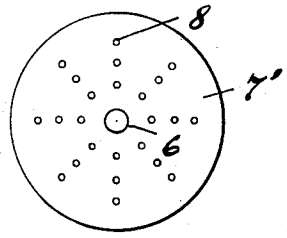
Nov. 9, 1965 N. N. BRENNER 3,216,775

BEVERAGE CABINETS

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Fig. 4



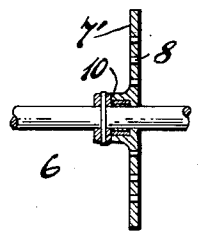


Fig. 5

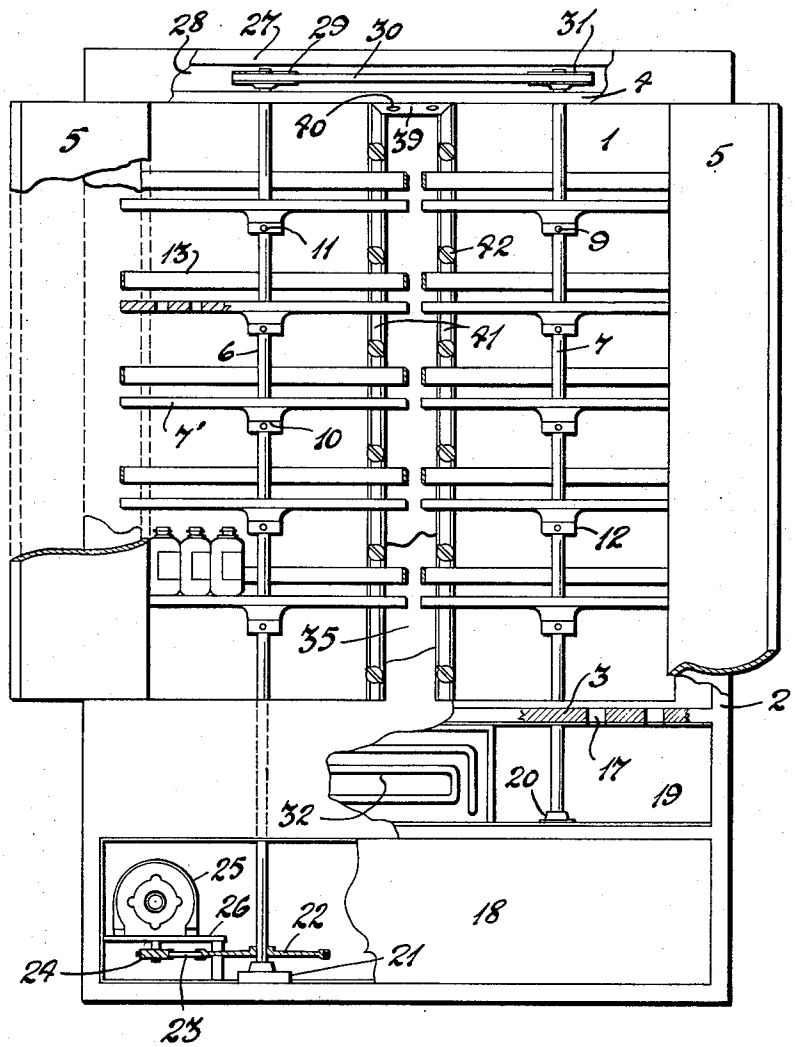


Fig. 1

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BEVERAGE CABINETS

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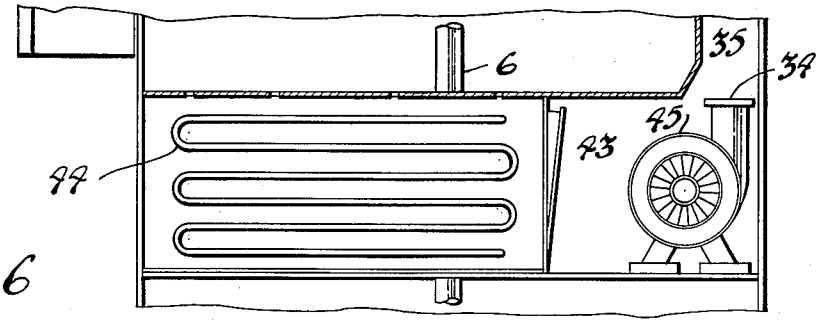


Fig. 6

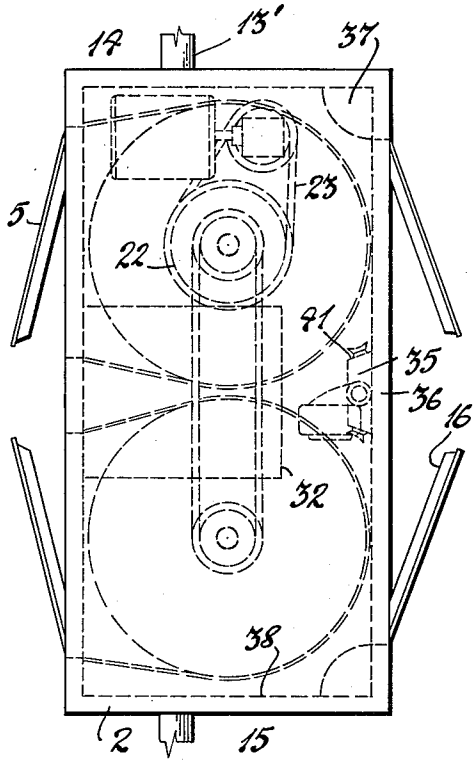


Fig. 2

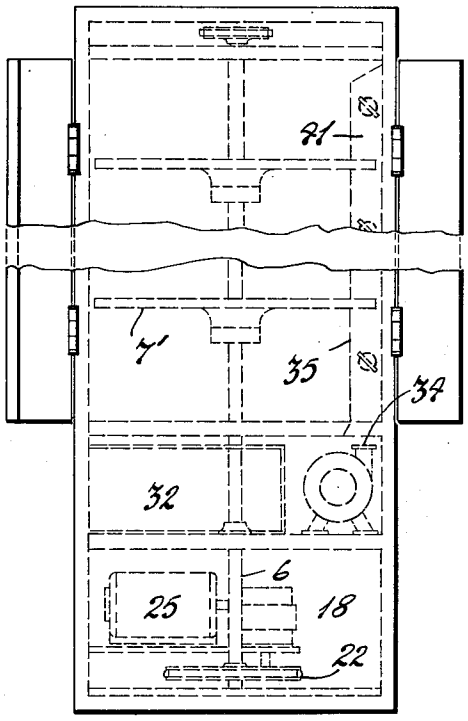


Fig. 3

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BEVERAGE CABINETS

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3 Claims. (Cl. 312—236)

The present invention relates to improvements in cooling enclosures for beverages, foods and the like, and particularly for alcoholic beverages, specifically beer and ale, an object of the invention being to provide, in such a cabinet, of any size and number of rotary units (as hereinafter described) wherein each rotary unit comprises a vertically disposed, rotatable rod upon which a plurality of encircling, circular shelves are mounted in variable superposed relationship such that the shelves may be rotated independently of the rod they encircle for convenient access, and in which the rods, with the shelves thereon may be slowly rotated due to the fact that each shelf is supported on a collar having an upper bearing surface interfacing the underside of the associated shelf whereby the co-efficient of friction between the two surfaces is sufficient to rotate the shelves when the rod is being slowly rotated by a source of power, usually in the order of 10 r.p.m.

A further object of the present invention is to provide a cabinet as aforesaid below which the source of power for rotating the rod or a plurality of spaced rods (and shelves) is positioned, a cooling compartment also being provided below the cabinet, said cooling compartment either being one and the same as that which contains the source of power (herein called the power compartment) or separate therefrom, together with a duct extending upwardly from the cooling compartment against one wall of said enclosure, the duct being intended to convey a current of cool air into the enclosure and having a variably openable vent at the upper end thereof, as well as a plurality of preferably variable openable vents upon the length thereof whereby cool air may be admitted into the cooling enclosure between the various shelves therein.

A further object of the present invention is to provide circular shelves of the character herewithin described which are individually multi-apertured so that cold air may be circulated downwardly therethrough upon its return to a cooling compartment below the enclosure.

With the foregoing objects in view, and such others as may become apparent as this specification proceeds, the present invention consists in the following arrangement and construction of parts, all as hereinafter more particularly described, reference being had to the accompanying figures in which:

FIGURE 1 is a front elevation, partly fragmented and with the doors open, of the present invention as embodying two rotary units.

FIGURE 2 is a plan view of FIGURE 1 illustrating the manner in which the cooling enclosure of the present invention may occupy a position within an opening in a room or compartment dividing wall, and illustrating the manner in which the enclosure may be replenished from a store (behind a barroom for example) and extracted from, within the bar.

FIGURE 3 is a side elevation of the invention according to FIGURES 1 and 2.

FIGURE 4 is a plan elevation of one of the circular shelves.

FIGURE 5 is a sectional representation of one of the circular shelves.

FIGURE 6 is a side elevation of an alternative modification of the present invention showing the pump in a modification showing the cooling coil and pump on a single

level below the beverage containing or cooling enclosure, it being understood that in this embodiment the source of power or drive for the shelf-supporting rods will be to one side of the cooling coil as also indicated.

In the drawings, like characters of reference designate similar parts in the several figures.

The present invention may be summarized conceptually as the combination with a cooling enclosure collectively designated **1** comprising walls **2**, floor **3**, roof **4** and a door or doors **5**, of a vertical, shelf-carrying rod or rods **6** and **7** (although it is to be understood there may well be more than two such rods) surrounding which are circular shelves **7'**. Such rods and shelves may conveniently be referred to herein as rotary units.

The shelves **7'** are preferably apertured as at **8** to permit the passage of air, mainly downwardly, though not necessarily, therethrough. Also surrounding the rods **6** and **7** and securable thereto at selected positions thereon, are cylindrical collars **9**, said collars having upper, annular, bearing surfaces **10** at right angles to the longitudinal axes of the aforesaid rods. They may be secured at any desired position upon the length of the rods, as aforesaid, by means such as the set-screws **11**.

The shelves **7'** are free of rods **6** and **7** and hence are free to rotate independently of the rods. However, when the rods are slowly rotated by a source of power presently to be described, the shelves will rotate with them due to the coefficient of friction between said shelves and said bearing surfaces. In this connection it will be noted that the shelves **7'** are preferably provided with downwardly projecting annular bosses **12** having bearing surfaces of similar diameter to the bearing surfaces **10** of the collars **9**.

Rails **13** are preferably provided within the compartment **1** slightly above the levels generally occupied by the shelves **7'** to lessen the possibilities of the bottles or cans being knocked off. In plan view (by reference to the accompanying FIGURE 2) it will be observed that the enclosure **1** is of generally rectangular conformation and will frequently, if not usually, be recessed so that it projects upon either side of a dividing wall **13'** separating a bar for example (in the area **14**) from a store room (in the area **15**). The enclosure **1** is so designed that wares may be withdrawn through the door or doors **5** for sale, and replenished by the storekeeper via the door or doors **16**. The floor **3** is apertured as at **17**, and below the enclosure **1** a power compartment **18** is located. In the embodiment of FIGURE 1 a cooling compartment **19** is positioned between compartment **18** and enclosure **1**, but by modifications of design it will be apparent that under some circumstances it may be desirable to combine compartments **18** and **19** into one.

Rod **7** (which is an idler rod as will presently become apparent) may be sunk into and supported upon the end-thrust bearing **20**. The driving rod **6** is socketed in the end-thrust bearing **21** in compartment **18**. Keyed to the shaft slightly above the bearing **21** is a large diameter pulley **22** to which is connected a belt **23** passing around a smaller pulley **24**. Pulley **24** is driven by a reduction gearing assembly of conventional design connected to motor **25** secured to platform **26**.

A false roof **27** is provided above roof **4**, and through the latter roof rod **6** extends to terminate in the area **28** in a pulley **29** around which passes a belt **30**. Upon rod **7** is a similar pulley **31**. Around this belt **30** also passes from which it will be obvious that rod **7** is rotated by rod **6**.

Within compartment **19** is a conventional cooling coil **32** through which return air from the floor apertures **17** passes, to be drawn into the impeller or pump **33** (see FIGURE 3). The outlet orifice **34** of this pump is in communication with or contiguous to the lower end of

a vertical duct collectively designated **35**. In the embodiment of the accompanying FIGURE 1, it will be most convenient to locate this duct centrally against wall **36** (that is to say against the strip separating the two doors **16**). However, in a cooling enclosure comprising only one rotary unit (as already defined) there may preferably be two ducts of the conformation indicated by phantom lines **37** in the accompanying FIGURE 2 from which it will be seen that they are located against the side walls **38** and the aforesaid rear wall **36**, it being again understood of course that sufficient rear will be provided for this purpose on either side of the opening for the (single rotary unit) enclosure. It is not too important that the impeller orifice **34** be in direct communication with the intakes of the duct **35** or ducts **37** (which of course communicate with compartment **19**) since the whole compartment may be said to be more or less pressurized by the presence of the operating pump **33**.

In any event, the duct **35** or the ducts **37** should be provided with vents. The principal vent in the case of the duct **35** is designated **39**. By best reference to the accompanying FIGURE 1 it will be seen to incline forwardly and downwardly. It may be fully open but is preferably "variably openable" by means of such as conventional butterfly or other valves **40**.

The side walls **41** of the duct **35** are also vented, and here too preferably provided with variably openable valves **42** of conventional design. As a result it will be apparent that very effective cold air circulation may be effected within the enclosure **1**.

Finally, in the accompanying FIGURE 6 there is illustrated a compartment **43** which is intended to combine the power and cooling compartments **18** and **19** of the accompanying FIGURE 1. In this embodiment the cooling unit is designated **44**. To the rear of same is the impeller **45** in communication with duct **35**. It will readily be appreciated that the source of power comprising parts **22** through **25** supra are located on the far side of the coil **44** as suggested by the depicted location of rod **6**.

Since various modifications can be made to the novel subject matter herein, without departing from the inventive concept which the same embodies, it is not intended that protection of this invention by letters patent should be interpreted as restricted to the particular modification or modifications thereof particularly described and exemplified.

What I claim as my invention is:

1. In a cabinet for beverages, feeds and the like, comprising an enclosure for said beverages, foods and the like,

a floor, a roof, and a door, in combination, a cooling compartment below said enclosure, a power compartment also below said enclosure, a duct against one wall of said enclosure extending vertically from said cooling compartment substantially to the top of said cooling enclosure, an air-discharge vent in said duct, a vertical, shelf-carrying rod, said rod extending through said compartments, said rod being supported in a thrust-bearing in the lower of said compartments, an impeller within said power compartment, a plurality of circular shelves surrounding said rod, a plurality of cylindrical collars also surrounding said rod, said collars having upper annular bearing surfaces at right angles to said rod, means for securing said collars at selected positions on the length of said rod, said shelves being supported on said collars, and being rotatable thereon independently of said rod, and a source of power within said power compartment for slowly rotating said rod and said shelves due to the co-efficient of friction between said shelves and said bearing surfaces.

2. The duct according to claim **1** in which said vent is at the upper end of said duct and inclines forwardly and downwardly toward the interior of said enclosure.

3. The duct according to claim **1** which has a discharge aperture therein within said cooling enclosure and in which said vent is at the upper end of said duct, the same inclining forwardly and downwardly toward the interior of said cooling enclosure, said duct having a front wall and a pair of side walls which incline rearwardly from said front wall toward the wall of said enclosure against which said duct is positioned, and a plurality of variably openable vents in said side walls, the said vent in the upper end of said duct being also variably openable.

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