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SPRING-LIFT COMBINATION DISPLAY SHELF

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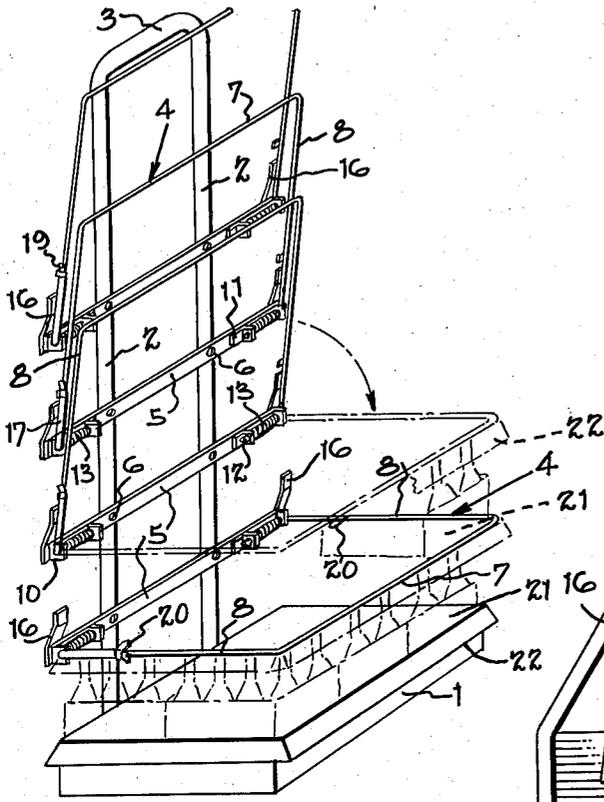


Fig. 1

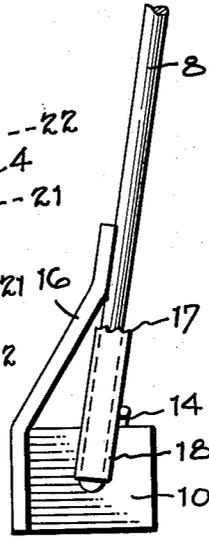


Fig. 3

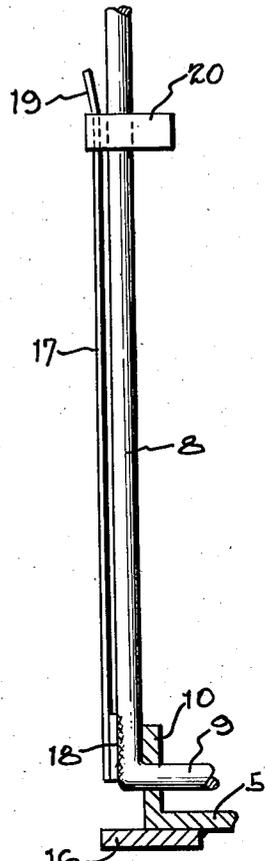


Fig. 4

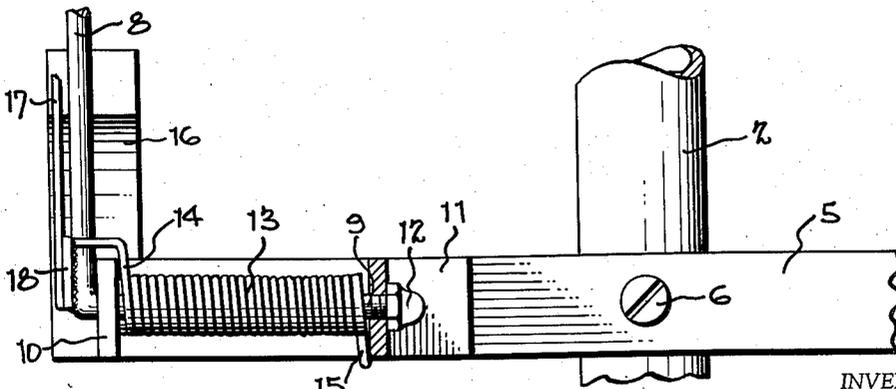


Fig. 2

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SPRING-LIFT COMBINATION DISPLAY SHELF

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1 Claim. (Cl. 211—49)

This invention relates to a spring-lift combination display shelf and divider or separator for a stack of columnar articles, such as bottled or canned goods, which are stacked in superimposed layers for display in stores, and it particularly pertains to a pivoted support for carrying a readily detachable bottom which is a divider or separator between two stacked layers. The support for said divider or separator is pivoted to a vertical wall of a building or to an upright of a rack. One or any number of pivoted supports may be provided disposed in vertical spaced apart relation in position to be pulled down in a horizontal plane over the top of an underlying layer of goods for another layer of the stack to be laid thereon.

The invention is an improvement over application Serial No. 701,421, filed December 9, 1957, now Patent No. 2,950,820, and the shelf is provided with a back stop against which the support or divider rests when said support is biased to elevated position from a horizontal plane above an underlying layer of the goods after the top layer of goods is removed. The stop is disposed so that the support is pivoted to a predetermined angle or position above the horizontal plane to be held spaced from the wall or upright to which the support is pivoted. The stop for each shelf is so disposed that all of the shelves are parallel when in their elevated positions.

The detachable disposable divider or separator for the support may be used with any type of pivoted support which may or may not itself be interposed between the stack layers, but said support is preferably a rectangular frame that serves solely as a support for the detachable divider or separator and is itself out of contact with the stacked layers. This prevents the pivoted support from being sprung or bent and being subjected to the wear and tear that would result from the weight of the stacked goods.

One of the main objects of the invention is a spring-lift divider or separator unit which is simple in construction and efficient in operation.

Another object of the invention is a spring-lift unit in which the divider and separator unit is provided with a back stop when biased to elevated position.

Another object of the invention is a spring-lift unit which is held spaced from the upright support to which the unit or units are pivoted.

Further objects, and objects relating to details of construction and economies of operation, will readily appear from the detailed description to follow. In one instance, the objects of the invention have been accomplished by the device and means set forth in the following specification. The invention is clearly defined and pointed out in the appended claim. A structure constituting a preferred embodiment of the invention is illustrated in the accompanying drawings, forming a part of this specification, in which:

Fig. 1 is a perspective view of a rack embodying the invention, showing several upper unloaded dividers or

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separators biased to elevated position and lower loaded ones in horizontal position.

Fig. 2 is an enlarged detailed view, showing one rear opposite corner of the shelf unit.

Fig. 3 is an enlarged detailed end view of one rear opposite corner of the shelf unit.

Fig. 4 is an enlarged detailed view of a spring holding clip for the detachable separator or divider.

Referring specifically to the drawings in which like numerals designate like parts, numeral 1 is a base of a rack to which is attached the bottom free ends of the legs 2 of an upright holding means connected at their top ends by a cross piece 3, said upright being formed of a U-shaped tubular metal pipe.

A plurality of frame members, each comprising a part or support 4 pivoted to a back strip 5, is fastened to the upright by any suitable means, such as screws 6, projecting through said back strip 5. The part 4 is a metal rod or wire with a main portion 7 having its opposite ends bent into parallel legs 8, terminating in terminals 9, bent inwardly toward each other to be disposed substantially parallel to the main portion 7. These terminals 9 are each pivoted to a pair of spaced lugs 10 on a clip 11 that is fastened as by welding to the opposite ends of the back strip 5. The ends of the terminals 9 are preferably screw threaded for receiving cap nuts 12 for holding said terminals assembled.

A cylindrical torsion spring 13 is mounted on each of the terminals 9 with one end 14 in contact with underside of a leg 8 and its opposite end 15 in contact with clip 11. The spring is given any degree of torsion for biasing the pivoted support from a horizontal position to an elevated position.

Fitted to the back strip 5, preferably at its opposite ends, are back stops 16. There are preferably two of these back stops 16, each being mounted in position to be in registration with a leg 8 of the pivoted member so that both of said legs 8 will rest against these back stops 16 when the pivoted member is biased to elevated position.

Each of the legs 8 is provided with a spring finger 17 having one end 18 fixed thereto as by welding and its opposite free end 19 disposed along the said leg 8 and carrying an angle piece 20. These spring fingers 17 are preferably disposed on the opposite ends of the support along the outer sides of the legs 8.

A detachable bottom unit 21 of cardboard is mounted on top of the pivoted support, and has a downwardly and outwardly extending apron 22 on its front side and opposite ends for extending over and beyond the said front side and opposite ends of the pivoted support, its opposite or rear side being free of said apron. The main body portion of the bottom unit 21 is of an area about equal to the area of the support. The opposite ends of the detachable bottom unit are interposed between the legs 8 of the pivoted support and the spring fingers 17 with the angle piece 20 overhanging the opposite ends of the main body of said bottom unit. With the spring fingers 17 thus disposed, the end portions of the apron 22 are held in position at their proper angle. The detachable bottom 21 can be printed on its top side and on the overhanging apron with advertising. The display shelf is adapted for use with any bottled and canned goods, and particularly those which are sold in cartons. The top surface of the bottom member can be marked with transverse and longitudinal lines to set off square portions corresponding with the cartons. The underlayers of the stacked goods are covered with a clean and neat separator which is easily replaced by a new one when it has become worn and dirty. The necks of the bottles of an underlying layer of the stack are covered and con-

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sealed by the overhanging apron and blends in with the cartons of the stacked goods so that they are displayed to their fullest advantage and with a neater appearance.

The display rack and shelves may be of a different size. One size is made to accommodate conventional sized bottled goods, and the larger size is for king size bottles.

It is understood that there may be various changes in details of construction without departing from the spirit of the invention, and, therefore, the invention is claimed broadly as indicated by the appended claim.

Having thus described my invention, what I claim as new and useful and desire to secure by United States Letters Patent, is:

A combination display shelf and divider for rows of tiers of stacked columnar articles comprising a horizontally extending rectangular base, an inverted vertically extending U-shaped holding member having the free ends of its legs affixed to one edge portion of said base, a plurality of transversely extending back strips affixed to the legs of said holding member in vertically spaced relation, a plurality of supports each having a main portion, a leg extending from each end of said main portion toward one of said back strips and having its free end pivotally connected to its respective back strip, said support and said back strip defining an unobstructed space therebetween with said back strip, and said support being disposed outside the cross sectional area of said rows of

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stacked articles when said support is disposed in a substantially horizontal position, means for biasing each of the supports to elevated position adjacent said holding member, and a pair of back stops affixed to each back strip, the legs of said supports abutting said back stop when said supports are biased to elevated position, said back strips and said supports being disposed outside of a stacking area formed therebetween, a divider removably mounted on each of said supports and having an outwardly and downwardly extending apron extending over the front and sides of said support, and spring fingers attached to each of the legs of each support and each having an angular free end portion overhanging its associated leg.

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