A. F. BURDICK & W. E. MILLER.

SANITARY MILK BOTTLE CLOSURE.

APPLICATION FILED OCT. 24, 1914.

1,173,553. Patented Feb. 29, 1916.

Fig. 1.

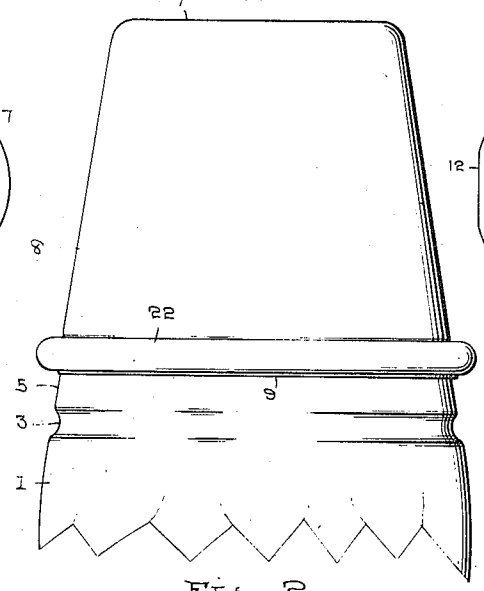


Fig. 6.

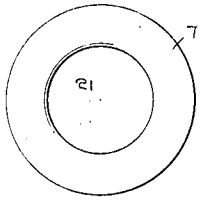


Fig. 3.

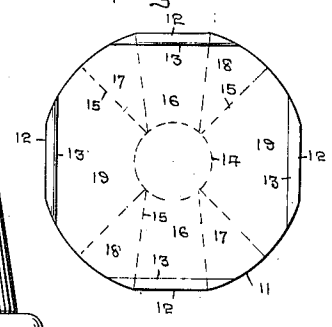


Fig. 5.

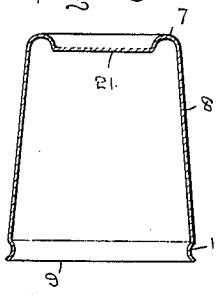


Fig. 2.

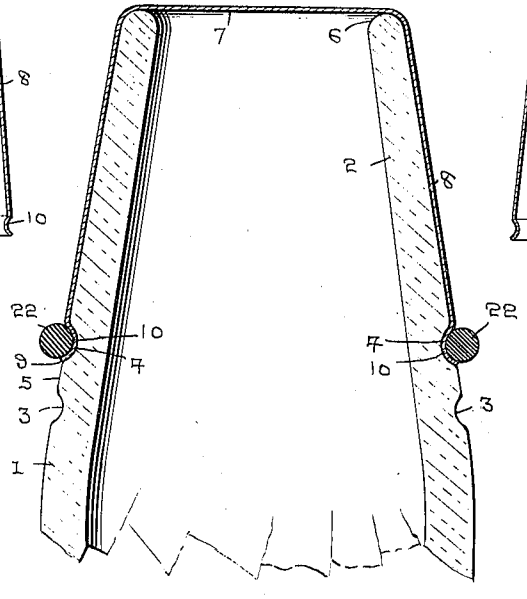
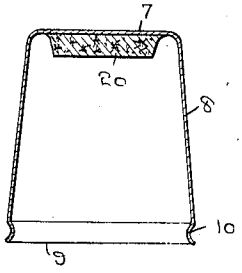


Fig. 4.



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SANITARY MILK-BOTTLE CLOSURE.

1,173,553. Specification of Letters Patent. Patented Feb. 29, 1916.

Application filed October 24, 1914. Serial No. 868,433.

To all whom it may concern:

Be it known that we, AUSTIN F. BURDICK and WILLIAM EARL MILLER, citizens of the United States, residing at Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Sanitary Milk-Bottle Closures; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a combined sanitary closure and drinking cup for bottles, jars, etc., and has for one of its objects the provision of a device for efficiently embracing the entire mouth of a receptacle to form a sanitary closure therefor to prevent the accumulation of germs and foreign matter upon the surrounding edge of the receptacle, and at the same time provide an efficient sanitary drinking cup.

A further object of this invention resides in the provision of a closure to be used in combination with a bottle, jar or other receptacle having a specifically constructed neck for receiving the closure, in conjunction with means for securing the closure upon the neck of the receptacle which is capable of ready adjustment upon the neck of the receptacle to provide for the efficient application or removal of the cup and closure to and from the receptacle.

A still further object of this invention resides in the provision of a combined sanitary closure and drinking cup for receptacles formed of a flat piece of paraffin paper or other suitable material that is impervious to fluids and folded to form a closure for the receptacle and at the same time capable of use as a sanitary drinking cup when removed from the receptacle. And a still further object of this invention resides in the provision of a combined closure and drinking cup for bottles, jars and other receptacles formed of flat pieces of impervious material which can be readily shipped, occupying little space and which can also be readily folded into shape for a sanitary closure for hermetically sealing the receptacle and also capable of use as a drinking cup, the same being efficient and durable in purpose, simple in construction, and which can be manufactured and sold upon the market at a nominal cost.

These and other objects will more fully appear as the nature of the invention is more clearly understood by the construction, combination and arrangement of the parts thereof as described in the following specification, defined in the appended claims and illustrated in the accompanying drawings, in which,

Figure 1 is a fragmentary side view of a receptacle showing the closure and cup as applied to the receptacle and the means for securing the same upon the neck of the receptacle. Fig. 2 is a vertical sectional view of the invention showing the detailed construction of the receptacle and the closure thereon. Fig. 3 is a top plan view of the construction of the blank formed to be folded into shape to provide the closure and cup for the receptacle. Fig. 4 is a vertical sectional view of the closure and cup showing the same provided with a stopper of any suitable material for entering the mouth of the receptacle. Fig. 5 is a vertical sectional view of the closure and cup showing the same with the bottom indented inwardly to provide an integral stopper for entering the mouth of the receptacle, and Fig. 6 is a bottom plan view of the closure and cup shown in Fig. 5.

Referring to the drawings, 1 denotes the body of the receptacle provided with the neck 2, which may be straight or tapering but preferably tapered, the neck 2 being provided adjacent its juncture with the body 1 of the receptacle with the annular exterior lower groove 3 and the upper annular exterior groove 4, the grooves 3 and 4 being parallel with each other and also slightly spaced apart, that portion of the neck therebetween providing the spacing rib 5, any number of grooves 3 and 4 may be formed upon the exterior portion of the neck 2 as desired, however, for the sake of illustration only two are here shown in the drawings, the mouth of the receptacle is preferably provided with the rounded annular edge 6.

The closure in its complete form and applied as shown in Figs. 1 and 2 comprises the bottom 7 which may be circular, hexagonal or any other desired form, and the wall 8 which may be cylindrical, hexagonal or any other shape in conformity with that of the bottom 7, and adjacent the upper edge 9 of the closure and cup, is further provided

with the annular groove 10 formed by indenting that portion thereof inwardly to be hereinafter more fully explained.

The combined closure and cup is formed from a blank or disk 11 shown in Fig. 3, the blank being cut from a piece of thick paraffin paper or any other suitable impervious material or circular formation excepting certain portions of the periphery of the blank or disk 11 is cut with straight edges as shown at 12, and adjacent the edges of the straight edges 12, the blank or disk 11 is indented to form the grooves 13 which grooves form the continuous groove 10 of the closure and cup when the same is folded for this purpose. The blank or disk 11 is provided with the central circular crease 14 and the straight creases 15 radiating therefrom to the periphery of the blank or disk 11, thus dividing the blank or disk 11 into opposing segments 16, 16; 17, 17; 18, 18 and 19, 19; and to fold the blank or disk 11 to shape or form the closure and cup, the segments 19, 19 are folded upwardly and inwardly toward each other for a distance at a portion of the crease 14, the segments 17, 17 are then folded upon the segments 16, 16, and thereafter the segments 18, 18 are folded upon the segments 16, 16 and 17, 17, whereby that portion within the scored or creased line 14 forms the bottom 7 of the closure and cup, the segments 19, 19 now assume a circular form and provide the circular wall 8 of the closure and cup, the respective ends of the grooves 13 are brought into registration with each other and form the annular circular groove 10 of the closure and cup, it is, of course, understood that the segments 16, 16 are bent and folded upwardly and inwardly toward each other along the remaining portion of the crease 14 and that the segments 17, 17 and 18, 18 are bent along the respective creases or scored lines 15.

In Fig. 4 the closure and cup are shown as provided with the stopper 20 secured to the bottom 7 within the closure and cup, the stopper being designed to fit snugly within the mouth 6 of the receptacle and may be formed of cork, rubber or any other suitable material, while the view shown in Fig. 5 shows a portion of the bottom 7 being indented inwardly as at 21 in order that the indented portion 21 will pass for a distance into the mouth of the receptacle and is designed for use in lieu of the stopper 20 as shown in Fig. 4.

In applying the combined closure and cup upon the neck 2 of the receptacle, the same is inverted and passed over the neck 2 until the edge of the mouth 6 of the receptacle engages the inner side of the bottom 7, the wall 8 of the cup snugly embracing the exterior of the neck 2 and the annular groove 10 of the closure and cup being seated within the groove 4 of the neck 2, and for securing the closure and cup upon the neck 2 the circular ring member 22 is provided, the ring member 22 being formed of coil spring wire or rubber, preferably rubber, is then passed over the closure and cup until the ring member 22 is seated within the groove 10 of the closure and cup, the ring member 22 being elastic presses the grooved edge of the closure and cup firmly into the groove 4 of the neck 2 of the receptacle. When it is desired to remove the closure, it is only necessary to force the ring member 22 downwardly until the same is seated in the groove 3 of the neck 2, whereupon the closure may be removed and the contents of the receptacle poured therein, the closure then performing the function of a drinking cup and after such use the same is discarded and a new blank folded as before described into the shape of a cup, and thereafter passed over the neck 2 in the manner as before described, the ring member 22 being then forced upwardly out of the groove 3 and over the grooved edge 10 of the closure and cup thus securing the grooved edge 10 firmly within the groove 4 for again closing the receptacle.

From the foregoing, it is obvious that we have invented a most efficient combined sanitary closure and cup for use in conjunction with a specifically formed receptacle for holding fluid such as milk, mineral water, beverages or other fluids which is cheap, strictly sanitary from the fact that the same entirely embraces and covers every portion of the mouth of the bottle whereby it is free from germs and foreign matter which may collect thereon, as well as useful as a drinking cup, and which invention now fills a long felt want.

It is to be further understood that while we have here shown and described the combined closure and drinking cup as of circular formation, the same may be formed of any desired configuration, this being accomplished by the manner of creasing or scoring the blank or disk 11 together with the formation of the neck 2 of the receptacle 1, and we do not wish it to be understood that we are limiting ourselves to the circular formation of our device as the same may be formed of any desired shape without any additional cost.

While we have here shown and described the preferred embodiment of our invention we hereby reserve the right to make such alterations and variations therein from time to time as we may deem expedient and which will not depart from the spirit of the invention nor the scope of the claims.

Having thus fully described our invention what we claim as new and desire to secure by Letters Patent is:—

1. The combination with a fluid receptacle, an upwardly and inwardly tapered neck

therefor, spaced parallel annular grooves formed in the lower exterior surfaces of said neck, of a combined closure and cup formed of impervious material and tapered to conform to said neck for snugly embracing the same, an annular groove formed adjacent the edge of said closure and cup for seating in the uppermost of said grooves of said neck, and a resilient ring for encircling said neck for seating within the groove of said closure and cup within the uppermost groove of said neck for retaining said closure and cup upon the neck of said receptacle, said resilient ring adapted to be seated in the lowermost of said grooves of said neck when removing said closure and cup from said neck.

2. The combination with a fluid receptacle having a tapered neck provided with spaced annular grooves, of a combined closure and cup therefor, said closure and cup formed of a flat blank of impervious material provided with a centrally disposed circularly creased portion to provide a bottom therefor, creased lines extending radially from the circular creased portion, and obliquely disposed creased lines intersecting the circular creased portion at the point of the intersection of the radially disposed creased lines whereby to provide overlapping segments to form the side walls of the said closure and cup, said blank being also provided with marginal indentations to provide an annular groove adjacent the edge of said closure and cup when said blank has been bent to form the same, the annular groove of said closure adapted to be seated in one of the grooves of said neck, and a resilient ring adapted to be seated in said annular groove of said closure for retaining said closure upon the neck of the receptacle.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

AUSTIN F. BURDICK.
WILLIAM EARL MILLER.

Witnesses:
NELLIE STEWART,
BONNABELLE B. HART.