Jan. 8, 1929. 1,698,466

D. R. ARNOLD ET AL

SOFT DRINK COOLER

Filed Nov. 3, 1927 3 Sheets-Sheet 1

Fig. 1.

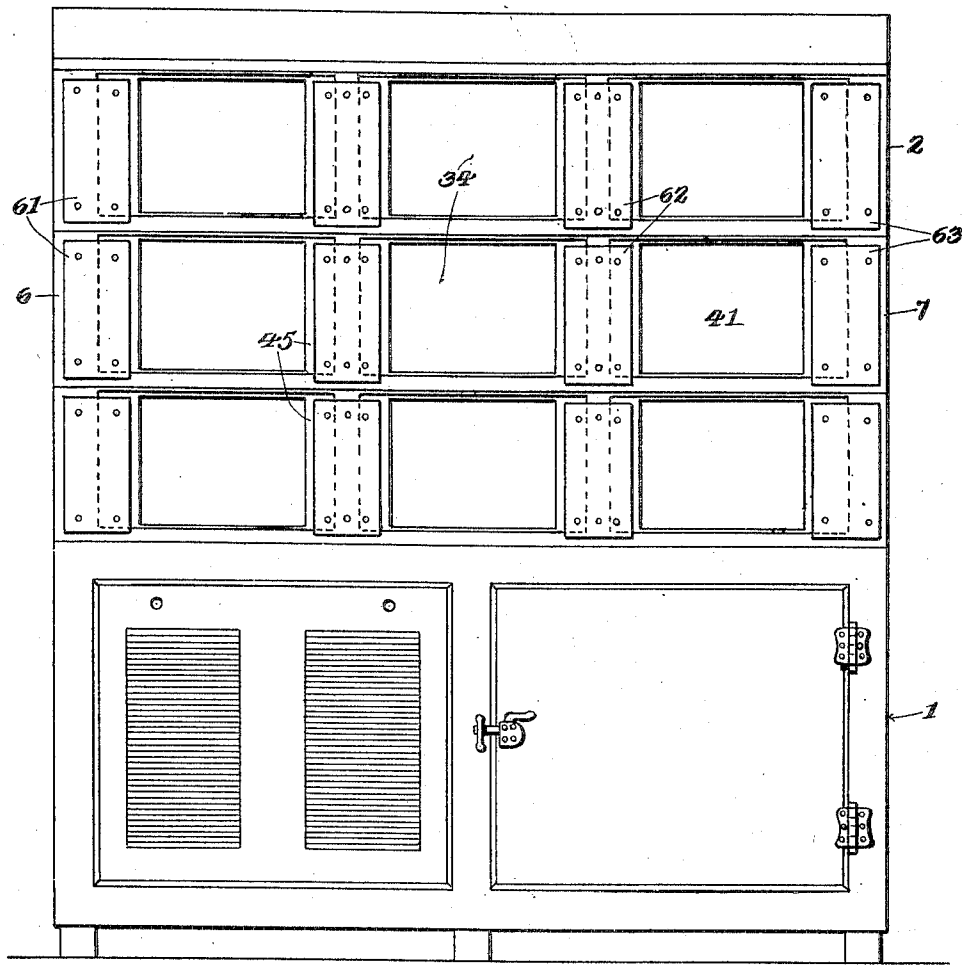
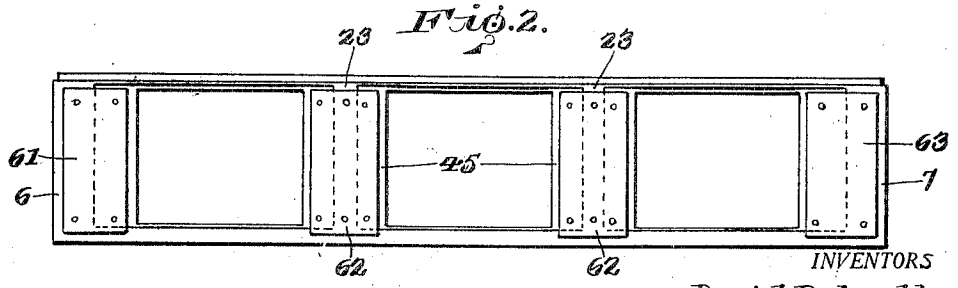


Fig. 2.



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Fig. 3.

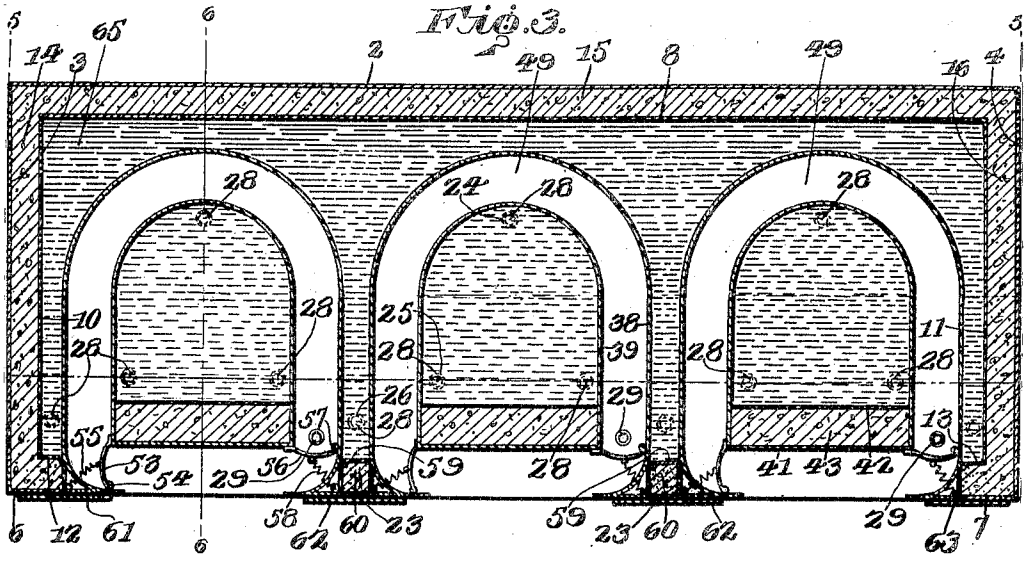
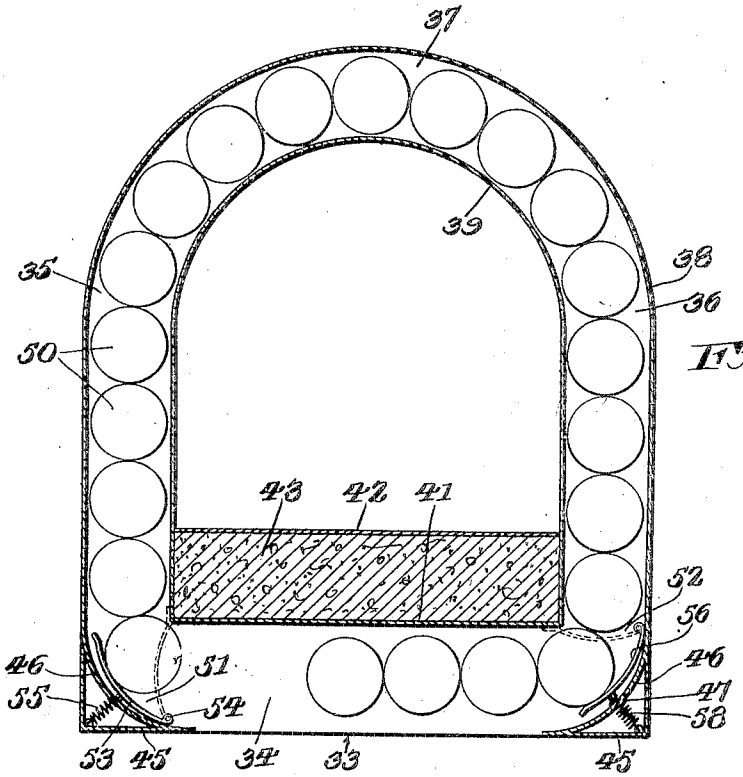


Fig. 4.



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Fig. 5.

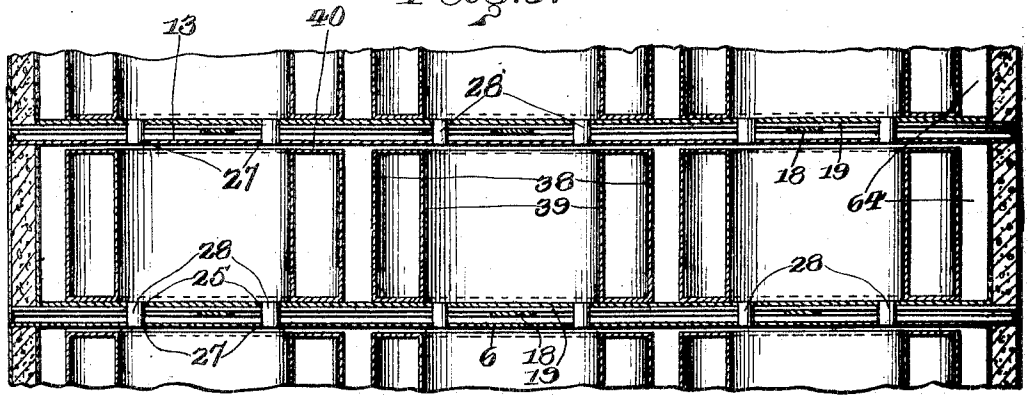


Fig. 7.

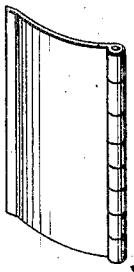


Fig. 6.

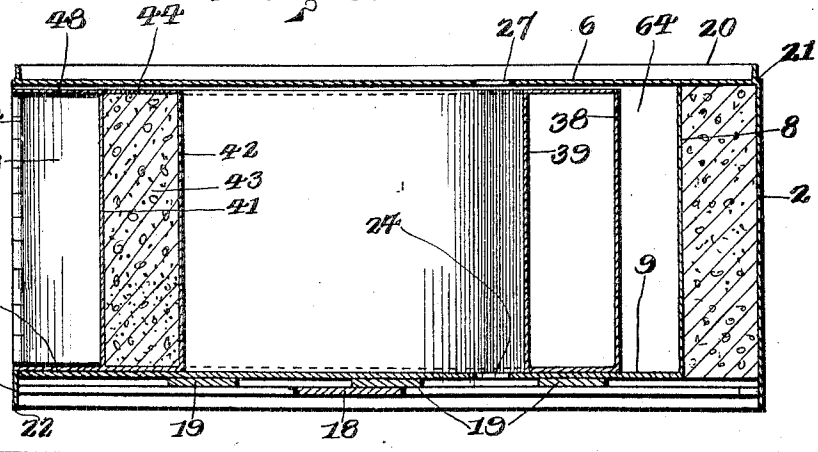
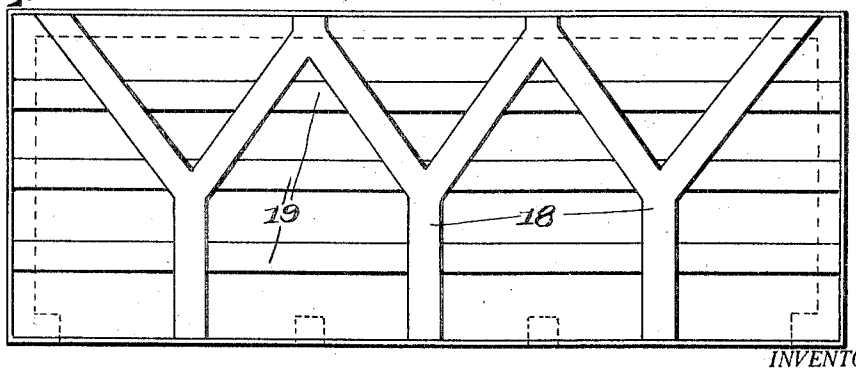


Fig. 8.



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UNITED STATES PATENT OFFICE.

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SOFT-DRINK COOLER.

Application filed November 3, 1927. Serial No. 230,858.

This invention relates to an electric cooler of the sectional type and is designed primarily for the storing, cooling and dispensing of bottled beverages of the non-alcoholic type, such as soft drinks, but it is to be understood that a cooler in accordance with this invention may be employed for the storing, cooling and dispensing of any character of merchandise for which it is found applicable, and the invention has for its object to provide, in a manner as hereinafter set forth, a cooler including a plurality of superposed, interchangeable, detachable and removable refrigerant containing sections communicating with each other and each provided with one or more vertically disposed, transversely extending, bottle receiving, storing and dispensing elements formed with normally closed intake and delivery ends opening at the front of the section and with said element or elements constructed and arranged to provide for the delivery therefrom of a bottle on the insertion of a bottle therein for storing, cooling and dispensing.

A further object of the invention is to provide, in a manner as hereinafter set forth, an electric cooler of the sectional type capable of being built up to the desired height from superposed, interchangeable, detachable, removable combined refrigerant containing and bottle storing and dispensing sections having the intake and delivery for the bottles at the front thereof, and with the sections communicating with each other.

A further object of the invention is to provide, in a manner as hereinafter set forth, an electric cooler of the sectional type including superposed refrigerant containing and separable sections and with each of the sections provided with one or more bottle receiving, storing and dispensing element or elements each having normally closed intake and delivery ends opening at the front of the sections and with the element or elements surrounded by the refrigerant.

Further objects of the invention are to provide, in a manner as hereinafter set forth, an electric cooler of the sectional type which is comparatively simple in its construction and arrangement, strong, durable, compact, thoroughly efficient in its use, conveniently used for cooling and dispensing bottled beverages, readily assembled, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view the invention consists of the novel construction, combination and arrangement of parts as hereinafter more specifically described, and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which fall within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:—

Figure 1 is a front elevation of an electric cooler of sectional type shown with three refrigerant containing sections.

Figure 2 is a front elevation of one of the refrigerant containing sections.

Figure 3 is a sectional plan of one of the refrigerant containing sections.

Figure 4 is a sectional plan of a bottle receiving, storing and dispensing element, carried by a refrigerant containing section.

Figure 5 is a section on line 5—5 Figure 3.

Figure 6 is a section on line 6—6 Figure 3.

Figure 7 is a perspective view of the form of closure gate employed for the intake and delivery ends of a bottle receiving, storing and dispensing element.

Figure 8 is a plan of the manner of bracing the bottom of a refrigerant section.

Referring to the drawings in detail 1 denotes a cabinet adapted to contain any suitable means to provide for the circulation or supplying of a refrigerant, such as brine, through or to the refrigerant containing sections to be presently referred to. The cabinet 1 further provides a support or base for the superposed, interchangeable, separable refrigerant containing sections.

As the refrigerant containing sections are of like construction, but one will be described, as the description of one will apply to the other. The sections communicate with each other and the means to provide therefor will be hereinafter referred to. Any suitable means can be employed for establishing communication between the lowermost of the refrigerant containing sections and the means to provide for the circulation or supplying of the refrigerant.

Each refrigerant containing section consists of an outer open bottom casing formed of sheet metal and comprising a rear wall 2,

a pair of end walls 3, 4 of the same height as the rear wall, a front wall 5 of less height than the rear wall 2, a top 6 and a pair of front wall forming portions 6, 7 extended upwardly from the top of the front wall 5. The front wall 5 opposes the lower portion of the rear wall 2.

Arranged within, spaced from and of less height than the outer casing is an open top and front inner casing formed of acid resisting sheet metal. The inner casing comprises a rear wall 8, a bottom 9, a pair of end walls 10, 11 and a pair of front wall forming portions 12, 13 which extend inwardly at right angles from the front ends of the walls 10, 11. The wall forming portions 12, 13 are of less width than the wall forming portions 6, 7, but the free ends of these latter register with the free ends of the portions 12, 13. Positioned between the end walls 3, 10 is a sheet of insulation 14 preferably of cork. Positioned between the rear walls 2, 8 is a sheet of insulation 15, preferably cork. Positioned between the end walls 4, 11 is a sheet of insulation 16, preferably cork. Positioned within the outer casing and arranged below the bottom 9 are transversely and longitudinally extending brace members 18, 19 respectively and with the latter abutting against the bottom 9. The brace members 18 are connected to the front and rear walls and the brace members 19 are connected to the end walls of the outer casing. See Figure 8. The brace members 18 are arranged below the brace members 19, but in abutting relation. The brace members 18 are positioned above the bottom edge of the outer casing.

The top 6 of the other casing is formed with a vertically disposed, rectangular, inset flange 20 providing a ledge 21 which extends entirely around the flange 20 and upon which is adapted to rest the bottom edge 22 of a superposed section. The flange 20 of the lower section extends into the lower end of the outer casing of an upper section and abuts against the braces 18 when a pair of sections are arranged in superposed relation. The rear and end walls and front wall forming portions of the inner casing extend to the top 6 of the outer casing. The bottom 9 of the inner casing is secured to the front wall 5 of the outer casing. See Figure 6.

The outer casing at its front is provided with spaced, vertically disposed wall forming portions 23 arranged in alignment with the wall forming portions 6 and 7 and spaced therefrom. The wall forming portions 23 extend from the top edge of the front wall 5 to the top 6 of the outer casing.

The bottom 9 of the inner casing of each section is formed with three spaced sets 24, 25 and 26 of vertically disposed spaced openings which are arranged in alignment with spaced sets 27 of spaced openings formed in the top 6 of the outer casing. The sets of openings in the bottom 9 of an upper section align with the sets of openings in the top of a lower section, and positioned with the said sets of aligning openings are pipes 28 of acid resisting metal. The bottom 9 of each inner casing is provided with drip pipes 29 which extend therethrough and open into the slides to be presently referred to. The pipes 27 are provided for establishing communication between the sections and said pipes 27 which are arranged in bottom of the lowermost section are adapted to be connected with the means to provide for the circulation or supplying of a refrigerant to a section or sections.

Each section is provided with one or more vertically disposed, transversely extending, bottle receiving, storing and dispensing elements formed with normally closed intake and delivery ends opening at the front of the section and with the elements constructed and arranged to provide for the delivery therefrom of a bottle on the insertion of a bottle therein for storing, cooling and dispensing. Each of said elements is what may be termed a slide. The slides or the slide are detachably secured within the sections. The vertically disposed, transversely extending, bottle receiving, storing and dispensing element includes a base member 33 of substantially semi-oval contour and it consists of a front part 34 of rectangular contour, a pair of side parts 35, 36 extending rearwardly from the front part 34 and of materially less width than the width of the latter and a rear part 37 of arcuate contour and joining the side parts 35, 36 together. Formed integral with each end of the front part 34 and the outer side of the parts 35, 36 and 37 as well as conforming in contour to the base member 33 is an upstanding wall forming member 38 constructed of acid resisting metal. Formed integral with the upper face of the base member 33, at the rear of the forward part 34 thereof, and also integral with the inner side of the parts 35, 36 and 37, as well as conforming in contour to the shape of the base member 33, is an upstanding wall forming member 39 constructed of acid resisting metal and having its ends spaced rearwardly with respect to the ends of the member 38. The members 38 and 39 are of the same height and secured to the upper ends thereof is a top member 40 which is horizontally disposed. Connected to the forward ends of the member 39 and arranged between said ends, as well as secured to the part 34 of the base member 33, and of the same height as the height of the member 39, is a vertically disposed front wall forming member 41 of sheet metal and secured between, as well as to the member 39 and also to the part 34 of the member 33 and spaced rearwardly from the member 41 is a vertically disposed wall forming member 42 constructed of said resisting material.

Interposed between the members 41 and 42 is a strip of insulation 43.

The top member 40 is extended over and secured to the members 41 and 42 and also extended over the insulation 43 as indicated at 44. See Figure 6. Each end of the member 38 is formed with a right angularly disposed, inwardly extending, vertically disposed extension 45 which is connected to the front edge of the base member 33. The ends of the member 38 are positioned at the outer corners of the base member 33. Formed integral with the inner faces of the extensions 45 and also with the inner faces of the opposed sides of the member 38, as well as connected to the part 34 of the base member 33, are vertically disposed arcuate stop members 46 and each of said members 46 is formed intermediate its upper and lower ends with an opening 47. The members 46 are oppositely disposed with respect to each other. The top 41 is extended over the members 46 and it is not only secured to said members 46, but also to the extensions 45 as well as the front portions of the sides of the member 38, and that portion of the top referred to is indicated at 48. See Figure 6.

The members 38, 39, in connection with the top 41 and base member 33 provide a semi-oval shaped slide or guide passage 49 for the bottles 50. The intake end of the passage 49 is indicated at 50 and it is formed between one end of the member 39 and the inner portion of one of the extensions 45. The delivery or discharge end for the passage 49 is indicated at 52 and it is formed between the outer portion of one side of the member 38 and one end of the member 39. The intake 51 is normally closed by a spring controlled vertically disposed curvilinear pivoted gate 53 which is positioned between the outer end of one of the curved members 46 and one of the other ends of the member 39. The pivot for the gate 53 is indicated at 54 and its controlling spring as at 55 and the latter extends through an opening 47 in a member 46. The pivot 54 is positioned in proximity to the inner portion of the extension 45 positioned at the left of Figure 4. The delivery or discharge end of the passage 36 is normally closed by a vertically disposed, curvilinear, pivoted gate 56 which is normally extended across the passage 36 at a point between an end of the member 39 and one side of the member 38, at a point inwardly with respect to the front end of the latter. The gate 56 opposes the curved member 46, at the right of Figure 4, when the gate 56 is in open position. The pivot for the gate 56 is indicated at 57, and which is positioned rearwardly with respect to the member 46 at the right of Figure 4. The controlling spring for the gate 56 is indicated at 58, and which extends through opening 47 formed in the member 46 at the right of Figure 4. The forward portion of the part 34 of the base member 33, that is to say that portion of the part 34 arranged forwardly of the wall forming member 41, provides a platform for supporting the bottles when entering them into the slide from the intake end 51 or when the bottles are discharged or dispensed from the passage 49 at the discharge or delivery end 52 of said passage. The gate members 53 and 56 are oppositely disposed with respect to each other and are of curvilinear cross section to facilitate the entrance and discharge of the bottles. When a bottle 50 is inserted through the intake 51 it moves the other bottles within the passage 49 towards the discharge or delivery end thereof and will force or dispense or discharge a bottle from the slide. The gates 53 and 56 provide means for closing the passage 49 to retain the cooled air therein. The normal positions of the gates are shown in Figure 3.

Secured between the top of the outer casing and bottom of the inner casing and arranged rearwardly of, as well as spaced from the wall forming portions 23, are front wall forming portions 59 and positioned between these latter and the portions 23 are insulation strips 60 preferably formed of cork. The portions 59 are arranged in alignment with the portions 12, 13 at the front of the inner casing but spaced therefrom and the said portions 12, 13 and 59 are arranged forwardly of the members 39 but rearwardly with respect to the outer ends of the member 38. When the slides are mounted in position the members 38 thereof abut against the portions 6, 7, 12, 13, 23 and 59. See Figure 3. The portions 6, 7, 12, 13, 23 and 59 provide spacing means for the slides. See Figure 3. Coupling pieces are provided for detachably securing the slides in position and said pieces are indicated at 61, 62 and 63. The coupling pieces 61 and 63 are secured to the portions 6, 7 and to an extension 45 of the outer slide. See Figure 3. The coupling pieces 62 are secured to the portions 23 and to the other extensions of the outer slides and to the extensions of the central slide. See Figure 3. The coupling pieces are connected in position by removable holdfast devices.

The slides are of less height than the height of the refrigerant receiving chamber 64 provided by the inner casing. The refrigerant is indicated at 65 and bears against the sides and rear of the slides and when the chamber 64 is completely filled with the refrigerant it extends over the tops of the slides as these latter are spaced from the top of chamber 64. The joints are sealed, preferably with tar to prevent leakage of the refrigerant.

What we claim is:—

1. A combined cooler and dispenser for bottled beverages comprising a plurality of superposed, interchangeable, communicating separable refrigerant containing sections,

each provided therein with one or more hollow, vertically disposed, semi-oval, bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage for the bottles having normally closed intake and delivery ends at the front of the section.

2. A combined cooler and dispenser for bottled beverages comprising a plurality of superposed, interchangeable, communicating separable refrigerant containing sections, each provided with one or more hollow, vertically disposed, transversely extending, bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage for the bottles having normally closed intake and delivery ends at the front of the section, and said element further having a supporting platform forwardly thereof for bottles passing from the delivery end and for ingress to the intake end of said passage.

3. A combined cooler and dispenser for bottled beverages comprising a plurality of superposed, interchangeable, communicating separable refrigerant containing sections, each provided with one or more hollow, vertically disposed, transversely extending, bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage for the bottles having normally closed intake and delivery ends at the front of the section, and said element further including oppositely shiftable spring controlled doors closing said intake and delivery ends of said passage.

4. A combined cooler and dispenser for bottled beverages comprising a plurality of superposed, interchangeable, communicating separable refrigerant containing sections, each provided with one or more hollow, vertically disposed, transversely extending, bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage for the bottles having normally closed intake and delivery ends at the front of the section, said element of substantially semi-oval contour, and said element further including oppositely shiftable spring controlled doors for closing said intake and delivery ends of said passage.

5. A combined cooler and dispenser for bottled beverages comprising a plurality of superposed, interchangeable, communicating separable refrigerant containing sections, each provided with one or more hollow, vertically disposed, transversely extending, bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage for the bottles having normally closed intake and delivery ends at the front of the section, and said element further having a supporting platform forwardly thereof for bottles passing from the delivery end and for ingress to the intake end of said passage, and said element further including oppositely shiftable spring controlled doors for closing said intake and delivery ends of said passage.

6. In a combined cooler and dispenser for bottled beverages a refrigerant containing section being provided therein with one or more hollow, vertically disposed, semi-oval bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage for the bottles having normally closed intake and delivery ends positioned at the front of the section.

7. In a combined cooler and dispenser for bottled beverages a refrigerant containing section provided with one or more hollow, vertically disposed, transversely extending bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage for the bottles having normally closed intake and delivery ends positioned at the front of the section, and said element further having a supporting platform forwardly thereof for bottles passing from the delivery end and for ingress to the intake end of said passage.

8. In a combined cooler and dispenser for bottled beverages a refrigerant containing section provided with one or more hollow, vertically disposed, transversely extending bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage for the bottles having normally closed intake and delivery ends positioned at the front of the section, and said element further including oppositely shiftable spring controlled doors for closing said intake and delivery ends of said passage.

9. In a combined cooler and dispenser for bottled beverages a refrigerant containing section being provided therein with one or more hollow, vertically disposed, semi-oval bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage for the bottles having normally closed intake and delivery ends positioned at the front of the section, and means for connecting the front of the element to the front of the section.

10. In a combined cooler and dispenser for bottled beverages a refrigerant containing section provided with one or more hollow, vertically disposed, transversely extending bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage

for the bottles having normally closed intake and delivery ends positioned at the front of the section, and said element further having a supporting platform forwardly thereof for bottles passing from the delivery end and for ingress to the intake end of said passage, and means for connecting the front of the element to the front of the section.

11. In a combined cooler and dispenser for bottled beverages a refrigerant containing section being provided therein with one or more hollow, vertically disposed, transversely extending bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage for the bottles having normally closed intake and delivery ends positioned at the front of the section, and means for connecting the front of the element to the front of the section and said element of less height than the height of said section.

12. In a combined cooler and dispenser for bottled beverages a refrigerant containing section provided with one or more hollow, vertically disposed, transversely extending bottle receiving, storing and dispensing elements extending into the refrigerant contained in the section, said element providing a slide passage for the bottles having normally closed intake and delivery ends positioned at the front of the section, and said element further having a supporting platform forwardly thereof for bottles passing from the delivery end and for ingress to the intake end of said passage, and means for connecting the front of the element to the front of the section, and said element of less height than the height of said section.

In testimony whereof, we affix our signatures hereto.

DANIEL R. ARNOLD.
WILLIAM E. KULP.