

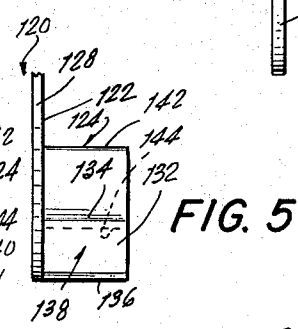
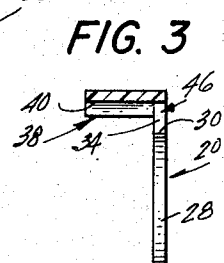
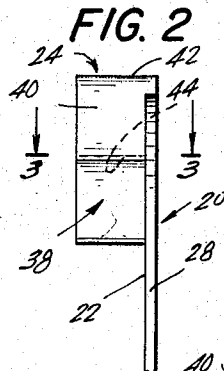
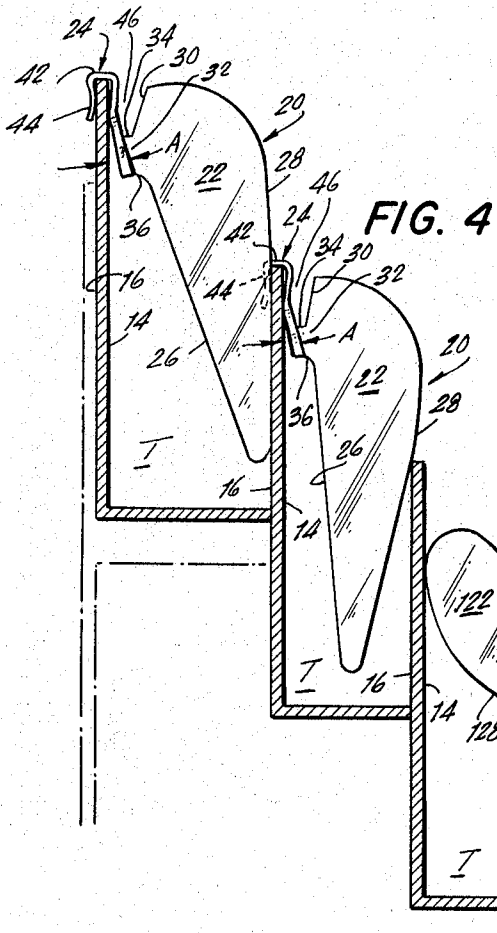
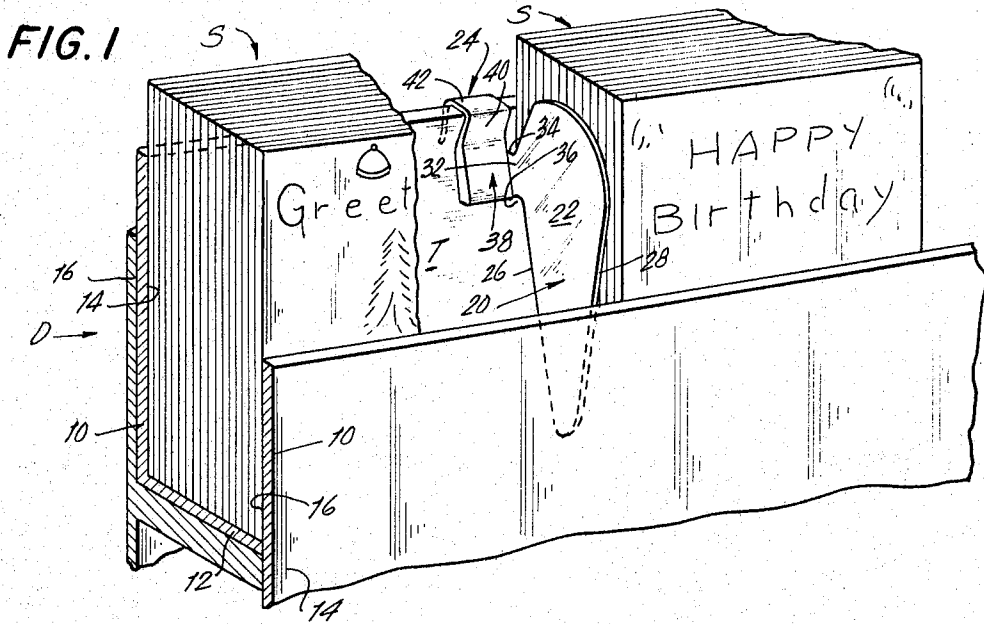
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D. M. GANZ ET AL

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DISPLAY RACK DIVIDER

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INVENTORS
DANIEL M. GANZ
HAROLD J. MAHLER
BY *Amster & Rothstein*
ATTORNEYS

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3,298,538

DISPLAY RACK DIVIDER

Daniel M. Ganz, Rockville Centre, and Harold J. Mahler,
New York, N.Y., assignors to Darrol Company, Inc.,
New York, N.Y., a corporation of New York
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The present invention relates generally to display racks and in particular to an improved display rack divider for use in sub-dividing the shelves of a display rack.

In the merchandising of stationery, such as greeting cards and other small flat items, display racks are generally used which are formed with tiers of troughs arranged in step-wise relation. The troughs are generally defined by openings on either side and spaced-apart front and rear walls for receiving plural stacks of cards in side-by-side relation. It is generally known to provide a means for separating the stacks of cards which are disposed along the width of each of the troughs, such as by a spring loaded rack divider which is shown in the earlier patent filed on January 20, 1959 under No. 2,869,732. In this earlier form of rack divider, it was necessary to provide a two-piece divider body and clip construction with a spring-loaded hinge connection. A more simplified and effective display rack divider has been developed by utilizing a one-piece construction in which an elongated slot is disposed between the clip and divider body to obtain the same type of force which is normally exerted by conventional spring arrangements which have been used.

Broadly, it is object of the present invention to provide an improved display rack divider for separating and preventing the interleaving of articles from adjacent stacks of flat cards in a display rack. Specifically, it is within the contemplation of the present invention to provide a display rack divider of one-piece construction which can easily be fabricated and utilized.

In accordance with an illustrative embodiment demonstrating objects and features of the present invention there is provided a rack divider for use with a display rack in the form of an elongated trough which is defined by opposed side walls, having front and rear faces, and spaced-apart in substantially parallel relation to each other. The troughs are provided for receiving a series of side-by-side stacks which are made up of flat elements. An upright divider is formed from thermoplastic material and includes an integral clip and divider body. The clip is formed of substantially U-shaped cross section with opposed body walls for mounting on the side walls of the display rack, and the divider body is resiliently mounted at an angle to the normal plane of the body walls of the clip. The divider body extends in a plane transverse to the opposed walls of the clip and an elongated slot is disposed between the clip and the divider body such that a force is exerted between the clip and divider body to maintain the divider body in a rigid position against one side wall when the clip is mounted on another opposite side wall of the trough.

The above brief description as well as further objects, features and advantages of the present invention will be more fully appreciated by reference to the following detailed description of presently preferred, but nonetheless illustrative embodiments in accordance with the present invention, when taken in conjunction with the accompanying drawings wherein:

FIG. 1 is a perspective view of the first embodiment of

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a rack divider, employing features of the present invention, shown mounted on one tier of a display rack of greeting cards, with portions thereof being broken away and sectioned;

FIG. 2 is a front elevational view of the rack divider of FIG. 1, as shown removed from its mounted position on the display rack, with a portion of the divider body broken-away;

FIG. 3 is a sectional view taken along the lines 3-3 of FIG. 2 and looking in direction of the arrows;

FIG. 4 is a side elevational view of two rack dividers in accordance with the first embodiment of the invention and another rack divider in accordance with a second embodiment of the invention, with the rack dividers being shown mounted on the side walls of the display rack; and

FIG. 5 is a left side elevational view of the second embodiment of the rack divider of FIG. 4, and shown removed from its position on the display rack, with a portion of the divider body broken-away.

Referring now specifically to the drawings, and particularly to FIG. 4, there is shown a display rack fixture D having tiers of elongated troughs T, in a stepwise arrangement. The troughs T include upstanding side walls 10 which extend perpendicularly from base walls 12. The side walls 10 are spaced-apart in substantially parallel relation and each of the walls 10 has a front face 14 and rear face 16. In order to more clearly demonstrate the instant invention, varying distances are shown in FIG. 4 between the upstanding walls 10 for each of the troughs T. The display rack fixture D is open at both ends and the upstanding walls 10 are disposed in substantially parallel relation to each other for receiving a series of side-by-side stacks S which are made up of flat elements such as greeting cards.

In accordance with a first embodiment of the present invention, an upright divider 20 is provided for use with the display fixture D in order to provide a means for separating the stacks S of flat material. This is of particular importance in the merchandising of greeting cards since each stack of greeting cards is of varying frontal width, which makes it necessary to vary the separating means in accordance with the width of the particular stack of greeting cards involved. The rack divider 20 is integrally formed from a moldable and resilient material such as thermoplastic, and includes a divider body 22 and clip 24 which has a substantially U-shaped cross section.

The divider body 22 is relatively flat with a preferred thickness of approximately $\frac{1}{8}$ of an inch. As best seen in FIG. 2, the peripheral configuration of the divider body 22 is bounded by a straight edge 26, opposite curved edge 28, and top edge 30.

An intermediate body 32 is provided for integrally joining the clip 24 to the divider body 22. The intermediate body 32 is defined by an upper edge 34 which extends from the top edge 30 and a lower edge 36 which extends from the rear edge 26.

The clip 24 includes a base wall 38 which is integrally formed with the intermediate body 32, and base wall 38 is in turn integrally formed with a front wall 40, top wall 42 and rear wall 44. As seen in FIG. 4, the clip 24 is of substantially U-shaped cross section, and the walls 40 and 44 oppose each other in substantially parallel, spaced-apart relation for engaging the top edge of the side walls 10 of display rack D, with the divider body 22 and intermediate body 32 extending in a plane transverse to the opposed walls 40, 44.

By progressively inspecting the rack dividers 20 of FIG.

4, it can be seen that base wall 38 extends at an angle from the plane of front wall 40, with this angle being designated A. Thus, when the clip 24 is fabricated, the base wall 38 is formed so as to normally extend forward from the plane of front wall 40. Since the rack divider 20 is made of a resilient material, such as thermoplastic, the formation of the integral base wall 38 and front wall 40 in different planes, serves as a means of resiliently mounting the divider body 22 at an angle to the normal plane of body walls 40 and 44, such that the divider body is biased into the operative positions shown in FIG. 4. Accordingly, the divider body 22 of rack divider 20 can be resiliently mounted on the top edges of the walls 10, with the angle A decreasing as the width of the base walls 12 of troughs T decrease.

An elongated slot 46 is disposed between the clip 24 and divider body 22, and slot 46 is bounded by top edge 30, upper edge 34 and the edge of front wall 40. Thus, the overall configuration of slot 46 is defined by the upper rearward edge of divider body 22 and front wall 40. The depth of slot 46 or the distance from the opening at the top of slot 46 to upper edge 34, determines the tension exerted between the divider body 22 and clip 24, when the clip is mounted on the wall 10 of the display rack D. It is important to be able to vary the tension exerted between the divider body 22 and the clip 24 when the clip is mounted on one of the side walls 10 with the front edge 28 being biased against the rear face 16 of another opposite side wall 10 of the trough T. If the depth of slot 46 is increased by increasing the distance between the opening at the top of the slot to upper edge 34, the tension exerted is diminished. Thus, the tension exerted is proportioned to the depth of the slot 46, with the tension decreasing as the depth increases.

Referring next specifically to FIGS. 4 and 5 of the drawings, there is seen a second illustrative embodiment of the invention, various parts of which are assigned reference numerals in the hundreds series corresponding to the reference numerals in the tens series assigned to corresponding parts of the first illustrative embodiment. Thus, a rack divider, designated generally by the numeral 120 is integrally formed from a moldable and resilient material and includes a divider body 122 and clip 124. The peripheral configuration of the divider body 122 is bounded by a straight edge 126, curved edge 128 and top edge 130. An intermediate body 132 is provided for integrally joining the clip 124 to the divider body 122, with intermediate body 132 being defined by upper edge 134 which extends from the top edge 130 and the lower edge 136 which extends from the curved edge 128.

The clip 124 includes a base wall 138 which is integrally formed with the intermediate body 132, and base wall 138 is in turn integrally formed with a front wall 140, top wall 142 and rear wall 144.

As in the first embodiment of the instant invention, the base wall 138 extends at an angle from the plane of the front wall 140 with this angle being designated A'. Thus, when the clip 124 is fabricated, the base wall 138 is formed so as to normally extend forward from the plane of the front wall 140.

An elongated slot 146 is disposed between the clip 124 and divider body 122 and the slot 146 is bounded by top edge 130, upper edge 134 and the edge of front wall 140. Thus, the overall configuration of the slot 146 is defined by the upper rearward edge of the divider body 122 and front wall 140. The overall depth of the slot 146 or the distance from the opening at the top of slot 146 to the upper edge 134, determines the tension exerted between the divider body 122 and clip 124 when the clip is mounted on the wall 10 of display rack D.

From the two embodiments of the instant invention, 20 and 120, shown in FIG. 4, it can be seen that the rack divider 120 is of the same general configuration as the rack divider 20. By progressively inspecting FIGS. 3 and 5, it is apparent that the divider body 120 is formed

at the left edge of base wall 138, whereas the divider 22 is formed at the right edge of base wall 38. Further, divider body 122 extends in an upward direction from base wall 138 and divider body 22 extends in a downward direction from base wall 38. Thus, the rack divider 22 is designed for mounting on the rearward wall of the display rack D with the edge 28 being biased against the rear surface 16 of the opposite wall, and the rack divider 120 is designed for mounting on the frontal wall of the rack divider D with the front edge 128 being biased against the front face 14 of the opposite wall.

A latitude of modification, change and substitution is intended in the foregoing disclosure and in some instances some features of the invention will be employed without a corresponding use of other features. Accordingly it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention herein.

What we claim is:

1. A rack divider for use with a display rack in the form of elongated troughs each having a bottom wall and opposed side walls with front and rear faces and said side walls being spaced-apart in substantially parallel relation from each other for receiving a series of side-by-side stacks which are made-up of flat elements, an upright divider formed from thermoplastic material and including a clip and divider body, said clip being of substantially U-shaped cross-section and having opposed body walls for mounting on said side walls of the display rack, said divider body being resiliently mounted at an angle to the normal plane of said body walls of said clip with said divider body extending in a plane transverse to said body walls, and said clip being integrally formed on said divider body with an elongated slot disposed between said clip and divider body such that said divider body is capable of being biased in an upright orientation against one side wall when said clip is mounted on another opposed spaced-apart side wall of a trough.

2. A rack divider according to claim 1 in which the configuration of said slot is defined by the upper rearward edge of said divider body and the front body wall of said clip such that the tension exerted between said divider body and clip is proportionate to the depth of said slot with said tension decreasing as said depth increases.

3. A rack divider for use with a display rack in the form of elongated troughs each having a bottom wall and opposed side walls with front and rear faces and said side walls being spaced-apart in substantially parallel relation from each other for receiving a series of side-by-side stacks which are made-up of flat elements, an upright divider formed from thermoplastic material and including a clip and divider body, said clip being of substantially U-shaped cross-section and having opposed body walls for mounting on a rear side wall of a display rack, said divider body being resiliently mounted at the right side edge of said body walls and at an angle to the normal plane of said body walls with said divider body extending downwardly from said body walls in a plane transverse thereto, and said clip being integrally formed on said divider body with an elongated slot disposed between said clip and divider body such that said divider body is capable of being biased in an upright orientation against the rear face of one side wall when said clip is mounted on another opposed spaced-apart side wall of a trough.

4. A rack divider for use with a display rack in the form of elongated troughs each having a bottom wall and opposed side walls with front and rear faces and said side walls being spaced-apart in substantially parallel relation from each other for receiving a series of side-by-side stacks which are made-up of flat elements, an upright divider formed from thermoplastic material and including a clip and divider body, said clip being of substantially U-shaped cross-section and having opposed body walls for mounting on a front side wall of a display rack, said

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divider body being resiliently mounted at the left side edge of said body walls and at an angle to the normal plane of said body walls with said divider body extending upwardly from said body walls in a plane transverse thereto, and said clip being integrally formed on said divider body with an elongated slot disposed between said clip and divider body such that said divider body is capable of being biased in an upright orientation against the front face of one side wall when said clip is mounted on another opposed spaced-apart side wall of a trough.

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CAUDE A. LE ROY, *Primary Examiner.*10 W. D. LOULAN, *Assistant Examiner.*