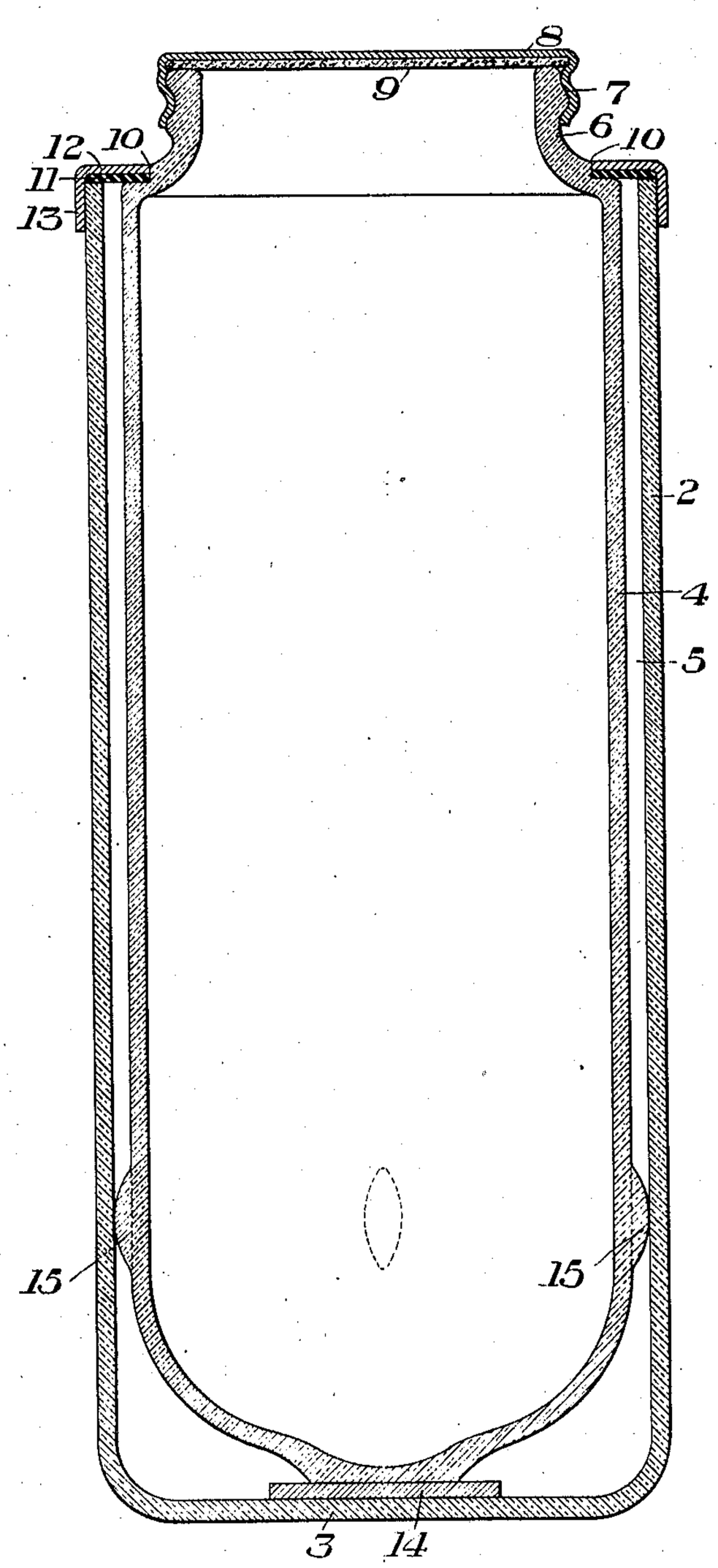
J. E. MILLER.

VACUUM BOTTLE OR RECEPTACLE.

APPLICATION FILED OCT. 15, 1909.

956,395. **Patented Apr. 26, 1910.**



WITNESSES

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UNITED STATES PATENT OFFICE.

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VACUUM BOTTLE OR RECEPTACLE.

956,395. Specification of Letters Patent. Patented Apr. 26, 1910.

Application filed October 15, 1909. Serial No. 522,728.

To all whom it may concern:

Be it known that I, JOHN E. MILLER, of Washington, Washington county, Pennsylvania, have invented a new and useful Improvement in Vacuum Bottles or Receptacles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, in which the figure is a central vertical section of a vacuum bottle or receptacle embodying my invention.

My invention has relation to vacuum bottles or receptacles, and is designed to provide an article of this character which can be manufactured and sold at a relatively low cost.

My invention more particularly relates to means for sealing the vacuum chamber or space between the inner and outer receptacles.

Referring to the accompanying drawings, in which I have shown the preferred embodiment of my invention, the numeral 2 designates an outer receptacle, which is preferably of glass, and which is formed with a closed bottom 3 and with an open upper end.

4 designates the inner vessel or receptacle, which is set within the outer one, and which is of sufficiently less diameter to leave a surrounding vacuum space or chamber 5. The inner receptacle is formed with a reduced neck portion 6, which projects above the upper end of the outer receptacle, and is screw-threaded as indicated at 7 to receive a closing cap 8. This cap may be provided with a lining 9 of cork or other suitable material. The inner receptacle is also provided at the base of its neck portion 6 with a surrounding shoulder 10, which is adapted to seat a packing ring or gasket 11. This packing ring or gasket is secured in place by means of a metallic ring 12 having a depending flange portion 13 which fits around the upper portion of the outer receptacle. The inner edge of the upper or horizontal portion of the ring seats against the shoulder 10.

The inner receptacle is placed within the outer one, and is seated upon a piece 14 of paper, cardboard or other suitable material, which is made of the proper thickness to bring the top shoulder 10 into proper relation with the upper edge of the outer receptacle. The inner receptacle is also preferably provided with three or more outwardly extending centering projections 15 for holding the inner receptacle in proper position. After the air has been exhausted from the space 5 between the two receptacles, the gasket 11 and ring 12 are forced to place within the receiver, in which the exhausting is done. The gasket, together with the inner surface of the ring is coated with silicate of soda, or other suitable cement, so as to closely adhere to the glass surfaces with which they contact, and thus form a secure seal for the vacuum space.

My invention provides a vacuum bottle or receptacle which can be manufactured and sold at a relatively low cost, and which, although perhaps not as efficient as the more expensive bottles now in the market, are sufficiently so for various purposes for which such articles are employed.

What I claim is:—

1. A vacuum bottle comprising an outer receptacle, an inner receptacle, a vacuum space or chamber between the two receptacles, the inner receptacle having a neck extension beyond the outer receptacle, and means for sealing the upper end of the vacuum space or chamber comprising a gasket seated on the upper edge of the outer receptacle and a shoulder of the inner receptacle, and a metal ring seated over said gasket; substantially as described.

2. In a vacuum bottle, an outer receptacle formed with an open top, an inner receptacle having a reduced neck extension projecting beyond the outer receptacle, and having a shoulder at the base of such extension, a gasket seated on such shoulder and against the upper edge of the outer receptacle, and a metal ring seated over said gasket and having a depending flange embracing the upper portion of the outer receptacle and means for centering the inner receptacle within the outer one, substantially as described.

3. In a vacuum bottle, an outer receptacle formed with an open top, an inner receptacle having a reduced neck extension projecting beyond the outer receptacle and having a shoulder at the base of such extension, a gasket seated on such shoulder and against the upper edge of the outer receptacle, and a metal ring seated over said gasket and having a depending flange embracing the upper portion of the outer receptacle; substantially as described.

4. In a vacuum bottle, an outer receptacle

formed with an open top, an inner receptacle having a reduced neck extension projecting beyond the outer receptacle, and having a shoulder at the base of such extension, a gasket seated on such shoulder and against the upper edge of the outer receptacle, and a metal ring seated over said gasket and having a depending flange embracing the upper portion of the outer receptacle, and the inner receptacle having a removable closure; substantially as described.

5. In a vacuum bottle, an outer receptacle formed with an open top, an inner receptacle having a reduced neck extension projecting beyond the outer receptacle, and having a shoulder at the base of such extension, a gasket seated on such shoulder against the upper edge of the outer receptacle, and a metal ring seated over said gasket and having a depending flange embracing the upper portion of the outer receptacle, said neck extension being exteriorly threaded to receive a screw cap or closure; substantially as described.

In testimony whereof, I have hereunto set my hand.

JOHN E. MILLER.

Witnesses:

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F. W. LEEPER.