March 17, 1942. W. P. ROCKER 2,276,795

DISPLAY STAND

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Fig. 1

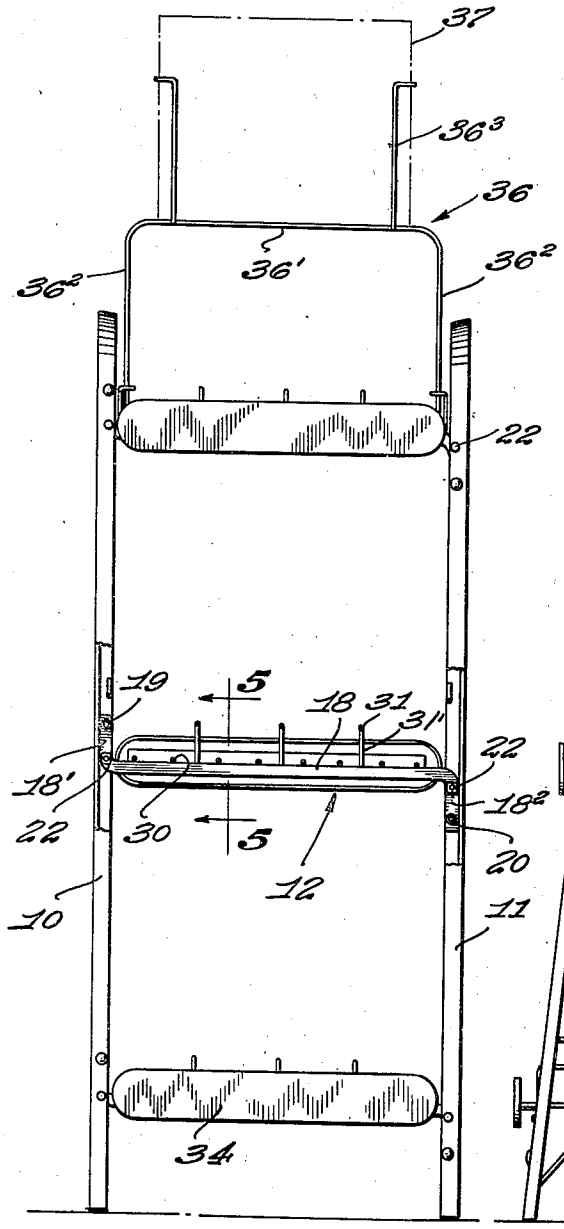
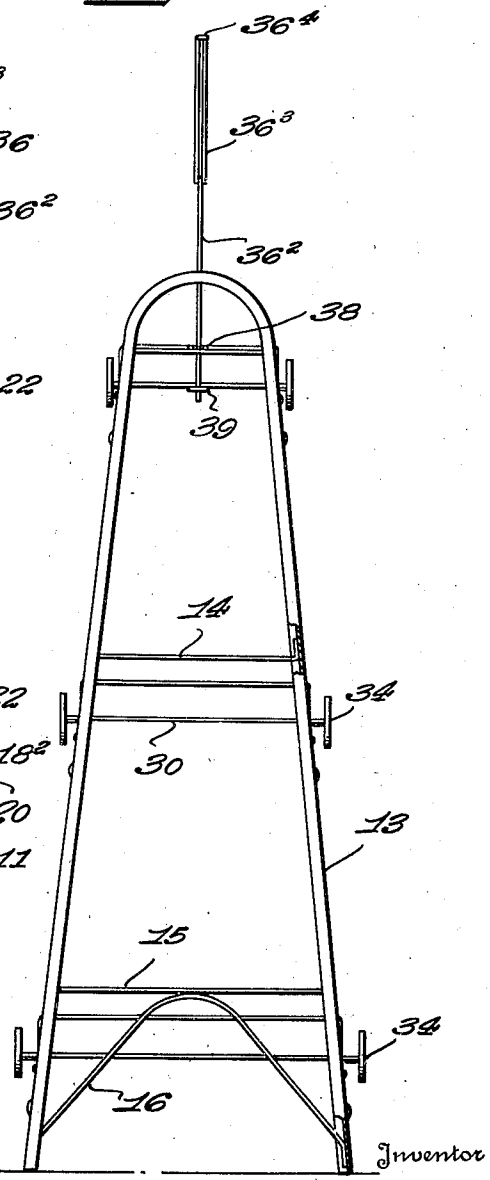


Fig. 2



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Fig. 3

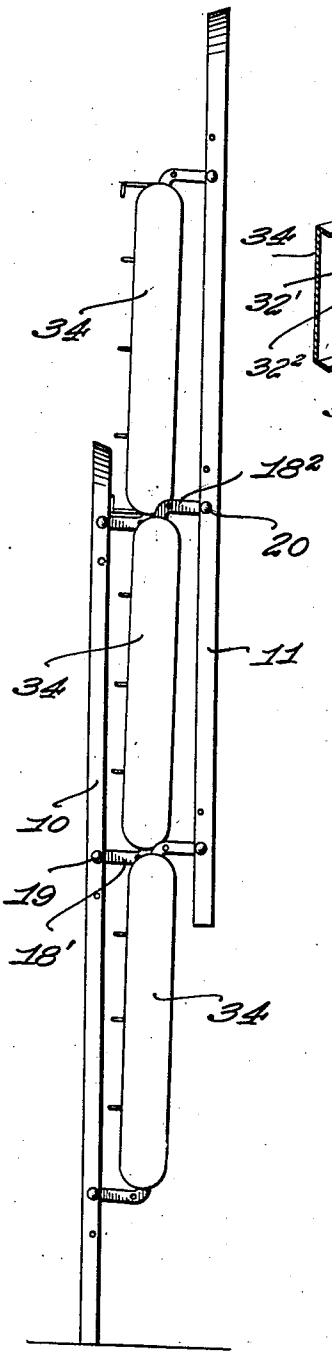


Fig. 4

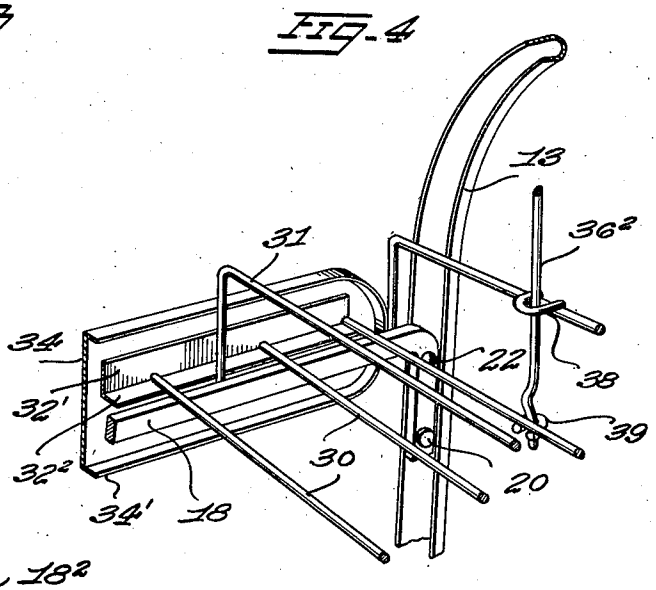
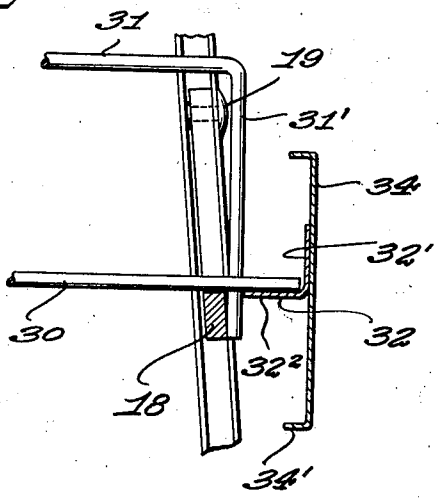


Fig. 5



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UNITED STATES PATENT OFFICE

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DISPLAY STAND

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Application December 5, 1940, Serial No. 368,704

5 Claims. (Cl. 211—132)

The present invention relates to display stands and particularly to display stands of collapsible type which, when erected, may be employed to display in an attractive manner goods and wares of various types in stores, on sidewalks, and in other prominent locations and which, when collapsed, can be easily carried and can be stored in a very small space.

The collapsible display stand is by no means new and many types have heretofore been designed or suggested. The present invention, however, comprises an improvement upon all known, previously designed or used stands of this general character, embodying a number of details of construction which render it more suitable for the display of articles of various types, more attractive in appearance, more economical to construct, and less bulky when collapsed. Within the import of the invention certain of its details may be modified, particularly in adapting the stand for the display of articles of different types and sizes, but the essential features of the invention will be apparent from an inspection of the accompanying drawings in which a preferred embodiment is disclosed.

In the drawings:

Figure 1 is a front elevation of the stand as it appears when fully erected, portions thereof being broken away to more adequately disclose certain constructional features;

Figure 2 is a side elevation of the stand, likewise partially broken away;

Figure 3 shows in front elevation the stand of Figures 1 and 2 but in its collapsed condition;

Figure 4 is a perspective view of portion of the stand, as erected, showing certain structural elements thereof upon a larger scale; and

Figure 5 is a section on line 5—5 of Figure 1.

The major portions of the stand comprise vertical frames 10 and 11, the frame 10 being hereinafter designated the first vertical frame and the frame 11 the second vertical frame, and three horizontal frames, one of which is generally indicated at 12 in Figure 1. It will be understood, of course, that the frame elements just referred to will not be always vertical and horizontal, respectively, but, for the sake of simplicity of description, they will be so referred to, the stand being described as it appears in Figures 1 and 2 of drawings, ready for use.

The vertical frames 10 and 11 are identical in structure, each including a sheet metal member 13, channel-shaped in cross-section as shown clearly in Figure 4, and curved at its midpoint, as shown in Figure 2, so that each frame may be said to be generally in the form of an inverted U, the legs of which are downwardly and outwardly inclined from its curved midpoint in order that the stand may resist overturning due to some impact against its front. Stiffening elements are indicated at 14, 15 and 16, these elements being preferably in the form of wires or rods the ends of which are welded to the opposite legs 13 of the vertical frames.

The horizontal frames 12 are, in the case of the stand illustrated, three in number, and each horizontal frame comprises two parallel frame members 18, each such member having means associated therewith for connecting one end to one vertical frame for pivotal movement about an axis above the horizontal frame and means associated therewith for connecting the other end to the second vertical frame for pivotal movement about an axis below the horizontal frame. Thus, the horizontally disposed member 18 is provided with an upturned end 18′ connected to the first vertical frame 10 by a pivot 19 and the other end of the horizontal member 18 is connected by a downturned end portion 18^2 and a pivot 20 to the second frame 11. Normally, when the stand is in the erect position in which it is shown in Figures 1 and 2, locking bolts 22 passing through registering openings formed in the upturned and downturned portions of the horizontal frame members 18 and in the legs of the end frames, respectively, lock the various frame members against relative movement so that the stand will remain as shown in Figures 1 and 2 under all conditions. By removing locking bolts 22, however, the horizontal frames will then be free to rotate about pivots 19 and 20 so that the second vertical frame may be lifted with respect to the first vertical frame and the stand collapsed, as shown in Figure 3. The reverse is of course not true, the "means" 18′ and 18^2 preventing lifting movement of the first vertical frame relatively to the second vertical frame, even though locking bolts 22 may have been removed.

As a result of the construction described, the horizontal frames will move into substantially a common vertical plane intermediate the vertical frames when the stand is fully collapsed, as shown in Figure 3, thus minimizing the overall width of the collapsed stand and likewise causing the article supporting members mounted upon the horizontal frames, to be effectively protected.

The article supporting members which are carried by the horizontal frames may convenient-

ly comprise horizontally disposed rods or wires 30 arranged in parallelism with each other and at right angles to the members 18 and secured to the upper edge surfaces of these members 18 in a suitable manner as by welding. Additional transversely extending elements 31 with downturned ends 31' are likewise welded to the frame members 18, these members dividing the space above the article supporting elements 30 into smaller spaces, four such spaces being shown in Figure 1, so that four different types of articles may be displayed and maintained separated from each other, the bottoms of such articles of course resting upon the transversely extending elements 30.

As will be observed from an inspection of Figures 4 and 5, the elements 30 have their ends projecting beyond the horizontal frame members 18 to which they are secured, and attached as by welding to the ends of these elements are angles 32 disposed in parallelism to the adjacent members 18, respectively. Each angle 32 has a vertical web 32' as well as a horizontal web 32^2 and the vertical web serves as a support for an elongated sheet metal plate 34, substantially coextensive in length with the adjacent frame member 18 and provided with an inturned flange 34'. These plates 34 not only serve as stiffening elements imparting added rigidity to the horizontal frames, but likewise provide elongated surfaces upon which advertising matter may be either directly printed or attached as by adhesives. At the base of each series of articles supported upon the article supporting elements 30, therefore, may be fixed identifying legends, prices, or other desired information, all of which renders the stand more suitable for many uses, particularly when employed in a self-service store or the like.

A further means for supporting an advertising card is indicated generally at 36 this member comprising a horizontal portion 36' having downturned parallel supporting legs 36^2 and upwardly extending members or arms 36^3 each comprising two parallel rod-like elements interconnected at their upper ends, as by the horizontally extending U-shaped portion 36^4 and having their lower ends attached as by welding to the member 36'. A card indicated in chain lines at 37 may be slipped downwardly intermediate the parallel elements 36^3 and will be held in the position in which it is shown in Figure 1, the bottom of the card resting upon the horizontal element 36'. The lower ends of the legs 36^2 of the card support 36 are received within U-shaped loops 38 and 39, two of which are clearly shown in Figure 4 and which are placed one above the other as shown to provide registering apertures for the reception of the legs 36^2. The card supporting frame 36 is therefore readily removable and must of necessity be removed when the stand is collapsed.

All of the parts of the stand are preferably formed of metal and sheet metal is utilized in the fabrication of the vertical frames and the plates 34, thus minimizing the cost of construction.

It is of advantage to so fabricate the stand that the several shelves project horizontally beyond the legs of the vertical frames, as shown in Figure 2. Goods or merchandise placed on the shelves and occupying positions at the ends thereof will be prominently displayed and more easily seen than would be the case were the shelves of less width. Likewise it is the lateral extension of each shelf beyond the vertical frames which makes it possible to make use of such effectively positioned plates as those indicated at 34 in the drawings.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A display stand comprising, in combination, spaced substantially parallel vertical frames, spaced parallel horizontal frames extending between said vertical frames, each of said horizontal frames being provided at one side with an upward extension overlapping the adjacent vertical frame and pivotally connected therewith at the end of said extension, a similar downward extension provided on each of said horizontal frames at the side opposite the first named extension, overlapping the other of said vertical frames and pivotally connected at its end with said last named vertical frame, whereby the stand may be collapsed by lifting said second vertical frame relatively to the first vertical frame, bringing the horizontal frames into substantial alignment in a plane intermediate the vertical frames, and means for detachably securing the overlapping extensions of a horizontal and a vertical frame together to prevent collapse of the stand.

2. A display stand comprising, in combination, spaced substantially parallel vertical frames, spaced parallel horizontal frames extending between said vertical frames, each of said horizontal frames being provided at one side with an upward extension overlapping the adjacent vertical frame and pivotally connected therewith at the end of said extension, a similar downward extension provided on each of said horizontal frames at the side opposite the first named extension, overlapping the other of said vertical frames and pivotally connected at its end with said last named vertical frame, whereby the stand may be collapsed by lifting said second vertical frame relatively to the first vertical frame, bringing the horizontal frames into substantial alignment in a plane intermediate the vertical frames, and means for securing one end of at least one of said horizontal frames to the adjacent vertical frame at the base of one of said extensions, for locking the stand in uncollapsed display position.

3. A display stand comprising, in combination, a pair of spaced substantially parallel vertical frames constituting the side frames and supporting legs of the stand, a plurality of spaced parallel horizontal frames constituting trays extending between said side frames, each of said horizontal frames including a pair of spaced substantially Z-shaped bars, the oppositely extending arms of each of the bars being pivotally connected with the adjacent vertical frames, whereby the stand may be collapsed by lifting said second vertical frame relatively to the first vertical frame, bringing the horizontal frames into substantial alignment in a plane intermediate the vertical frames, and means for securing at least one of said bars to one of said vertical frames at a point on one of said oppositely extending arms remote from the pivot point at the end thereof, for locking the stand in uncollapsed display position.

4. A display stand comprising, in combination, a pair of spaced substantially parallel vertical frames constituting the side frames and supporting legs of the stand, a plurality of spaced parallel horizontal frames constituting trays extending between said side frames, each of said horizontal frames including a pair of spaced substan-

tially Z-shaped bars, the oppositely extending arms of each of the bars overlapping the adjacent side frame and pivotally connected therewith at the ends of said arms, whereby the stand may be collapsed by lifting one vertical frame relatively to another vertical frame, bringing the horizontal frames into substantial alignment in a plane intermediate the vertical frames, and fastening elements for securing said Z-shaped bars to said side frames at the points of intersection of said arms with the intermediate portions of said bars, whereby the stand is locked in uncollapsed display position.

5. A display stand comprising, in combination, a pair of spaced substantially parallel vertical frames constituting the side frames and supporting legs of the stand, a plurality of spaced parallel horizontal frames constituting trays extending between said side frames, each of said horizontal frames comprising a pair of bars the ends of which are pivotally connected with the adjacent side frames, a plurality of spaced transverse rods secured to said bars, certain of said rods forming the base of said tray and others disposed in a higher plane forming partitions for dividing the tray into a plurality of compartments for the support and display of articles, and releasable means for locking the horizontal frames against pivotal movement relatively to the vertical frames.

WILLIAM PARKS ROCKER.