

April 30, 1935.

B. M. STROUSE ET AL

1,999,670

BOTTLE COOLER

Filed March 21, 1934

2 Sheets-Sheet 1

Fig. 1.

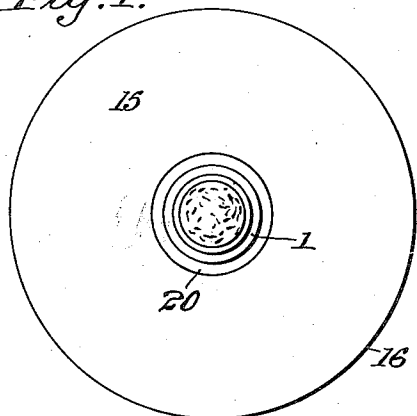


Fig. 2.

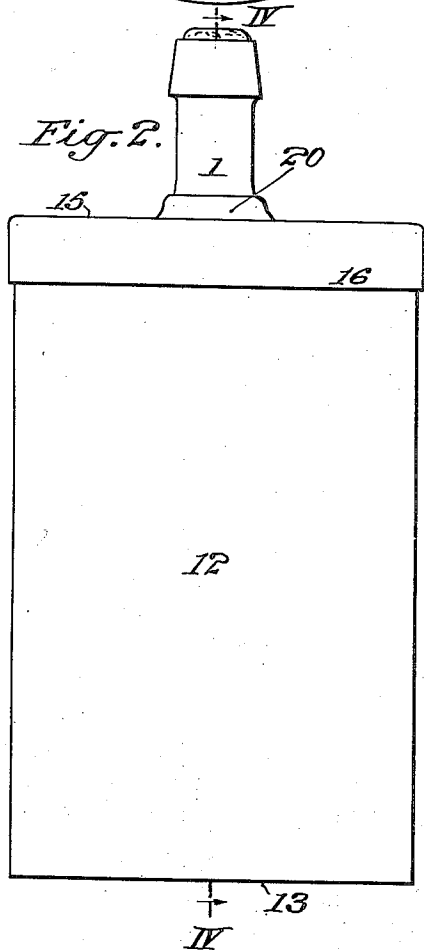


Fig. 3.

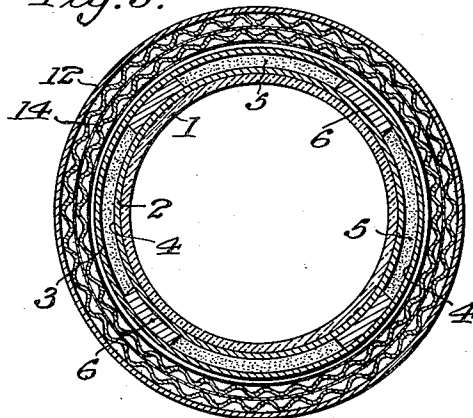
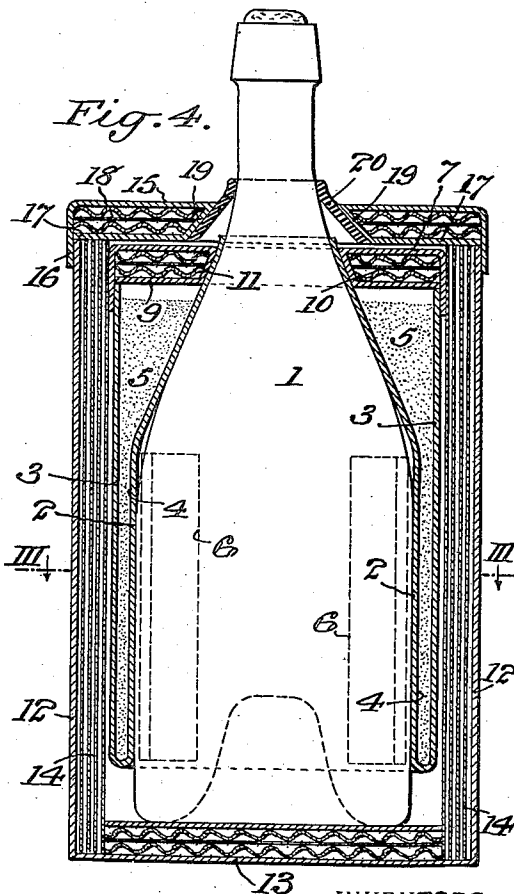


Fig. 4.



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2 Sheets-Sheet 2

Fig. 5.

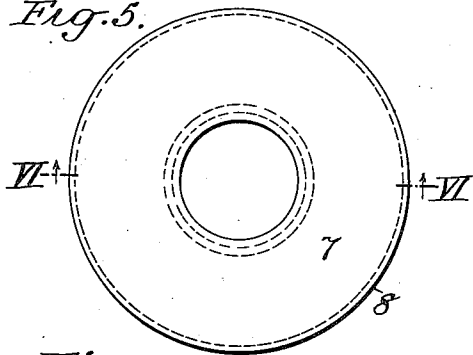


Fig. 6.

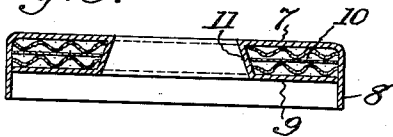


Fig. 7.

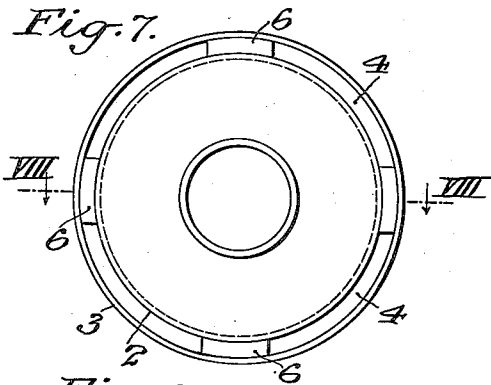


Fig. 8.

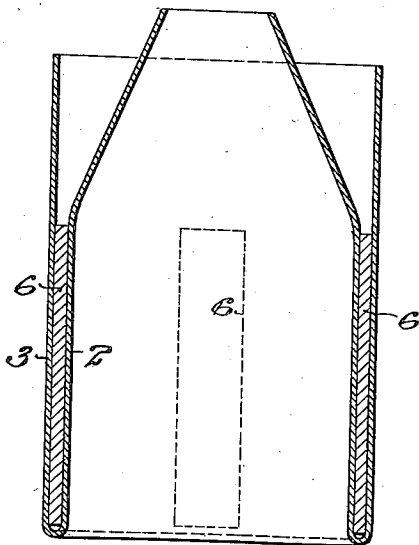


Fig. 9.

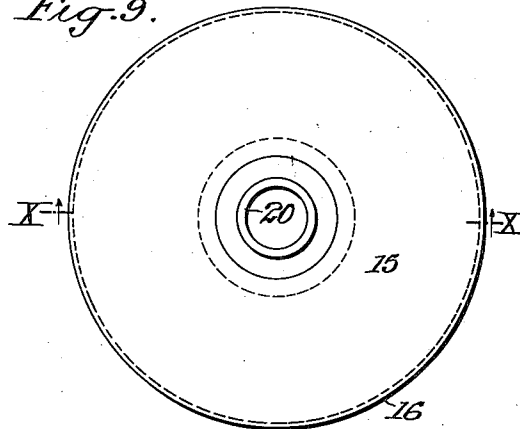


Fig. 10.

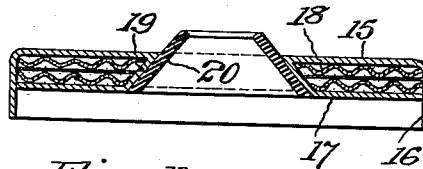
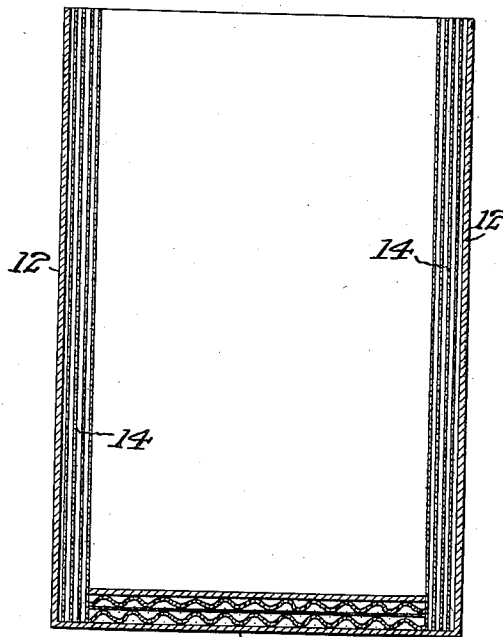


Fig. 11.



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1,999,670

BOTTLE COOLER

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Application March 21, 1934, Serial No. 716,570

7 Claims. (Cl. 62—76)

Coolers as heretofore made, for keeping bottles of charged liquids, such as champagne, burgundy, ginger ale, beer, etc. properly chilled during their service period at the table, have been quite cumbersome and expensive as well as wasteful of the refrigerating agent.

The object of our invention is to provide bottle coolers especially designed for use on the table in connection with charged liquids, whereby the charged liquids may be kept at the proper temperature throughout their intended service period, said bottle coolers being attractive in appearance, readily handled, and inexpensive to manufacture.

A further object of our invention is to produce a cooler of the above character which will be made of discardable material such, for instance, as paper board, which material will be so cheap that the cooler may be thrown away with its empty bottle, said cooler serving as a protection for the empty bottle, to prevent its breakage when thrown away.

Our improved bottle cooler comprises, generally, a refrigerant containing inner jacket and a heat insulated outer jacket and, more particularly, inner and outer jackets of the above character in which removable closures are provided for the jackets, whereby the refrigerant can be placed in the inner jacket chamber and sealed therein, and whereby the inner jacket may be inserted over the top of the table into its refrigerating position and the outer jacket, without its closure, can be inserted over the bottoms of the bottle and inner jacket into its insulating position and its closure applied.

A practical embodiment of our invention is represented in the accompanying drawings, in which

Fig. 1 represents a plan view of the bottle cooler in its operative position, embracing a bottle assumed to contain a charged liquid;

Fig. 2 represents a side view of the same;

Fig. 3 represents a cross section taken in the plane of the line III—III of Fig. 4;

Fig. 4 represents a vertical central section taken in the plane of the line IV—IV of Fig. 2;

Fig. 5 represents a top plan view of the closure for the inner jacket adapted to contain the refrigerant;

Fig. 6 represents a vertical central section taken in the plane of the line VI—VI of Fig. 5;

Fig. 7 represents a plan view of the inner jacket, with the closure removed;

Fig. 8 represents a vertical central section

taken in the plane of the line VIII—VIII of Fig. 7;

Fig. 9 represents a top plan view of the closure for the outer heat insulated jacket;

Fig. 10 represents a vertical central section taken in the plane of the line X—X of Fig. 9; and

Fig. 11 represents a vertical central section through the outer jacket, with the closure removed.

The bottle, which is assumed to contain a charged liquid, is denoted by 1. Surrounding this bottle is an inner jacket having inner and outer side walls 2 and 3 forming an annular chamber 4 adapted to receive the refrigerant 5, which refrigerant may be shaved dry ice, for instance. The inner and outer side walls of the inner jacket may be suitably spaced apart by an annular series of vertical strips 6, in the present instance four in number. These spacing strips 6 also serve to materially reduce the capacity of the chamber 4 and their widths may be adjusted, to provide a proper capacity for securing the right amount of chilling effect of the refrigerant. The outer side wall 3 of the inner jacket is shown as cylindrical and the inner side wall 2 is shown as tapered at its upper portion to substantially conform to the shape of the bottle 1. This tapering of the inner side wall 2 serves also to provide an annular hopper shape to the upper portion of the refrigerant containing chamber 4, thus not only enabling a larger amount of the refrigerant to be used at the portion of the bottle where it is most needed but also permitting the ready filling of the chamber with the refrigerant.

The annular closure for the inner jacket comprises in the present instance an outer top 7 having a depending flange 8 and an inner top 9 spaced from the outer top by a heat insulating material, such for instance as corrugated paper board 10. The tapered side walls 11 of the central opening through the closure serve to snugly engage the tapered upper portion of the inner side wall 2 of the jacket when the closure is inserted into position to close the jacket, the depending flange 8 of the closure in the present instance overlapping the top of the outer side wall 3 of the inner jacket.

The outer heat insulated jacket is herein shown as comprising cylindrical side walls 12 and a closed bottom 13 lined with a heat insulating material such, for instance, as corrugated paper board 14.

The annular closure for the outer jacket comprises, in the present instance, an outer top 15

provided with a depending annular flange 16 adapted to snugly fit over the top of the side wall 12 of the outer jacket. An inner top 17 is spaced from the outer top 15 by a heat insulating means such, for instance, as corrugated paper board 18. The tapered side wall 19 of the central opening through the closure has attached thereto a tapered yielding washer 20 which is adapted to snugly embrace the neck of the bottle when the parts are assembled. This tapered washer may be of rubber, felt, or other suitable material.

In operation the parts of the cooler and the bottle are assembled as follows:

A refrigerant is placed in the chamber in the inner tubular jacket and the closure is placed in position to close the said chamber, it being observed that the bottom of the tubular jacket is open. The inner jacket is then inserted over the top of the bottle until the tapered inner side wall 2 comes into snug engagement with the tapered portion at the neck of the bottle. The heat insulated outer container is then inserted upwardly over the bottom of the bottle and inner jacket and the closure for the outer jacket is inserted downwardly over the top of the bottle into position to close the top of the outer jacket and bring the yielding tapered washer 20 into snug engagement with the neck of the bottle above the closure for the inner jacket.

When the parts are assembled the bottle with its cooler is ready for use and may be placed on the table or counter, the refrigerant serving to keep the liquid within the bottle chilled to the proper temperature for a considerable period of time, at least long enough for the normal serving of the entire contents of the bottle.

It will be noted that the bottom of the inner jacket is spaced somewhat from the bottom of the outer jacket, thus rendering the cooler applicable for bottles of various heights within reasonable limits.

The cooler may be made of discardable material such, for instance, as paper board, so that it may be made cheaply enough to warrant its being thrown away with the empty bottle. After this is done the cooler serves the additional purpose of protecting the empty bottle from breakage when thrown into an empty bottle receptacle. This is an important point, for the empty bottles of the more expensive wines especially have a considerable market value. It is, of course, obvious that this cooler may also be made of permanent materials so that the cooler may be used repeatedly, thus rendering it feasible for use in households where a large number of coolers would not be required to be kept in stock, as is required in hotels and restaurants.

It is evident that various changes may be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of our invention, and hence we do not intend to be limited to the particular embodiment herein shown and described, but

What we claim is:

1. An article of the character set forth, com-

prising inner and outer telescoping jackets, the inner jacket being an annular, hopper-shaped refrigerant container and the outer jacket being heat insulated, an inner jacket closure and an outer jacket closure adapted to snugly embrace the neck of a bottle.

2. An article of the character set forth, comprising inner and outer telescoping jackets, the inner jacket being adapted to contain a refrigerant and the outer jacket being heat insulated, an inner jacket closure, an outer jacket closure and a yielding washer carried thereby adapted to snugly embrace the neck of a bottle.

3. An article of the character set forth, comprising inner and outer telescoping jackets, the inner jacket having an annular chamber for containing a refrigerant and the outer jacket being heat insulated, a closure for the inner jacket chamber and an outer jacket closure having means adapted to snugly embrace the neck of a bottle.

4. An article of the character set forth, comprising inner and outer telescoping jackets, the inner jacket having an annular chamber for containing a refrigerant and filler strips, the upper end of said chamber being hopper-shaped, and the outer jacket being heat insulated, a closure for the inner jacket chamber and an outer jacket closure having means adapted to snugly embrace the neck of a bottle.

5. An article of the character set forth, comprising inner and outer telescoping jackets, the inner jacket being open at its bottom for the insertion of a bottle and having an annular chamber for containing a refrigerant and filler strips and the outer jacket having a closed bottom and being heat insulated, said outer jacket being insertable over the bottoms of the bottle and inner jacket, a closure for the inner jacket chamber and an outer jacket closure having means adapted to snugly embrace the neck of the bottle.

6. An article of the character set forth, comprising inner and outer telescoping jackets, the inner jacket having spaced inner and outer side walls to form a refrigerant containing annular hopper-shaped chamber, the upper portion of the inner side wall being tapered to substantially conform to the shape of the bottle, an annular closure for the refrigerant containing chamber, the outer jacket being heat insulated and a closure therefor having means adapted to snugly embrace the neck of the bottle.

7. An article of the character set forth, comprising inner and outer telescoping jackets, the inner jacket having spaced inner and outer side walls to form a refrigerant containing annular chamber, spacing and filler strips between said inner and outer walls, the upper portion of the inner side wall being tapered to substantially conform to the shape of the bottle, an annular closure for the refrigerant containing chamber, the outer jacket being heat insulated and a closure therefor having means adapted to snugly embrace the neck of the bottle.

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