

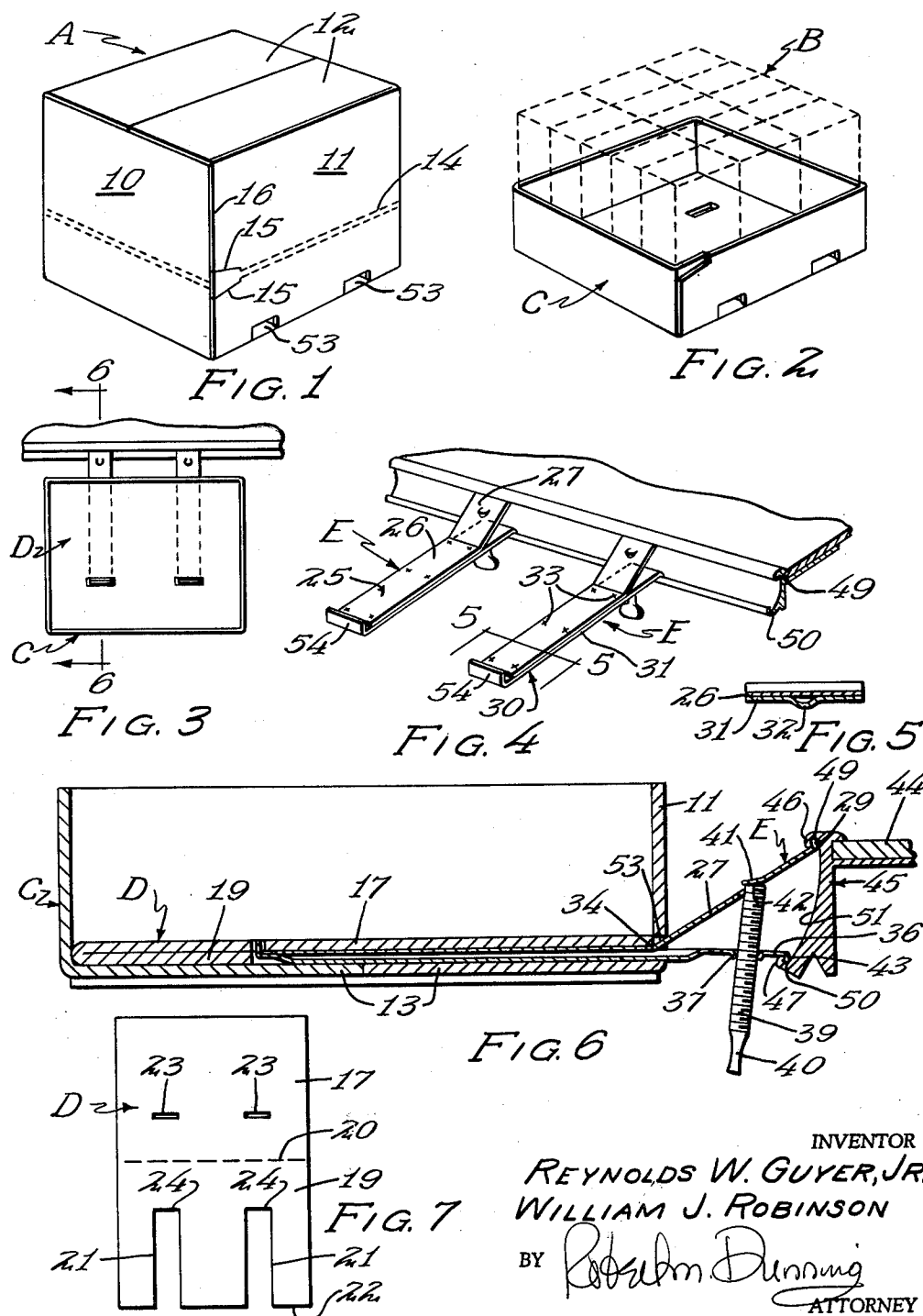
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SHELF EXTENDERS

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SHELF EXTENDERS

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This invention relates to an improvement in shelf extenders and deals particularly with an attachment to the price molding of a store shelf to produce a display which stands out in prominence with respect to the other goods upon the shelf.

At the present time most of the stores such as the usual supermarket display the goods on rows of superimposed shelves. In most instances, the outer edges of these shelves are provided with a price molding. This molding includes along its forward edge, a pair of vertically spaced flanges which are shaped to form opposed grooves. These grooves are designed to support flexible price cards and the like which may be positioned anywhere throughout the length of the molding, and which usually may be flexed for insertion and removal. It is an object of the present invention to provide a shelf extender which is supported by the price molding to extend forwardly from the shelf.

A feature of the present invention resides in the provision of a plurality of arms which are at least partially formed of spring strip material such as spring steel and the like, and to provide a bifurcated end on each arm formed by bending one of the strips into diverging relation with the other. Hook flanges are provided on the extremities of the diverging ends of the arms which are designed to engage in the opposed flanges of the price molding. Usually such arms are formed of two flat strips one of which is generally flat throughout its length and the upper of which is bent to incline upwardly and rearwardly to engage in the upper downwardly opening groove. An adjustable means is designed to bridge the divergent ends of the strips forming the arms so as to prevent the inward flexing of these strip ends once the hook flanges are engaged in the grooves. A display support is mounted on two or more such arms to produce the desired extending display.

The invention also incorporates a novel type of display container which may serve as a shipping container for the goods to be displayed, and which may be transformed into a tray-shaped display when opened. In this arrangement, a continuous tear strip extends about the four walls of the container, and when removed, the upper portion of the container may be detached and removed to display the contents. A novel means is provided for detachably connecting the lower portion of the container to the supporting arms.

In this form of construction, a pad formed of two layers of materials such as corrugated paperboard is secured to the inside bottom of the container in face contact therewith. The lower of the two layers is provided with a pair of parallel slots which communicate with an edge of the pad. The wall of the container is provided with a pair of apertures communicating with the ends of the slots so that the supporting arms may extend through the apertures and the slots. Also in the preferred construction, the upper layer of the pad is provided with a pair of apertures which register with the other ends of the slots, and the supporting arms are provided with upwardly and angularly turned flanges designed to engage into these apertures to hold the tray shaped bottom portion of the container from detachment from the supporting arm.

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These and other objects and novel features of the present invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of the specification;

FIGURE 1 is a perspective view of the container, which later forms a part of the display.

FIGURE 2 is a perspective view of the lower portion of the container with the top thereof detached, as shown in dotted outline in FIGURE 2 so that the construction of the container can be better noted.

FIGURE 3 is a top plan view showing the shelf extender in place upon the shelf.

FIGURE 4 is a perspective view of the two arms attached to a shelf before the display container has been mounted thereon.

FIGURE 5 is a sectional view through one of the arms, the position of the section being indicated by the line 5-5 of FIGURE 4.

FIGURE 6 is a sectional view through the shelf extender, the position of the section being indicated by the line 6-6 of FIGURE 3.

FIGURE 7 is a diagrammatic view of the pad which overlies the bottom of the container.

In the particular arrangement illustrated, a product is shipped in container A which may comprise a regular style container for rectangularly arranged side walls such as 10 and 11 which are provided with top and bottom closure flaps 12 and 13. The container is not shown in detail as it is generally a conventional structure and includes a removable tear strip 14 which extends continuously about the four container walls, the tear strip preferably being of the type shown in Patent 2,706,076 to Reynolds Guyer. Cut lines 15 are provided which define the end of the tear strip and which communicate with an edge 16 of the side wall 11 which forms the end of the blank.

The purpose of this arrangement is to provide a shipping container for a product such as is indicated by B and which may be divided into two parts, the lower portion of which comprises a tray C after the tear strip 14 has been removed.

A pad D is positioned to overlie the bottom closing flaps 13, and is preferably adhered or stitched thereto. The pad D includes an upper layer 17 and a lower layer 19 which are centrally connected by the fold line 20. The lower layer 19 is provided with a pair of parallel slots 21 which communicate with an end edge 22 of the blank. The upper layer 17 is provided with a pair of apertures 23 which preferably registers with the closed end 24 of the slots for a purpose which will be later described.

Each of the supporting arms E is constructed as best illustrated in FIGURES 4-6 of the drawings and includes a pair of generally flat strips of spring material such as spring steel or the like. The upper strip 25 includes a flat horizontal end portion 26 and an upwardly and rearwardly inclined strip end 27 which, as is best indicated in FIGURE 6 of the drawings, terminates in an upwardly directed hook end 29. The lower strip 30 also includes an elongated flat portion 31 which is preferably provided with a central downwardly projecting reinforcing rib 32 extending through the major portion of its length to hold the arm from bending intermediate its ends. The flat portions 26 and 31 are spot welded or otherwise secured together as indicated at 33. One end of the flat portion 31 extends beyond the point of bend 34 of the upper strip 25 to form a divergent end 36. This end is apertured as indicated at 37 and threaded to accommodate an adjustment screw 39. The screw 39 is provided with a flattened head 40 by means of which the threaded member may be adjusted. An ear 41 is cut from the divergent portion 27 of the upper strip 25 against which the upper end 42 of the threaded member 39 may engage, the ear

being bent out of the strip portion 47 so as to provide a small aperture into which the upper end of the threaded member may extend. The extremity of the divergent end 36 of the strip 31 is provided with a hook-shaped downwardly extending flange 43. The store shelf is represented at 44, and a molding 45 is attached to the forward edge of the shelf 44 in any suitable manner. Upper and lower flanges 46 and 47 extend forwardly, the upper flange 46 then extending downwardly to form a groove 49. In a similar way, the flange 47 extends forwardly and then upwardly to provide a groove 50. These grooves 49 and 50 are designed to engage the upper and lower edges of flexible price cards. The forward surface 51 of the molding 45 is preferably concave in vertical section so that the price cards are held in slightly curved form when in place.

The operation of the shelf extender is believed obvious from the drawings and description. While the threaded member 37 is loosened or retracted downwardly, the divergent strip ends 27 and 36 are compressed together sufficiently to permit the hook ends 29 and 43 of these strips to extend in the grooves 49 and 50. The two arms E are spaced apart a distance substantially equal to the spacing of the apertures 53 in the container wall 11, and the threaded members 39 are tightened to hold the diverging ends in properly diverging relation.

The container A is then opened by grasping the edge of the blank between the cut lines 15 and exerting an outward pull upon the tear strip, removing a section of the four walls of the container. The upper portion of the container is removed, and the tray C remains.

To complete the operation, the forward ends of the arms E are forced through the apertures 53 and through the slots 21. The lower strips 30 are provided with upwardly angularly extending end flanges 54 which bear against the bottom of the upper layer 17 of the pad D usually raising the portion of the pad above the slots to the extent necessary to permit the entrance of the flanges 54. When the flanges 54 register with the apertures 23 in the upper pad portion 17, they extend into these apertures and prevent the accidental removal of the tray from the supporting arms E.

In accordance with the patent statutes, the principles of construction and operation of this improvement in Shelf Extenders have been described, and while an endeavor has been made to set forth the best embodiment thereof, it should be understood that changes may be made within the scope of the following claims without departing from the spirit of the invention.

I claim:

1. A shelf extender for use in displaying a product contained in a container, the container including rectangularly arranged connected side walls and top and bottom closure walls,

a tear strip extending continuously about said rectangularly arranged side walls intermediate the top and bottom closure walls, whereby the portion of the container above said tear strip may be detached and removed to expose the container contents,

a pad of two layers secured overlying said container bottom closure wall,

the lower layer of said pad having a pair of slots therein communicating with an edge thereof,

one said side wall having a pair of apertures therethrough in registry with the ends of said slots communicating with the pad edge,

the upper layer of said pad having a pair of apertures therein in registry with the other ends of said slots,

a pair of arms extending through said one wall and said slots and including upturned flanged ends extending into said apertures in said upper layer, and means for attaching said arms to a shelf edge.

2. A shelf extender for use in combination with a shelf having an outer edge molding provided with a pair of opposed vertically spaced flanges defining opposed grooves adapted to accommodate opposite edges of price cards and the like, the extender including,

a pair of elongated arms adapted to be secured to said molding in spaced relation,

each arm including a relatively short bifurcated end comprising a pair of diverging strips, at least one of which is resilient,

outwardly directed hook flanges on said strip extremities adapted to engage into the opposed grooves in the molding,

a threaded member adjustably supported extending through one of said diverging strips and engageable against the other said strip to limit inward flexing of the strips,

an article support detachably supported by said arms, a tray-shaped body including a bottom wall and connected side walls,

a double layer pad secured overlying said bottom wall and including a pair of parallel slots in the lower layer of the pad communicating with an edge thereof, one of the side walls of the tray having apertures therein in registry with the ends of the slots, and said arms extending through said apertures and said slots to underlie the upper pad layer.

3. The structure of claim 2 and in which the other ends of the arms include upwardly and angularly turned flanges, and

in which the upper pad layer includes a pair of apertures into which said angularly turned flanges extend when extending through said slots.

4. A shelf extender for use in combination with a shelf including:

a pair of parallel arms extending from said shelf in a substantially common plane,

a tray including a bottom wall and connected side walls extending upwardly therefrom,

a double layer pad secured overlying said bottom wall and including a pair of parallel slots in the lower layer of the pad communicating with an edge thereof, one of said side walls of said tray having apertures therethrough in registry with the ends of said slots, said arms extending through said apertures and said slots to underlie the upper pad layer.

5. The structure of claim 4 and in which the ends of the arms most remote from said shelf include upwardly and angularly turned flanges, and

in which the upper pad member includes a pair of apertures into which said angularly turned flanges extend when said arms extend through said slots.

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