This invention relates to a display device for retail articles of substantially uniform size and shape such as are used extensively in packaging foods, drugs, beverages, bottled wines and liquors, and the like. More particularly it pertains to compartmented storage racks and/or to a turntable for display packaged articles including charts for their use, which device may vary in size and be mounted on the floor or on a counter or table. For example, liquor stores, food stores, restaurants, serve-yourself stores, and other types of supply and retail stores may benefit greatly through the use of the display devices of this invention.

It is an object of this invention to produce an efficient, simple, effective, economic, and durable display device for the storage and/or display of packaged retail goods. Another object is to provide a rotatable display device where many types of bottled wines and/or liquors may be placed in full view of an observer together with a chart or selection indicator for the use of the bottled goods.

Another object is to provide a frictionless turntable type of a storage stand whereby any goods displayed thereon may be brought readily into an observer's or prospective purchaser's view, and the top may be readily replenished from the storage place below it.

Another object is to provide such a storage space for bottled wines having spaced apart supporting elements for maintaining the bottles in an inclined position so that their cork stoppers will remain wet and normally expanded within the neck of the bottles.

A further object is to provide a readily accessible display stand having an open sided compartmented storage structure in which a plurality of containers or bottles of different shapes and sizes may be orderly arranged and stored.

Still another object is to provide a display device and stand and storage compartment associated therewith which is light in weight, portable, easily assembled, and simply constructed.

Generally speaking one device of this invention comprises a rectangular compartmented rack or base unit for storing various groups or groupings of bottled wines, an antifriction bearing mounted upon the top of said base unit, and a rotatable display unit mounted on the antifriction bearing to display a portion or a representative selection of the bottles being stored in the rack below it. In addition to the rotatable display unit, a dial and pointer cooperating therewith may be provided to aid in selection of the bottled goods such as by indicating the types of beverages which are recommended for different types of food. The rack or base unit may be of welded wire construction for lightness in weight and ready observability and display purposes, while the turntable top or display unit may be of plywood or other construction, as desired, and either unit may be employed independently of the other.

The above mentioned and other features and objects of this invention and the manner of attaining them will become more apparent and the invention itself will be understood best by reference to the following description of embodiments of the invention taken in conjunction with the accompanying drawings, wherein;

FIG. 1 is a front elevational view of one embodiment of a display device for wine bottles according to this invention showing the combination of a compartmented rack base unit and the rotatable display unit mounted thereon;

FIG. 2 is an end elevational view of the display device shown in FIG. 1 with parts of the rotatable display unit being broken away;

FIG. 3 is a partial plan view of the rotatable display unit shown in FIGS. 1 and 2 showing a selection indicator associated therewith;

FIG. 4 is a plan view of the rectangular base unit taken along line IV—IV of FIG. 1 showing the antifriction bearing for supporting the rotatable display unit thereon;

FIG. 5 is a cross sectional plan view taken along line V—V of FIG. 1, showing the arrangement of some of the compartments in the base unit and how some of the bottled beverages may be stored therein;

FIG. 6 is a detail sectional view of one of the support legs for the rack base unit taken along line VI—VI of FIG. 2;

FIG. 7 is a plan view of a food and wine index chart and its associated indicator which may be employed at the center of a rotatable display unit as shown in FIGS. 1, 2 and 3; and

FIG. 8 is a perspective view of another embodiment of the invention showing a rotatable display unit and selection indicator mounted on a table type of base unit.

I. The Base Unit

Referring first to the embodiment showing in FIGS. 1 and 2, a pedestal or base unit 10 is shown constructed of wire which is cut, bent and welded to form a stable, unitary, easily accessible, compartmented rack for the storage of packaged articles including bottled beverages. A pair of rectangular loop forms, which may be made from heavier wire, say of approximately ¼" diameter, are bent, butt-welded and/or otherwise shaped into end panels 11, 12 for the frame structure of the base unit 10. Front and rear panels 14, 16, respectively, also may be formed of wire, and may be similarly bent to shape and butt welded into firm continuous loops as are the end panels 11, 12, which front and rear panels 14, 16, may be arranged with the end panels 11, 12 to form a rectangular prism (see also FIGS. 4, 5) and so welded 17 into a single unitary frame structure. Intermediate, spaced apart panels 18, 19, and a central lattice or partition panel 19 may be provided between the front and rear panels 14 and 16 and parallel thereto, and may be employed as supporting elements for the compartmented portions of the base unit 10 as will be described hereinafter. Support legs or foot members 20 (see also FIG. 6) may be provided to give a nominal elevation of the base unit 10 above the floor. Diagonal braces 22 and horizontal braces 23 may be provided and may be welded 24, to the front and rear panels 14, 16 (see FIG. 2) to increase the rigidity and stability of the unit, and substantially complete the main frame structural portions of the base unit 10.

A plurality of each of a plurality of different sized compartments 30 and 31 may be provided in the base unit frame 10, such as for the different sized bottles C (champagne) and W (wine) shown in FIG. 1. Thus individual compartments may be formed with a series of horizontal wires 32 preferably of lesser diameter than the main frame, say approximately ¼" to ⅛" diameter, which may support a group of bottles C for storage thereon, while a series of upstanding or vertically mounted wires 33 of similar size may act as separators and cooperate with the horizontal wires 32 to form the side edges of the open ends of a plurality of one size of compartments 30 in which the individual bottles W may be stored. Another series of horizontal wires 34 may be provided at a slightly closer spacing to accommodate a
group of bottles W which may be of a smaller size or diameter; and vertically extending wires 35 may be provided to act as separators and cooperate with the horizontal wires 34 to form another size of compartment 31 in which the individual bottles W may be stored. The proportionate ratio of the numerical quantity of bottles C against bottles W may be used to determine the number of compartments of either size to be incorporated in the base unit. This ratio for the base 10 herein is approximately 1 to 2, respectively, and indicates six tiers of seven compartments to accommodate the bottles C as against ten tiers of nine compartments to accommodate bottles W, said tiers being divided equally between the two sides of the rack unit.

The partition panel 19 situated approximately midway between the panels 14, 16 may be provided with a series of vertical wires 36, 39 which in themselves form a barrier or screen to act as a limit or back stop for the stored bottles (FIG. 5) or as an end for the compartments 39 and 31.

The intermediate panels 18 may have vertically upstanding wires 38, 39 in parallel alignment with the wires 33, 35, respectively, to act as lateral guide members for the bottles C and W. The vertical guide wires 38, 39 may be spaced at varying intervals, their distances apart depending upon the numerical quantity of bottles of a given size which are to be stored. Intermediate horizontal support for the bottles may be provided on the panels 18 by means of wires 40, 41, arranged in a manner to be substantially parallel with the wires 32, 34, and possibly at a slightly lower elevation, or spaced sufficiently away from the side panels 14 and 16 so that the stored bottles may rest at a slight downwardly inclined angle, or on their tapered neck portion, as is usually preferred in the storage of corked wine bottles so that their corks will keep wet and tight at all times. All of the supporting wires, either horizontal or vertical, may be welded together at their intersections X to form a solid unitary structure.

Thus the articles or bottles to be stored in the rack base 10 may easily be placed into individual compartments and just as easily removed therefrom, and the structure of the rack is openened and substantially self cleaning so that the articles therein may be readily inventoried for stock replenishment when required.

Another type of pedestal or base unit 45 is shown in FIG. 8 comprising a table with a top 46 and legs 47 upon which the rotatable display unit part of this invention described below may be supported.

II. The Rotating Display Unit

A circular tray 50 of plywood or other material of a similar character, having an upstanding rim or marginal member 51, an intermediate circular partition member 52, and a central tower section 53, may be mounted upon an antifriction bearing 55 for rotation upon the base unit 10; the bearing 55 being attached to a plywood support member 56 affixed by fasteners 57 to the upper runs of the wire side panels or loops 14, 16 which form a part of the structure of the base unit 10, or to a top of a tablebase unit 45 as shown in FIG. 8. The intermediate partition member 52 of the rotating display unit 50 may have formed therein a series of arcuate recesses or pockets 58 extending around the upper edge of the partition, which recesses act both as a support for the displayed articles, such as the neck of bottles D (see FIGS. 1, 2 and 3), and as a means for maintaining a symmetrical spacing of the articles around and on the display table or unit 50. The bottles D thus may be placed on the tray 50 with their neck portions resting in the recesses 58, their bottom portions resting along and against the inner face of the rim 51. The bearing 55 may be made of two circular disks 59 and 59' with cooperating circular tracks or guides for spaced rolling balls 60, all of which may be surrounded by a skirt 61 to protect the bearing.

III. The Selection Indicator

The tower portion 53 of the rotatable display unit 50 may be provided with an index or chart 65, and the divisions 66 thereof may be made, for example, to correspond to a pattern devised to co-ordinate certain types of food with certain types of wine. The divisions 66 (see FIGS. 3 and 7) may be provided with designating labels or indicia 67 which may contain descriptions or recommendations concerning the choice of certain of the articles on display.

For instance, a restaurant may use one half of the margin (see FIG. 7) of the chart 65 to list a variety of food items, while wine types are listed on the other half, in which case the food items may be placed on the chart diametrically opposite the respective recommended wine and each particular food may have a certain preferred beverage to be recommended therewith, such as "Sea Food—Chablis wine," "Spaghetti, Ravioli—Chianti wine," etc.

To facilitate this selection, a pointer device 70 having a handle 71 may be pivoted on a post 72 for use with the chart 65, in which case when an observer turns one end of the pointer 70 to a certain choice of food, he will be informed of a suitable accompanying wine diametrically opposite on the chart 65 by the opposite end of the pointer 70.

In some cases, as for instance in liquor stores, it may be beneficial to have consecutive numbers along the periphery of the chart to coincide with the number of stations or positions in the table (see FIG. 3). This type of index may facilitate service to customers through use of numerical designations for the displayed articles, and accordingly by use of similar designations on the divisions of an individual storage rack or on individual racks in a series.

In the embodiment shown in FIGS. 1 and 2, a customer may make a choice from the turntable 50, rotating it to facilitate a complete view of the articles being displayed. Then service may be made directly from the compartments in the base unit 10 in accordance with the selection from the table or display unit 50, either by the customer or by the attendant. However, when the rotatable display unit 50 is mounted upon the pedestal 45, at one or more locations about the premises, service may be made by the attendant from a remote storage area, from one of the storage compartments on the base unit 10 at another location, or directly from the tray 50. Replenishment of the stocks to be stored on the tray 50 and/or in the rack base 10, may be made by the attendant as required.

While there is described above the principles of this invention in connection with specific apparatus, it is to be clearly understood that this description is made only by way of example and not as a limitation to the scope of this invention.

What is claimed is:

1. A bottle rack of welded wire construction comprising: a pair of laterally spaced apart rectangularly shaped loop members to form side walls for the rack, a pair of similarly shaped front and rear loop members to form front and rear walls of the rack, an intermediate loop member positioned medially between the front and rear loop members, first and second subintermediate loop members positioned between the intermediate member and the front and rear members respectively, a plurality of wires on the intermediate loop member to form a central barrier in the rack, a plurality of horizontal and vertical wires in spaced apart arrangement on the front and rear loop members and on the said subintermediate members to form a plurality of aligned and substantially rectangularly shaped compartments for storage of said bottles.

2. A bottle rack according to claim 1 in which the intermediate loop member comprises a plurality of wires in vertically extending gridiron arrangement.

3. A bottle rack according to claim 1 in which the plu-
rality of wires on the intermediate loop are in open mesh screen arrangement.

4. A bottle rack according to claim 1 comprising leg elements for said rack.

5. A bottle rack according to claim 1 comprising structural bracing elements on the side walls of said rack.

6. A device for storing and displaying elongated articles of various lengths, comprising a base, a tray member rotatably mounted on said base and having an annular peripheral trough for substantially horizontal radial display of said articles, said trough having an outer side and a concentric inner side, with the distance between said sides being greater than the length of the longest of said elongated articles to be displayed, and an article positioning means located in a concentric partition in said trough.

7. A device according to claim 6 wherein said base comprises an open sided lattice framework having a plurality of compartments for storing articles to be displayed.

8. A device according to claim 6 wherein said base comprises leg elements for supporting said tray member.

9. A device according to claim 6 including a disk supported by said inner side wall carrying indicia for identifying the articles displayed on said tray.

10. A device according to claim 9 including indicator means on said disk to coordinate said indicia with the articles on display.

11. A rotatable table display device for elongated articles comprising: a support for said device, a rotatable annular trough mounted on said support, said trough having concentric sides and having a width sufficient to hold said articles arranged with their longitudinal axes along the radii of said annular trough as spokes between said concentric sides, and guide means arranged in a ring in said trough and concentric therewith for restricting movement of said articles in said trough.

12. A table display device according to claim 11 in which said elongated articles to be displayed may comprise bottles having necks and said guide means comprises an annular upstanding substantially cylindrically shaped element having its lower edge affixed to said trough and having its upper edge notchted to position and support said necks of said bottles being displayed.

13. A rotatable display stand for elongated articles comprising a base, a rotatable platform, a circular antifriction element located between said base and said platform concentric with said platform for journaling said platform on said base, said platform comprising an upwardly extending peripheral flange for retaining said articles on said platform, a central island tower on said platform whereby an annular trough space is provided for the radial display of said elongated articles, and means arranged in a concentric ring within said annular trough space for engaging the sides of said articles to restrain them from movement on said platform.

14. A wire bottle rack comprising: a pair of laterally spaced apart rectangularly shaped loop members to form side walls for said rack, a pair of similarly shaped front and rear loop members to form front and rear walls of said rack, a plurality of intermediate loop members spaced from said front and rear members respectively, a group of a plurality of horizontal wires and a group of a plurality of vertical wires in spaced apart arrangement on said front and rear loop members and on said intermediate members to form a plurality of compartments for storage of said bottles, one of said groups of wires on at least one of said intermediate members being spaced closer together than its corresponding group on said front and rear loop members.

15. A bottle rack according to claim 14 in which said plurality of wires on said intermediate loops are in open mesh screen arrangement.

16. A bottle rack according to claim 14 comprising leg elements for said rack.

17. A device for storing and displaying bottles of various lengths in tilted position comprising a storage rack including a pair of laterally spaced apart rectangularly shaped loop members to form sides for said rack, a plurality of spaced apart members, said bottle members being staggered with respect to said horizontal members of an adjacent one of said bottle members, whereby a bottle resting on said horizontal members between two adjacent lattices will be tilted from a horizontal position, support means secured to said side loop members, an annular trough member rotatably mounted on said support means for display of samples of bottles stored in said compartments, said trough having inner and outer concentric sides and having a width to accommodate the longest of said bottles with their longitudinal axes along radii of said trough, and a partition concentric with said trough sides provided with means for holding said bottles in tilted position, whereby all bottles displayed as well as stored are tilted from a horizontal position.

18. A bottle rack according to claim 1 and further including a substantially horizontal support member affixed to the upper runs of said side loop members, an annular trough member rotatably mounted on said support member for display of samples of bottles stored in said compartments, said trough having inner and outer concentric sides and having a width to accommodate said bottles with their longitudinal axes along radii of said trough, and means in said trough for restricting movement of and holding said bottles in tilted position.

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