

G. P. VAN WYE.
VACUUM INSULATED BOTTLE.
APPLICATION FILED JULY 3, 1907.

1,005,087.

Patented Oct. 3, 1911.

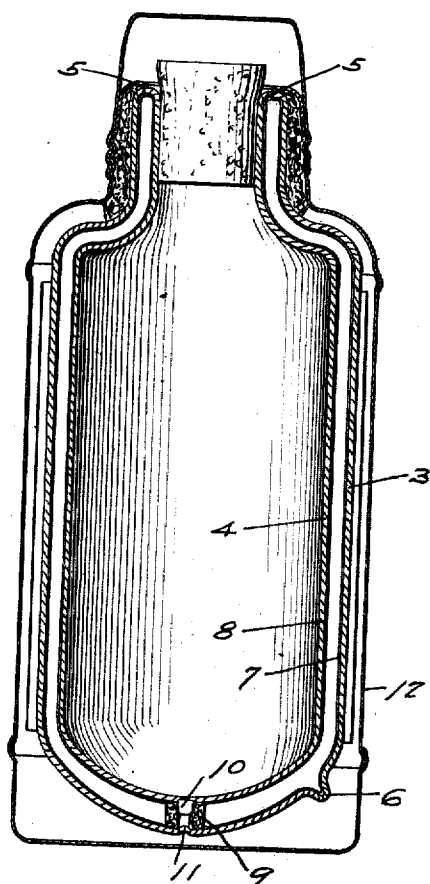


Fig. 1

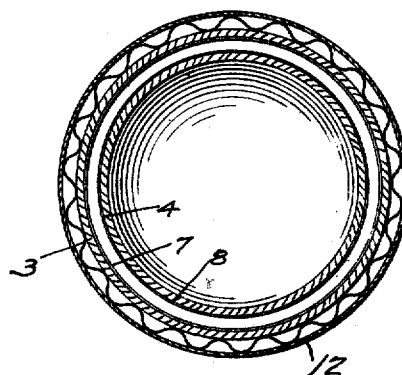


Fig. 2

Witnesses:
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Inventor
Garry P. Van Wye

UNITED STATES PATENT OFFICE.

GARRY P. VAN WYE, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, OF TWO-THIRDS TO EDWARD B. SKINNER AND ONE-THIRD TO LOUIS H. REYNOLDS, OF BROOKLYN, NEW YORK.

VACUUM-INSULATED BOTTLE.

1,005,087

Specification of Letters Patent.

Patented Oct. 3, 1911.

Application filed July 3, 1907. Serial No. 382,045.

To all whom it may concern:

Be it known that I, GARRY P. VAN WYE, a citizen of the United States, residing at New York, in the county and State of New York, have invented a new and useful Vacuum-Insulated Bottle, of which the following is a specification.

This invention relates to insulated bottles used in retaining the contents in the condition in which they were placed therein, whether hot or cold; and the object of my invention is to provide a bottle of the character described, comprising an outer and an inner bottle with a vacuum between them, with a non-heat conducting support between the bottles so arranged as to relieve all strain from the connection between the bottles no difference in what position the bottle is placed.

In making bottles of this kind, it has been customary to make an outer and an inner bottle with a vacuum between them, and mutually support the two bottles by a plurality of asbestos blocks annularly disposed between the same. While asbestos is in general non-heat-conducting, yet, in fact it will convey heat much more rapidly than a vacuum; and it is desirable to eliminate as many of these supports as possible. In this invention I use but a single support, but so disposed that the bottles are mutually supported whether standing upright or lying on the side.

My invention is illustrated in the accompanying drawing in which—

Figure 1, is a vertical section of a bottle constructed according to my invention; and Fig. 2, is a horizontal section thereof.

In the accompanying drawing, like numerals of reference refer to the same parts in each of the views; and in practice I provide a bottle comprising two parts, or bottles fused together, the outer part being indicated by 3, and the inner by 4, and the two being fused together at the lip 5, to make an integral whole, while the sealed short tube 6, on the part 3, may be used to admit the silvering solution by which the inner surface of the part 3, is given a silver, or mercury coat 7, and the outer surface of the part 4, is given a coat 8, in any well known manner. The tube 6, may also be used in exhausting the air in creating a vacuum, but I do not limit myself to this feature, as it

is an easy matter to form additional teats, or short tubes on the part 3.

As the only connecting part between the inner and outer parts of the bottle is the fused part or lip 5; when the inner part is filled with a liquid, there will be considerable strain on the fused part, and this would undoubtedly make a large percentage of the bottles very short lived. To avoid this strain, and yet reduce the mutual support to the smallest possible limit, I provide a small piece of asbestos tubing 9, proportioned in length to the distance between the parts 3, and 4, and which I prefer to mount on a small lug 10, which may be connected with the part 4 by attaching a small piece of glass thereto, and is preferably of such a size that the asbestos tube 9 will be held thereon by friction until the part 3 is connected underneath the same; and while the bottom of the part 3 is hot, I prefer to force a portion of the same into the lower end of the tube 9, as shown at 11, while the glass around the part 11 is forced into such close contact with the bottom of the tube 9, that the said tube will mutually support and steady the parts 3, and 4 in every direction, the lug 10, and part 11 assisting in the bracing, as will be understood. The support 9 is located between the bases of the inner and outer parts and by preference at their common axis where it is most remote from the connection at the lip, thereby separating the support as far as possible from the fused connection, and gaining the best results in the mutual bracing effect.

It will thus be seen that I am able to mutually brace the inner and outer parts of the vacuum bottle with a single support, and leave the rest of the surface to be coated with the silvering solution; and as the silvering of the bottles makes them much more effective in resisting the radiation of heat, the more of the surface coated, the better will the contents of the bottle be preserved in the condition desired. Then, too, as stated above, the vacuum between the parts affords much better insulation than asbestos, hence the fewer asbestos supports, the less radiation of heat. I may also provide a casing 12, of any desired construction, to inclose the bottle.

Having thus described my invention, what

I claim as new and desire to secure by Letters Patent is—

1. A vacuum insulated bottle comprising an inner part and an outer part joined together having a vacuum between them said inner part having a lug, or projection on the base thereof, an asbestos tube mounted on said lug, and the outer part having the base thereof bearing against the end of said tube.
2. A vacuum insulated bottle comprising an inner part and an outer part joined together at the lip, said inner part having a lug, or projection on the base thereof, an asbestos tube mounted on said lug, and the outer part having the base thereof bearing against the end of said tube with a portion thereof projecting within the tube.
3. A vacuum insulated bottle comprising an inner part and an outer part joined together at the lip, and a tube mounted between the bases of said parts, said outer part having a portion thereof projecting within the bottom of said tube.
4. A heat insulated bottle comprising two walls having a vacuum space between them, and a tube mounted between the bases of

the walls, the outer wall having a portion thereof projecting within said tube.

5. A heat insulated bottle comprising two walls having a vacuum space between them, and a tube of different material mounted between the walls, each of said walls having a portion thereof projecting into said tube.

6. A heat insulated bottle comprising two walls having a vacuum space between them and a tubular support mounted between the bases of the walls, the outer wall having a portion thereof projecting within said tube.

7. A vacuum insulated bottle comprising an inner and outer part and a tubular support mounted between the bases of said parts, the base of the inner part having a projection fitting the tubular support whereby the latter is held in place by its frictional engagement with the projection.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GARRY P. VAN WYE.

Witnesses:

ADELE F. JUILLERAT,
C. H. BERTHOLF.