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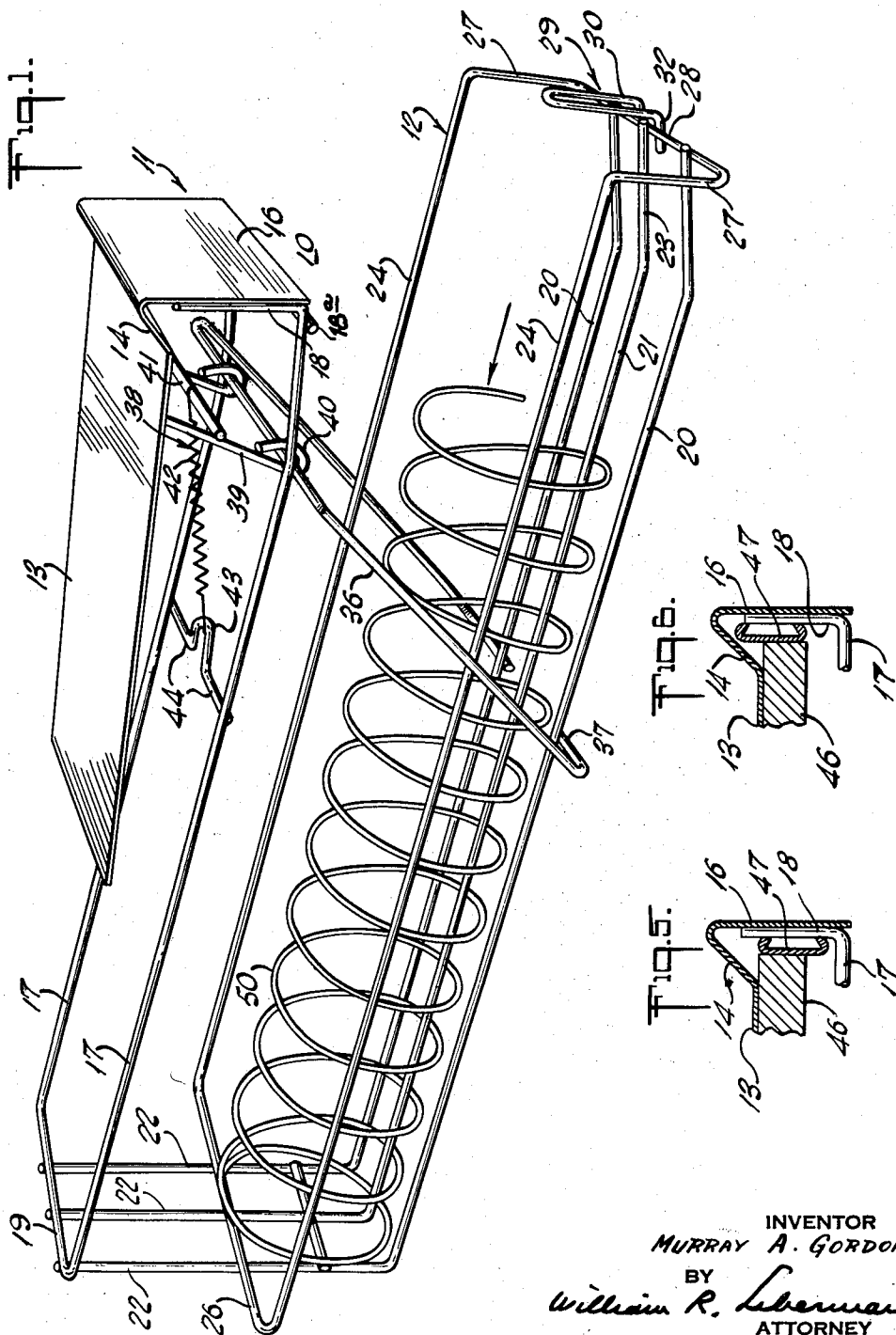
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2,954,128

ARTICLE DISPLAY AND DISPENSING DEVICE

Filed May 20, 1959

2 Sheets-Sheet 1



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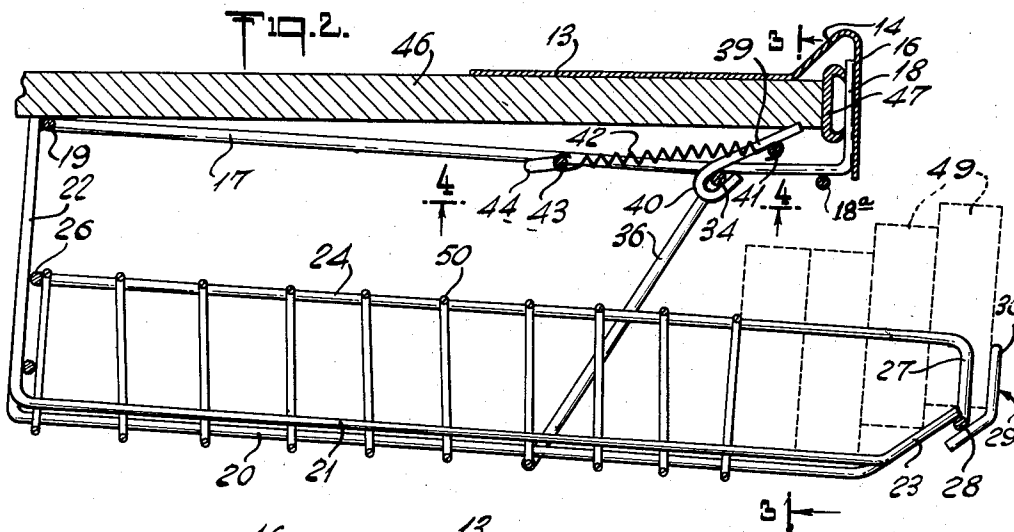
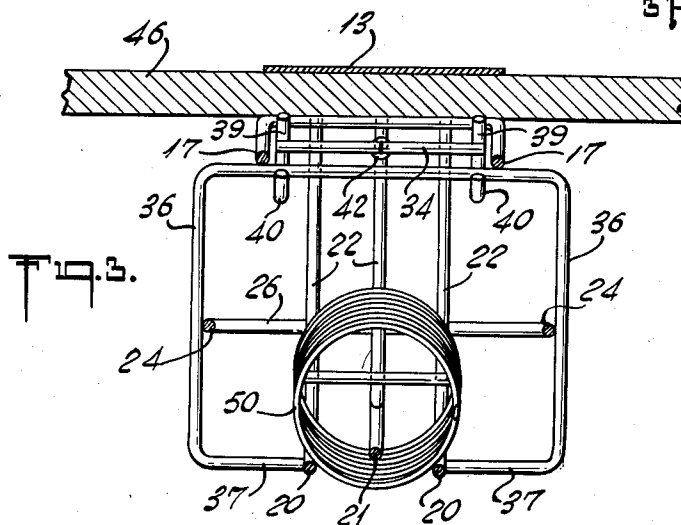
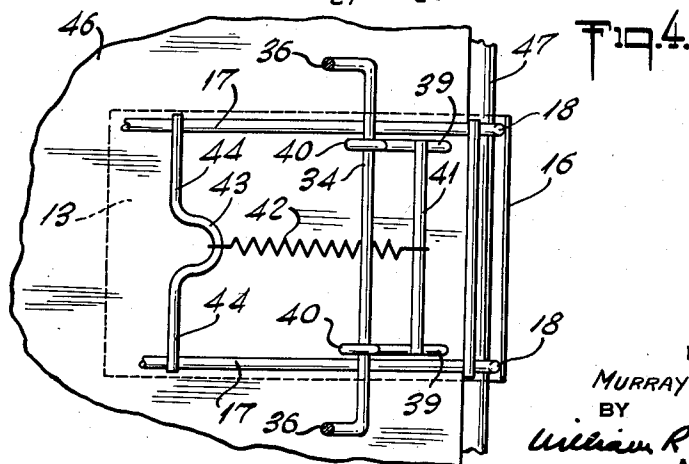
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ARTICLE DISPLAY AND DISPENSING DEVICE

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9 Claims. (Cl. 211-49)

The present invention relates generally to an improved article dispensing device, and in particular it relates to an improved dispensing tray or rack which may be readily separably mounted on a shelf or the like.

The general method for displaying and dispensing merchandise in stores, particularly of the self-service type such as grocery stores and supermarkets, general stores, and the like, is to support and exhibit the merchandise on shelves usually arranged in regularly spaced islands and along the walls of the store. These shelves are fixed in position and are provided with price tag-carrying mouldings along their outer edge. While the aforesaid arrangement is usually quite adequate, it offers little versatility and flexibility. Often, by reason of the size and configuration of the dispensed merchandise, the shelves can be only partially filled, leading to inefficiency in space utilization and in convenience of access. There are many other disadvantages and drawbacks accompanying the aforesaid display and dispensing arrangement.

It is, therefore, a principal object of the present invention to provide an improved dispensing device.

Another object of the present invention is to provide an improved device for the display and dispensing of packaged articles.

Still another object of the present invention is to provide an improved article display and dispensing device which may be easily and readily separably mounted on a shelf without interfering substantially with the normal use of the shelf.

A further object of the present invention is to provide an improved article display and dispensing device which may be readily separably mounted on a shelf whether in a loaded or unloaded condition.

A still further object of the present invention is to provide an article display and dispensing device of the above character which is of simple, rugged and inexpensive construction and is highly versatile, flexible and easy to use.

The above and other objects of the present invention will become apparent from a reading of the following description, taken in conjunction with the accompanying drawings, wherein

Figure 1 is a front perspective view of an improved display and dispensing device embodying the present invention;

Figure 2 is a front elevational view thereof mounted on and depending from a support shelf, the articles which are contained therein and to be dispensed therefrom being illustrated in broken lines;

Figure 3 is a sectional view taken along line 3-3 in Figure 2;

Figure 4 is a sectional view taken along line 4-4 in Figure 2;

Figure 5 is a transverse fragmentary sectional view of the dispensing device clamping bracket applied to a

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supporting shelf provided with a tag retaining moulding projecting below the level of the support shelf; and

Figure 6 is a view similar to Figure 5, the tag moulding, however, projecting above the level of the support shelf.

In a sense, the present invention contemplates the provision of an improved display and dispensing device of the character described, comprising a clamp bracket including confronting upper and lower arms joined by a knee portion along their leading edges and being resiliently urged toward each other, said clamp bracket being adapted to embrace a shelf between said arms, and a longitudinally extending tray disposed below and secured to said bracket.

According to a preferred form of the present invention, the clamp bracket includes an upper arm-defining plate having an upwardly and forwardly inclined front leg portion terminating in a depending wall. A pair of rods, defining the bottom bracket arm, extend rearwardly from the lower edge of the front wall and are joined by a cross arm at their trailing end. The tray is formed of wire rods and includes a base consisting of longitudinally extending laterally spaced rods terminating in upright legs joined to the rear cross piece of the bracket rods. The tray sides are defined by a pair of laterally spaced rods joined at their rears by a cross rod secured to the base rod uprights and terminating at their front by depending legs joined by a cross rod joined to the leading ends of the base rods. A rectangular wire frame depends from the forward section of the bracket to about the mid-point of the tray base and includes an upper cross arm to which is pivoted a forwardly and upwardly projecting latch member spring urged to its upper position.

Referring now to the drawings, which illustrate a preferred form of device constructed according to and embodying the present invention, reference numeral 10 generally designates the improved display and dispensing device which comprises a shelf engaging clamp bracket 11 and a longitudinally extending trough shaped wire tray 12 disposed below bracket 11. Bracket 11 includes an upper, rearwardly directed clamp plate 13 of rectangular configuration having a forwardly and upwardly inclined leading section 14 terminating in a depending vertical knee defining front wall 16. The lower clamp arm of bracket 11 is defined by a pair of parallel, laterally spaced, longitudinally extending wire rods 17 terminating at their front ends in upright legs 18 which are secured to the rear face of knee defining front wall 16, as by welding or the like. The trailing ends of the rods 17 are connected by a transverse cross-rod 19 preferably formed integral therewith. It should be noted that the trailing portions of the clamp plate 13 and clamp rods 17 are resiliently urged toward each other by reason of the flexibility of the material forming them, and that they normally converge rearwardly.

Tray member 12 is fabricated of wire rods and includes a base formed of a pair of outer laterally spaced longitudinally extending parallel rods 20 and an intermediate longitudinally extending rod 21 located between rods 20. Rods 20 and 21 are substantially horizontally disposed and terminate at their trailing ends in upright legs 22, the upper ends of which are secured as by welding to cross-rod 19 of bracket arms 17, 17. The front sections 23 of base rods 20 and 21 are upwardly and forwardly inclined.

The sides of tray 12 are defined by a pair of longitudinally extending, laterally spaced parallel side rods 24 located above and laterally outside base rods 20, and are joined at their trailing ends by an integrally formed cross-rod 26 which is weld secured across to the base

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upright legs 22. Depending from the leading ends of side rods 24 are vertical depending legs 27, the lower ends of which are joined by an integrally formed cross rod 28 which is weld fastened to the underfaces of the forward ends of the rods 20 and 21. A wire abutment member 29 of inverted U-shaped configuration projects above cross rod 28 and is located between the ends thereof. The vertical arms 30 of abutment member 29 terminate at the bottom in rearwardly, downwardly directed legs 32 weld secured to the underface of cross rod 28. A soft helical compression spring 50 is located in the tray 12 and registers with intermediate rod 21 of base 12, the trailing end of the spring abutting uprights 22 and cross rod 26. In its normal expanded form, the spring 50 extends for substantially the full length of the tray 12.

A wire frame of substantially rectangular configuration is provided, which frame includes an upper cross piece 34 extending transversely across and weld fastened to the underfaces of bracket rods 17 rearwardly of the leading ends thereof. Depending from the ends of the cross piece 34 and integrally formed therewith are a pair of parallel, rearwardly and downwardly inclined arms 36 which terminate in inwardly directed legs 37 which are weld fastened to the underfaces of corresponding base rods 20 approximately intermediate the ends thereof.

A latching member 38 is provided, which includes a pair of parallel laterally spaced arms 39 terminating at their lower ends in loop or eye portions 40 which rotatably register with cross piece 34 adjacent to the inner faces of bracket rods 17. A cross rod 41 extends between and is weld fastened to the latch arms 39 below the free ends thereof. Latch arms 39 are normally forwardly, upwardly directed and resiliently urged to an uppermost position wherein the free ends abut the underface of the clamp plate 13 by a helical tension spring 42. One end of tension spring 42 engages cross rod 41 and the other end thereof engages the forwardly disposed base of a U-shaped depression 43 formed in a cross piece 44 extending between and weld fastened to the underfaces of bracket rods 17 posterior to cross-piece 34. Latch member 38 is swingable against the pull of the spring 42 to a lowermost position substantially at the level of bracket rods 17, in which position the leading ends of the latching arms are spaced a distance of at least $\frac{5}{16}$ " from the upright legs 18 and preferably less than $\frac{3}{8}$ ", so as to rest on cross bar 18a suitably secured to the underside of rods 17 rearward of legs 18, cross bar 18a functioning to prevent latch arms 39 from swinging below the level of rods 17 (see Figure 2).

In applying the improved dispensing and display device to a shelf 46, clamp plate 13 is sprung upwardly and the bracket 11 slid transversely over the leading edge of a shelf 46, bracket arms 17 underlying shelf 46 and bracket plate 13 overlying shelf 46. Bracket plate 13 is then released and bracket 11 and tray 12 are pushed to their rearmost position along the shelf 46 until the rear faces of upright legs 18 abut the tag carrying moulding 47 carried along the forward edge of the shelf 46. As the device 10 is pushed rearwardly along the shelf 46, the latching member is urged relatively forwardly and downwardly and freely slides along the shelf underface. However, when the device 10 reaches its innermost mounted position, the latching arms 39 releasably lock it in this position by reason of the free ends of the arms 39 effecting a bite into the shelf underface, which engagement is tightened upon the forward movement of dispensing device 10.

When the dispensing device 10 is in its mounted position, as aforesaid, plate 13 lies substantially flatly along the top face of the shelf 46, thus not interfering with the use or loading of the shelf. Moreover, where the tag carrying moulding 47 extends above the level of the shelf 46, as seen in Figure 6 of the drawings, it registers with the downwardly directed recess separating bracket plate

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13 from front wall 16. On the other hand, when the moulding 47 projects below the shelf 46, there is sufficient clearance to permit the free rearward passage of the bracket rods 17, as illustrated in Figure 5 of the drawings. In removing the dispensing device 10 from the shelf 46, the latching member is manually disengaged from its "bite" into the underface of shelf 46 and then swung downwardly to its lowermost position against the tension of the spring 43, whereupon the device 10 may be slid forwardly out of engagement with shelf 46.

The tray 12 is loaded by inserting successive articles 49 into the front of the tray behind the abutment 29 and pushed rearwardly to compress the spring 33. Sufficient articles 49 are inserted to completely load tray 12 and fully compress spring 33. As an article as 49 is removed from the front of tray 12, the trailing stack of articles 49 is pushed forward by the normal expansion of spring 33 until the next leading article 49 abuts member 29 and is ready for removal.

While there has been described and illustrated a preferred embodiment of the present invention, it is apparent that numerous alterations, omissions and additions may be made without departing from the spirit thereof.

I claim:

1. An improved display and dispensing device of the character described, comprising a clamp bracket including confronting upper and lower arms joined by a knee portion along their leading edges and being resiliently urged toward each other, said clamp bracket being adapted to embrace a shelf between said arms, a latching arm pivotally mounted on said lower bracket arm posterior to the leading edge thereof and having a forwardly directed free end swingable toward and away from said bracket upper arm, spring means urging said latching arm to its upper position and a longitudinally extending tray disposed below and secured to said bracket.

2. An improved display and dispensing device in accordance with claim 1, wherein the free end of said latching arm is spaced at least $\frac{5}{16}$ " from the leading edge of said bracket arms.

3. An improved display and dispensing device comprising an upper rearwardly extending plate provided with a depending front wall, a pair of laterally spaced parallel first rods secured to and projecting rearwardly from the lower portion of said front wall, said plate and first rods being resiliently urged toward each other, a longitudinally extending tray disposed below said first rods and secured thereto by support rods depending from said first rods, said tray including a base member formed of a plurality of longitudinally extending parallel, laterally spaced base rods, and longitudinally extending side rods located above said base rod.

4. An improved display and dispensing device in accordance with claim 3, wherein the leading ends of said base rods are upwardly and forwardly inclined.

5. An improved display and dispensing device comprising an upper rearwardly extending plate provided with a depending front wall, a pair of laterally spaced parallel first rods secured to and projecting rearwardly from the lower portion of said front wall, said plate and first rods being resiliently urged toward each other, a longitudinally extending tray disposed below said first rods and including a base member formed of a plurality of longitudinally extending parallel, laterally spaced base rods having upstanding legs at their trailing ends secured to said first rods, and an upwardly directed abutment member disposed at the leading end of said base member.

6. An improved display and dispensing device in accordance with claim 5, wherein said tray member includes a pair of longitudinally extending, laterally spaced side rods disposed above said base rods, the trailing ends of said side rods being joined by a cross rod secured to the upstanding legs of said base rods and the leading ends of said side rods being provided with depending legs

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terminating in a joining cross rod secured to the forward ends of said base rods.

7. An improved display and dispensing device in accordance with claim 5, including a longitudinally extending helical compression spring registering with one of said base rods. 5

8. An improved display and dispensing device in accordance with claim 5, including a wire rectangular frame member having a lower cross-piece extending across said base rods intermediate the ends thereof and an upper 10 cross-piece extending across said first rod adjacent the forward ends thereof.

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9. An improved display and dispensing device in accordance with claim 8, including a latching member swingably mounted on the cross-piece of said frame member.

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