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O'Neill

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[54] **MODULAR WINE BOTTLE RACK**

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[52] **U.S. Cl.** **211/74,** 211/11, 211/42, 211/50, 211/72, 211/85, 220/DIG. 25

[51] **Int. Cl.** **A47b 73/00,** A47g 29/14

[58] **Field of Search** 211/72, 85, 10, 11, 50, 211/42, 55, 74; 248/152; 220/DIG. 25, 23.4

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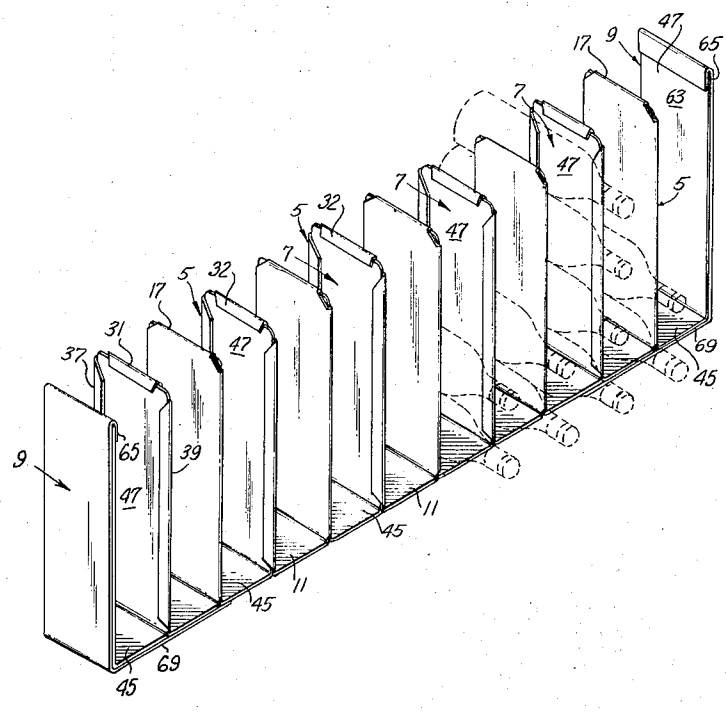
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[57] **ABSTRACT**

The modular rack is formed by connecting together a series of juxtapositioned, modular components or units formed of sheet metal, plastic or other suitable stiff, sheet material. Each component is dimensioned to receive a wine bottle lying on its side and a rack of any desired length may be formed by joining together as many of the components as necessary. The rack is completed by attaching to the end components an L-shaped trim or finishing unit which covers the outer side of the end walls and underlies the bottom wall adjacent each end thereof.

5 Claims, 8 Drawing Figures



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SHEET 1 OF 2

Fig. 2A.

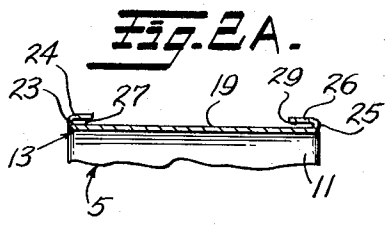


Fig. 1.

Fig. 2.

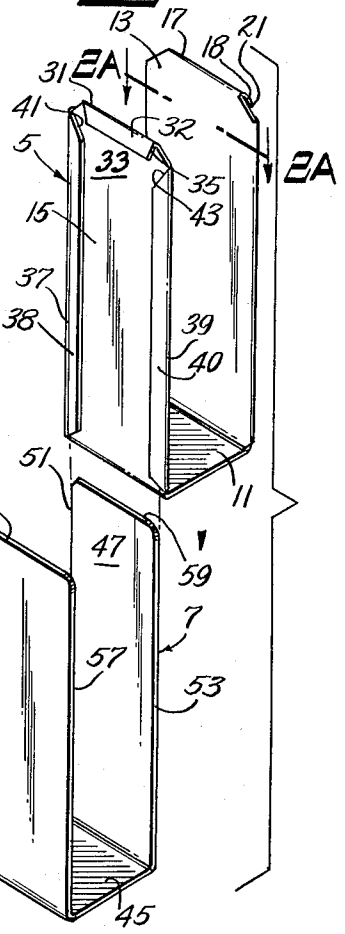


Fig. 4.

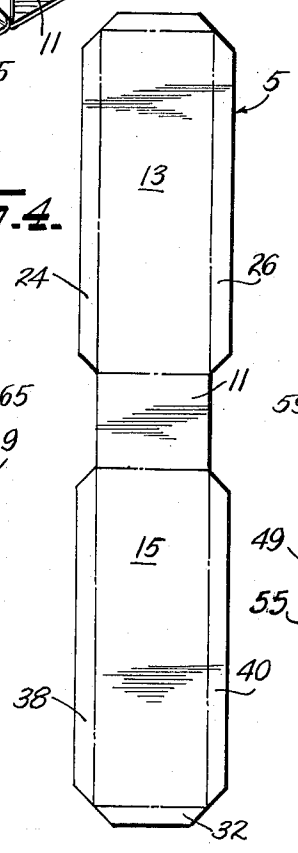


Fig. 3.

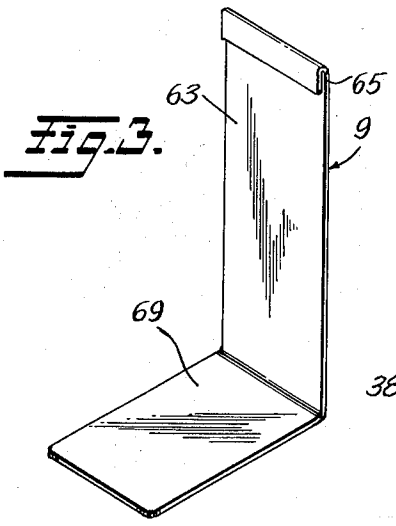


Fig. 5.

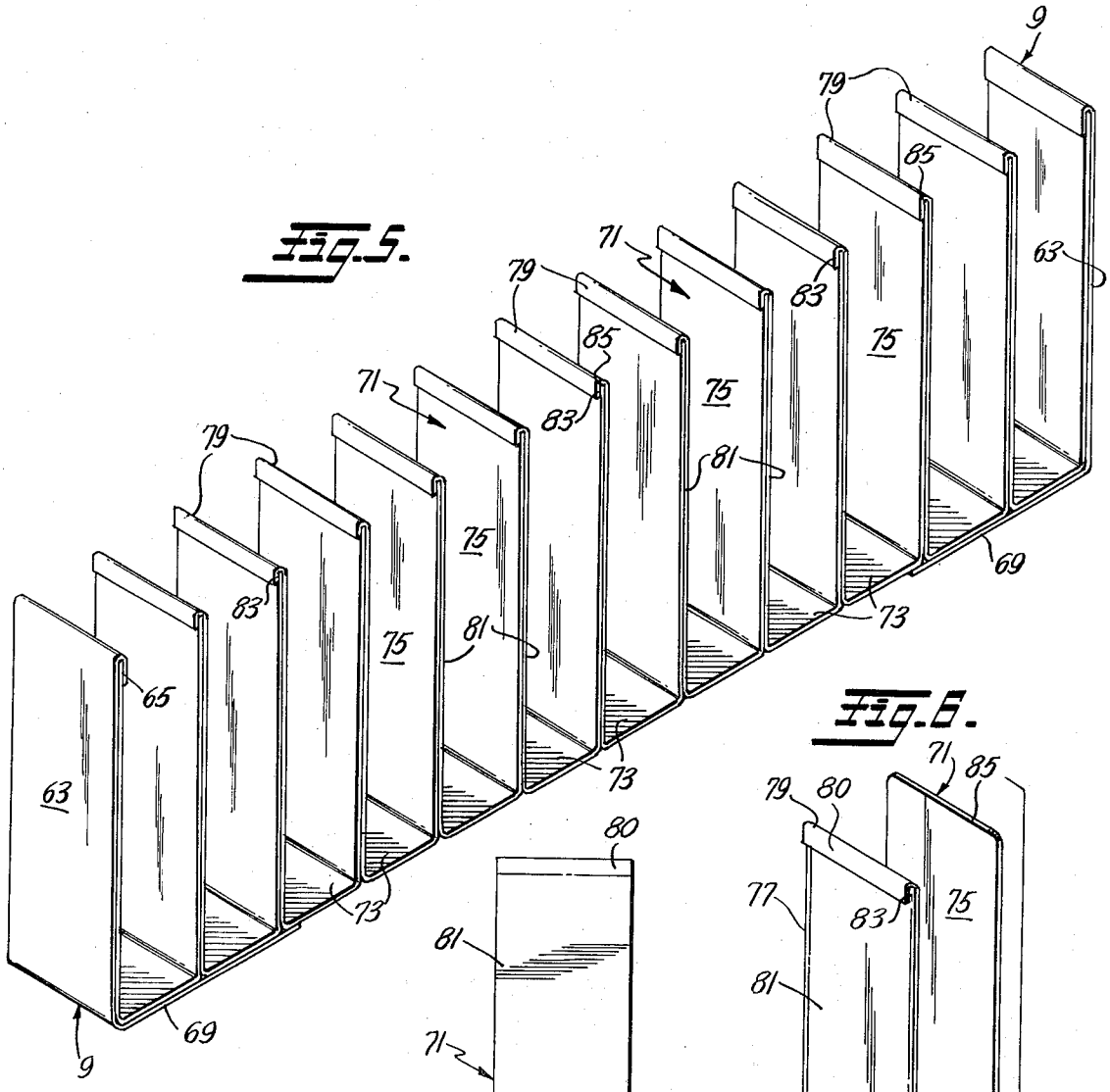


Fig. 6.

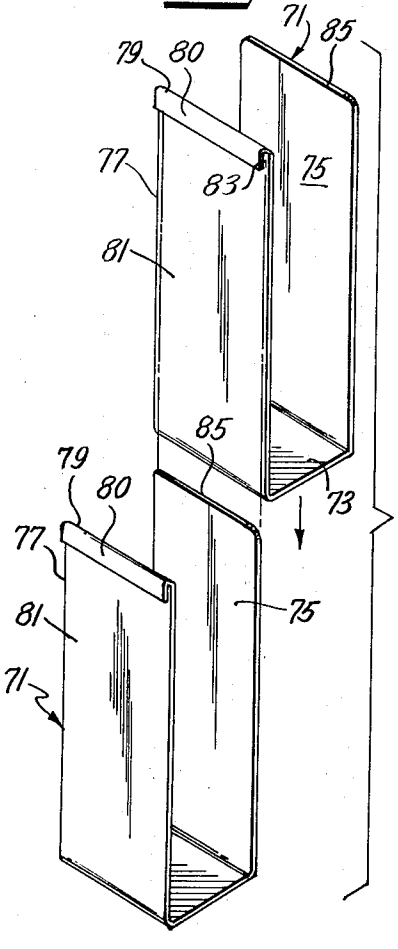
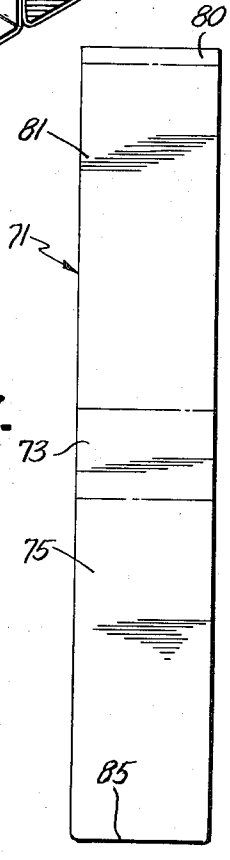


Fig. 7.



MODULAR WINE BOTTLE RACK

This invention relates to a rack for storing bottles lying on their side and more particularly for storing filled wine bottles in a convenient manner in spaced, vertical stacks so that the corks of the bottles will not dry out.

In one form of the invention, the bottle rack is composed of a first or male component, a second or female component adapted to be slidably connected with the male component and an end component providing a finishing trim and an end support for the rack.

The rack may be of any desired length and is formed by connecting juxtaposed, alternate male and female units arranged in a row. The end components provide a finish or trim to the rack and add stability at the extremities thereof.

When joined together, the components form a strong and lightweight rack for holding wine bottles lying on their side in adjacent but separated rows of one or more bottles deep.

This rack provides a storage system which makes the most efficient use of available storage or display shelf space regardless of its length or depth.

The partition formed between the rows or stacks of bottles by the side walls of the components requires a minimum of space between the rows and at the same time effectively separates adjacent rows.

In a second form of the invention, the modular rack is formed of a plurality of identical components juxtapositioned in a row and connected together only at the upper edge of the side walls thereof. End components or supports are provided to cover the outer side of the end walls and the bottom wall of the L-shaped component underlies the bottom wall of the adjacent components adding stability to the rack and providing an aesthetic trim or finish thereto.

It is an object of this invention to provide a wine bottle rack that may be of any desired length.

Another object of the invention is to provide an improved wine bottle rack for storing rows of spaced, adjacent wine bottles lying on their side.

A further object of the invention is to provide a modular wine bottle rack formed of a minimum number of different types of components arranged juxtaposed in a row of any desired length.

It is also an object of the invention to provide a rack for bottles lying on their side which is light in weight, strong, and inexpensive to manufacture.

These and other objects and advantages of the invention will become more apparent from the following specification when taken in conjunction with the drawings in which:

FIG. 1 is an isometric view of the wine rack of the present invention;

FIG. 2 is an exploded isometric view of two of the components of the wine rack prior to assembly;

FIG. 2A is an enlarged, fragmentary, horizontal, sectional view, taken on the line 2A—2A of FIG. 2;

FIG. 3 is an isometric view of one of the end components which make up the wine rack of FIG. 1;

FIG. 4 is a developed plan view of one of the components;

FIG. 5 is an isometric view of a modification of the wine rack;

FIG. 6 is an isometric exploded view of a pair of components of the rack of FIG. 5; and

FIG. 7 is a developed plan view of one of the components.

The form of the modular wine rack shown in FIGS. **1, 2, 3** and **4,** includes a plurality of generally U-shaped female components **5,** a plurality of U-shaped male components **7** and a pair of L-shaped end components **9.** These components may be formed of heavy gauge sheet metal, plastic or other suitable stiff material. If desired, the components could be formed by molding material such as plastic material.

Each of the female components **5** has a planar bottom wall **11** and planar side walls **13** and **15** extending upwardly from the bottom wall **11** in parallel relationship and spaced apart a distance substantially equal to or slightly greater than the diameter of a bottle to be disposed therein.

The upper end portion **17** of the side wall **13** of each female component **5** is bent outwardly and back upon itself or otherwise formed to provide a tab **18** extending parallel to the side wall **13** and forming, with the outer surface **19** of the side wall **13,** an end recess **21** of generally U-shaped cross section. The vertically extending edge portions **23** and **25** of side wall **13** are also bent outwardly and back upon themselves, or otherwise formed to provide the tabs **24** and **26** extending parallel to the side wall **13** and forming, with the outer surface **19** parallel side recesses **27** and **29** of generally U-shaped cross section. In like manner, the upper edge portion **31** of the side wall **15** is bent outwardly and back upon itself to provide a tab **32** which forms with the outer surface **33** an end recess **35,** while the vertically extending side edge portions **37** and **39** are also bent outwardly and back upon themselves, providing the tabs **38** and **40** which form with the outer surface **33,** parallel side recesses **41** and **43.**

Each of the male components **7** is formed of stiff sheet material such as metal or plastic and has a base wall **45** and vertically extending, planar lateral walls **47** and **49** extending vertically upwardly from the base wall **45** in parallel relationship.

The vertically extending side edges **51** and **53** of the lateral wall **47** and the corresponding side edges **55** and **57** of the lateral wall **49** of the male components are parallel and the width of the lateral walls **47** and **49** is dimensioned to be slightly less than the distance between the edge portions of the female components when measured between the intermost extremities of said side recesses, and each of the lateral walls is dimensioned to be of such a height that the upper end edge **59** of said walls will be disposed in the end recess at the upper edge portion of the side wall of the corresponding female component **5.**

Each end of a rack assembled from alternate female and male components, is preferably completed by attaching the L-shaped end trim component **9** to the end female or male component **5** or **7** with the inner surface **63** of the L-shaped component contiguous with the outer surface of the side wall of the respective end component and with the end wall recess **65** provided at the upper edge portion of the L-shaped component **9** enclosing and confining the upper edge of the upper edge portion of the respective end component. The lower bottom wall **69** of the L-shaped components **9** are disposed beneath the bottom wall of the adjacent male or female components whereby the components **9** form a stabilizing support at each end of the rack and provide a finishing trim for aesthetic purposes.

In the form of the invention shown in FIGS. **5, 6** and **7,** a plurality of components **71** of similar configuration are arranged in juxtaposed alignment and connected together to form a modular rack particularly adapted for storing rows of wine bottles lying on their side in closely adjacent, but spaced relationship.

Each of the components **71** is preferably of U-shaped configuration and each includes a bottom wall **73** and vertically extending, planar side walls **75** and **77.** The upper edge portion of only side wall **77** is bent outwardly and back upon itself to provide a tab **80** extending parallel to the side wall **77** and forming with the outer surface **81,** a connection recess **83** of generally U-shaped cross section.

The components **71** are arranged in alignment in side-by-side relationship in order to form a modular rack of any desired length with the upper edge **85** of each side wall **75** disposed in the connecting recess **83** of the respective adjacent component.

Each end of a modular bottle rack formed of the components **71** may be provided with an L-shaped component **9** arranged as described above in connection with FIGS. **1 – 4.** The end wall recess **65** of the L-shaped component **9** encloses and confines the upper edge **85** or the upper edge portion **79** of the respective adjacent component **71.** As shown in FIG. **5,** the upper edge portion of the side wall **77** of component **71** at the left end of the bottle rack has not been bent outwardly and back upon itself as were the other components to form a tab **80.** By omitting the tab **80** on this component, the inner wall **63** of the end component **9** lies contiguous with the opposed outer surface of the wall of the adjacent end component **71.**

It will be understood that the invention is not to be limited to the exact construction shown and described but that various changes and modification may be made without departing from the spirit and scope of the invention, as defined in the appended claims.

What I claim is:

1. A modular wine bottle rack formed of a plurality of juxtaposed, interconnected components, comprising: a plurality of first components formed of stiff sheet material, each of said first components having a bottom wall and a pair of substantially planar side walls, each of said side walls having an inner and an outer surface, a tab integral with the end portion of each of said side walls and disposed parallel with and closely adjacent said outer surface and providing therewith an end recess of generally U-shape cross section, each of said side walls having substantially parallel edge portions, a tab integral with each of said edge portions and disposed parallel with and closely adjacent said outer surface and providing therewith a pair of side recesses of generally U-shape cross section; and a second component juxtapositioned between a pair of said first components, said second component being formed of stiff sheet material and having a base wall and a pair of substantially planar lateral walls, the side edges of said lateral walls being substantially parallel and disposed with a close sliding fit within the side recesses of the adjacent side wall of the juxtaposed first component, the end edge of each of said lateral walls being disposed within the end recess of the adjacent side wall of the juxtaposed first component.

2. A modular wine bottle rack according to claim **1,** including a pair of third components formed of stiff sheet material and each comprising a substantially planar end wall, a lower bottom wall, and a tab integral with the upper edge portion of said end wall and disposed parallel with and closely adjacent the inner surface of said end wall and forming therewith an end wall recess, said third components being disposed at either end of said bottle rack with the inner surface of the end wall of each of said third components contiguous with the outer surface of the outer side wall of the respective end component, with the end wall recess of said third components enclosing the end portion of the adjacent side wall of the respective end component, and with said lower bottom wall underlying the bottom wall of the respective end component and being in contact therewith.

3. A modular wine bottle rack according to claim **1,** in which said first and said second components are formed of sheet metal.

4. A modular wine bottle rack according to claim **1,** in which the side walls of said first components are substantially parallel and said bottom wall is planar.

5. A modular wine bottle rack according to claim **4,** in which the side walls of said first component are spaced apart a distance substantially equal to the diameter of a wine bottle stored therein.

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