provided with divider members constructed in accordance with the present invention.

Figure 2 is a cross sectional view taken along the line 2—2 of Figure 1.

Figure 3 is a partially diagrammatic perspective view showing the manner in which a divider is installed.

Figure 4 is a side elevational view of the divider.

Figure 5 is an end view of the divider.

As shown in Figure 2, a preferred form of the invention comprises the combination of an apertured display rack 6, an elongated pin member 1 and a Tinnerman, or speed-nut 2. A portion of the pin adjacent one end is screw threaded as at 4 and is provided with a screw head 3. Tinnerman nut 2 is formed of resilient metal

and includes two spring arms 9 struck from the main body of the nut, the adjacent ends of arms 9 are provided with recesses for engagement with threads 4.

One form of rack adapted for use with the divider pin is shown in Figures 1 and 2. As there shown, a record display rack 6 comprises a plurality of shelves such as shelves 7 and 8 in which are displayed a number of phonograph records 10. Two of the divider pins are shown installed in Figure 1 at 11.

As can be seen in Figures 1 and 2, shelves 7 and 8 are arranged in parallel offset, or staggered relationship one above the other. It will be noted that vertical wall 12 of shelf 8 extends above the horizontal bottom wall 13 of the adjacent upper shelf so that a trough is formed in which the records rest. Each vertical wall thus forms a rear wall for one shelf and a front wall for the next higher shelf.

With particular reference to Figure 1, it is seen that the vertical wall 12 of each shelf (except wall 14) is supplied with two parallel transversely extending lines of apertures 15 and 16. One of the lines of apertures is placed near the upper portion of wall 12 and the other line near the lower portion of wall 12 in alignment with the line of apertures in the upper portion of the adjacent lower wall. The apertures are positioned so that each aperture in line 15 is in registry with a corresponding aperture in line 16 of the next highest shelf wall. In other words, the lines of apertures are lined up one behind the other so as to form a series of pairs of apertures.

As is disclosed in Figure 3, the divider pin is installed by first partially inserting the pin (from the front) through one of the apertures 15 in the portion of a vertical wall 12 forming the front wall of a shelf. A Tinnerman nut 2 is then pressed onto the pin and then the pin is forced inwardly until its inner end resides in an aperture 16 of the rear wall. Inward movement of the pin is limited by the engagement of screw head 3 with wall 12. The Tinnerman nut is then pressed toward screw head 3 until it fits snugly against the inside face of wall 12.

When in place, spring arms 9 of the Tinnerman nut engage screw threads 4, tightly gripping wall 12 between the faces of the nut and screw head 3 thereby locking the pin portion in the rack. As can be seen in Figure 5, screw head 3 is provided with a slot 17 so that when it is desired to remove the divider pin the pin may be "unscrewed" through the Tinnerman nut with a screw driver or coin.

As can be seen in Figure 1, the pins 11 may be installed so as to divide the shelves into as many transverse sections as there are pairs of perforations and of course the divided sections may be of many different sizes. The division of the display rack into separate sections allows for cataloguing and grouping of the merchandise displayed so that many customers may browse at the rack at one time, each of them leafing through the merchandise in a separate compartment.

It will be appreciated that while the Tinnerman nut may be quickly and easily snapped onto the divider pin, it takes a considerably longer time to "unscrew" it, therefore effectively discouraging pilfering. Thus while the divider may be quickly installed without the aid of any tool, a screw driver, blade, coin or the like must be used to detach the device. Moreover, once it is in place, the divider pin occupies a negligible amount of space, thereby allowing for maximum availability of shelf space for the articles displayed.

In the preferred embodiment of the invention, it is disclosed that the Tinnerman nut is disposed between the front and back walls of the rack so that it cooperates with the screw head of the divider pin and locks the pin in the rack by pressure against the rear face of the front wall of the rack. In conjunction with this type of operation, it has been disclosed that the portion of the pin adjacent the screw head is threaded. It will be readily appreciated that the Tinnerman nut may be used at the opposite end of the pin so as to abut the rear face of the rear wall of the rack; and if such use is desired, then the opposite end of the divider pin may be screw threaded instead of the end adjacent the head.

It will further be appreciated that the instant invention contemplates other dividing means than a threaded pin cooperating with a Tinnerman nut. For instance, a shaped pin may be used to coact with specially designed apertures so that upon the pins being inserted through a selected pair of the apertures it need only be rotated 90° or 180° thus causing the shaped portion of the pin to rotate out of alignment with the specially formed apertures so that the shaped portion will abut the shoulders of the apertures thereby locking the pin in the rack.

Having described my invention, I claim:

1. As a new article of manufacture, a display device comprising bottom, front and back walls, each of said walls having a plurality of apertures formed therein, each aperture formed in said front wall being aligned with an aperture formed in said back wall, said display device having an elongated divider pin for insertion through a pair of said aligned apertures and a speed-nut, said pin being provided with a screw head, a portion of said pin adjacent said screw head being screw threaded whereupon said speed-nut may be utilized to mount said divider pin in said rack thereby effectively dividing said rack into transverse sections.

2. As a new article of manufacture, an adjustable divider display device having bottom, front and back walls into transverse sections, each of said front and back walls having a plurality of apertures formed therein, said apertures being formed so that each aperture formed in the back wall of said rack has an axis common to an aperture formed in the front wall of said rack so as to form a plurality of pairs of aligned apertures, said device having a screw threaded divider pin for selective insertion through one of said pairs of apertures and a speed-nut to lock said divider pin into said rack upon insertion of said pin in one of said pairs of apertures so as to divide said rack into transverse sections.

3. A display rack comprising two spaced vertical walls each of said walls having an aperture formed therein, the aperture formed in each of said walls being designed in alignment with the aperture in the other of said walls, a horizontal shelf member joining the lower portions of said walls, a screw threaded elongated divider pin for insertion in said apertures, a Tinnerman nut adapted to fit over said pin to lock said divider pin into said rack upon insertion of said pin through said apertures so as to divide said rack into transverse sections.

4. A display rack comprising a plurality of adjacent shelves disposed one above the other, each shelf comprising two spaced vertical walls each of said walls having an aperture formed therein, the aperture formed in each of said walls being designed in alignment with the aperture in the other of said walls, a horizontal shelf member joining the lower portions of said walls, a screw threaded elongated divider pin for insertion in said apertures, a Tinnerman nut adapted to fit over said pin to lock said divider pin into said rack upon insertion of said pin through said apertures so as to divide said rack into transverse sections.

5. A display rack comprising a plurality of adjacent shelves one above the other in parallel offset relationship, each shelf comprising front and back spaced vertical walls, each of said walls having a pair of apertures formed therein, one of said apertures being formed adjacent the upper portion of said wall the other of said apertures being formed adjacent the lower portion of said wall, the aperture adjacent the upper portion of said front wall being disposed in alignment with the aperture formed adjacent the lower portion of said back wall so as to form a pair of aligned apertures, a hor-

izontal shelf member joining the two walls at a point adjacent the lower portion of said back wall and intermediate the upper and lower portions of said front wall, an elongated pin for insertion through said pair of aligned apertures and means for securing said pin in said walls upon being so inserted.

6. As a new article of manufacture, a display rack comprising, bottom, front and back walls, each of said front and back walls having at least one aperture formed therein in alignment with an aperture in the other of

said walls so as to form at least one pair of apertures, said display rack device having an elongated pin for transverse insertion through said pair of apertures, a portion of said pin being screw threaded, and means to lock said divider pin transversely in said rack when inserted through said pair of apertures.

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