L. R. STEEL.

HEAT INSULATED RECEPTACLE.

APPLICATION FILED NOV. 4, 1908.

957,808. Patented May 10, 1910.

Fig. 1.

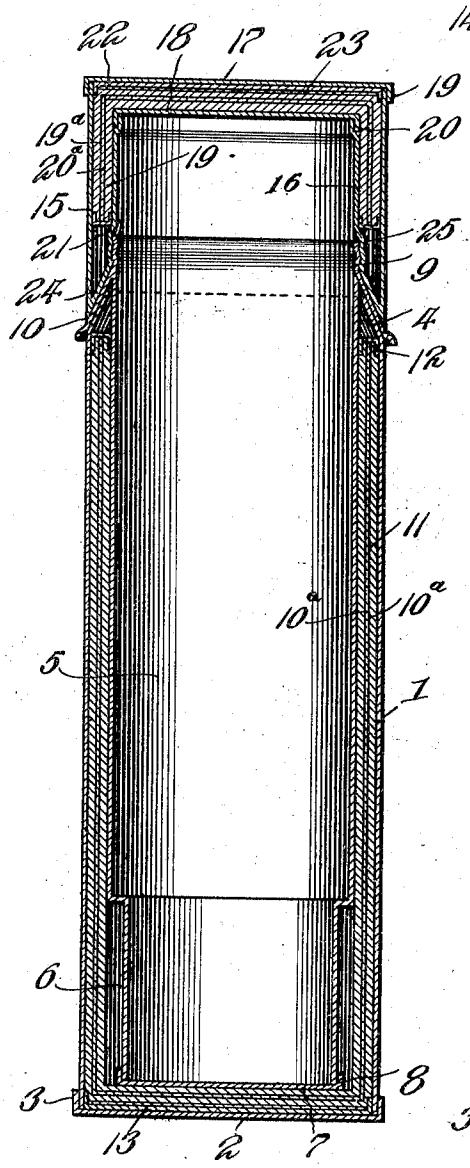
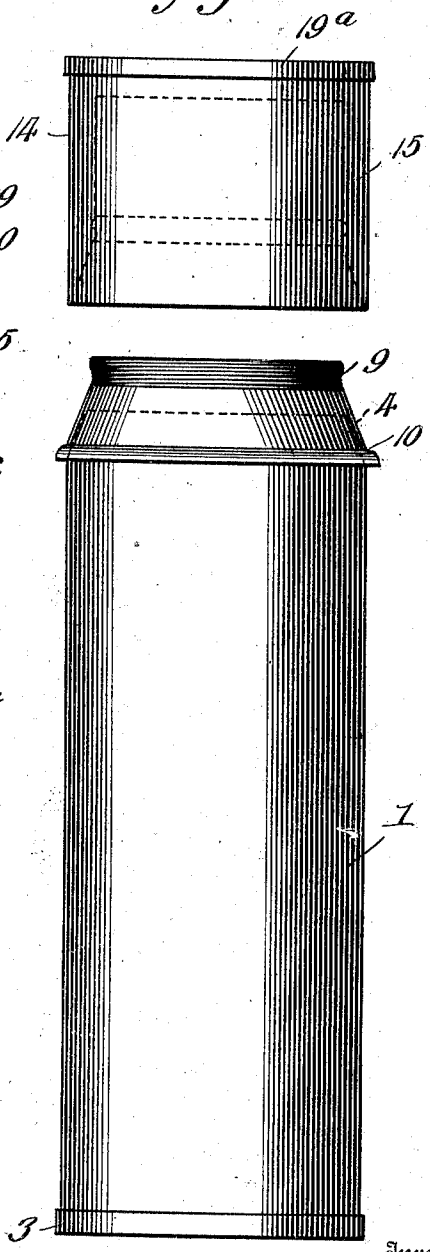


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

LEONARD R. STEEL, OF MILWAUKEE, WISCONSIN.

HEAT-INSULATED RECEPTACLE.

957,808. Specification of Letters Patent. Patented May 10, 1910.

Application filed November 4, 1908. Serial No. 461,071.

To all whom it may concern:

Be it known that I, LEONARD R. STEEL, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Heat-Insulated Receptacles, of which the following is a specification.

My invention relates to improvements in tubes or receptacles for bottles, and its primary object is the provision of a tube or receptacle in which the contents of the bottle may be kept at a predetermined temperature without the use of a refrigerating or heating medium, the tube or receptacle being especially designed for the reception of the bottle disclosed in my co-pending application filed November 4, 1908, and serially numbered 461,073.

A further object of the invention is the provision of a tube or receptacle which may be readily and quickly cleaned, which may be manufactured and sold at a comparatively low cost, and which shall be simple of construction.

With the above and other objects in view, the invention consists in the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawing, wherein:—

Figure 1 is a sectional view of a tube or receptacle constructed in accordance with my invention, the section being taken on a plane extending centrally and vertically through the tube or receptacle, and Fig. 2 is a view in side elevation thereof, the closure being removed.

Referring to the drawing by reference numerals, 1 designates a cylindrical casing fully open at its upper and lower ends. The lower end of the casing is closed by a bottom 2 which is provided with an upstanding annular flange 3, said flange receiving the lower end of the casing. The upper portion of the casing 1 is formed to provide an upwardly and inwardly inclined flange 4. The inner casing 5 which is also cylindrical is mounted within the outer casing 1. The inner casing is longer than the outer casing and has a diameter smaller than that of the outer casing. The lower end of the inner casing 5 is offset inwardly as at 6 and is closed by means of a bottom 7 which is provided with an upstanding flange 8 receiving the lower end of the offset portion 6. That portion of the upper end of the inner receptacle 5 which extends above the outer receptacle 1 is formed to provide screw threads 9 and is provided with a downwardly flaring flange 10 which contacts with the flange 4 of the outer casing 1. A lining which consists of inner and outer layers of paper 10^a and an intermediate layer of tin foil 11 is interposed between the inner and outer cases. The tin foil is provided with a light coating of mercury and it and the layers of paper are secured together by any suitable means. The lining is such as to retard the passage of heat and cold therethrough. The upper end of the lining is provided with a metallic member 12 while the lower end thereof is provided with a metallic member 13, the layer of tin foil being interposed between the lining and said member.

The tube or receptacle is provided with a removable closure 14. The closure comprises an outer cylindrical wall 15 and an inner cylindrical wall 16 which are relatively spaced. The closure also comprises an outer circular wall 17 and an inner circular wall 18 which are relatively spaced, the walls 17 and 18 being provided with flanges 19 and 20, which embrace the walls 15 and 16 respectively. A lining which also consists of inner and outer layers 19^a of paper and an intermediate layer 20 of tin foil is interposed between the walls of the closure. The tin foil of this lining is also provided with a coating of mercury, and the layers thereof are secured together by any suitable means. The lower portion of this lining is provided with a metallic member 21, and the upper portion thereof is provided with a metallic member 22, a layer of tin foil 23 being interposed between the member 22 and the lining. The lower portion of the inner wall 16 and the closure 14 is inclined as at 24, said inclined portion engaging the flange 14 of the receptacle 5 when the closure is in applied position. At a point above the inclined portion 24 the inner wall 16 of the closure 14 is threaded as at 25 for engagement with the threads 9 of the inner casing 5.

In practice the lower end of the bottle is placed in the reduced portion 6 of the inner casing 5, leaving a space between the side walls of the body and the casing. The air in such space assists the lining in preventing the contents of the bottle from absorbing

heat from the atmosphere and preventing the conduction of heat from the contents of the bottle.

The tube or receptacle may be readily cleaned and it may be manufactured and sold at a comparatively low cost.

Changes in the form, proportions and minor details of construction may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what is claimed as new is:—

1. A tube or receptable comprising an outer casing provided with an upwardly and inwardly inclined flange, an inner casing provided with a downwardly flaring flange engaging the flange of the outer casing, and a closure removably secured to the inner casing.

2. A tube or receptable comprising an outer casing with an upwardly and inwardly inclined flange, an inner casing provided with a downwardly flaring flange engaging the flange of the outer casing, and a closure removably secured to the inner casing, said closure having an inclined portion engaging the flange of the inner casing.

3. A tube or receptacle comprising inner and outer casings, a lining between the casings, the inner casing and its lower portion offset inwardly, the vertical wall of the said offset portion being spaced from the lining, and a closure.

4. A tube or receptacle comprising inner and outer casings, a closure, and a lining located between the bottom and side walls of the casings, said lining consisting of outer layers of paper and an intermediate layer of tin foil coated with mercury.

In testimony whereof I affix my signature in presence of two witnesses.

LEONARD R. STEEL.

Witnesses:

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