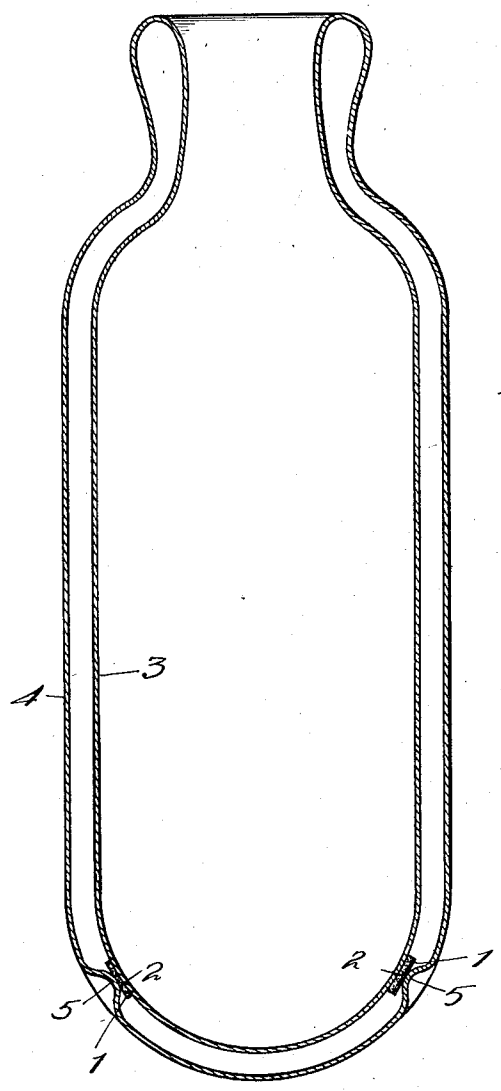
H. M. DAGGETT, Jr. & L. J. STILLING.

VACUUM BOTTLE SUPPORT.

APPLICATION FILED JULY 21, 1910.

1,031,692. Patented July 9, 1912.

Fig. 1.



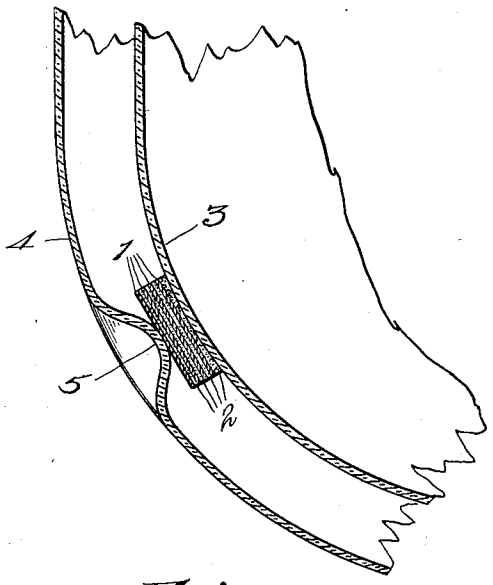


Fig. 2.

Witnesses:
Hamyle Hecbig
C. L. Russell.

Inventors
Homer M. Daggett Jr
Lorne J. Stilling
By their Attorney
Clifford E. Dunn

UNITED STATES PATENT OFFICE.

HOMER M. DAGGETT, JR., OF MOUNT VERNON, NEW YORK, AND LOUIS J. STILLING, OF NEWARK, NEW JERSEY, ASSIGNORS TO JANUS VACUUM GOODS COMPANY, A CORPORATION OF NEW YORK.

VACUUM-BOTTLE SUPPORT.

1,031,692. Specification of Letters Patent. Patented July 9, 1912.

Application filed July 21, 1910. Serial No. 573,088.

To all whom it may concern:

Be it known that we, HOMER M. DAGGETT, Jr., and LOUIS J. STILLING, citizens of the United States, residing at Mount Vernon, in the county of Westchester and State of New York, and Newark, in the county of Essex and State of New Jersey, respectively, have invented certain new and useful Improvements in Vacuum-Bottle Supports, of which the following is a full, clear, and exact specification.

Our invention relates to improvements in vessels or receptacles provided with a vacuum insulation, and the object has been to provide a new and improved construction which shall be completely satisfactory and at the same time inexpensive and simple.

In the accompanying drawing we have shown our invention as applied to a vacuum bottle, and this is one of the important uses to which it may be put, but it will be understood that it is equally applicable to other forms of receptacles, and all such are within the scope of our invention. In these vessels or receptacles one of the chief difficulties met with has been the provision of suitable spacing means to preserve the relative positions of the inner and outer walls. The problem has been complicated by the different temperatures to which the walls are subjected and the corresponding different expansion thereof, and spacing blocks, to be effective, must be of such a character and arranged in such a way as to provide and compensate for such expansion.

In the drawing illustrating one preferred form and arrangement, Figure 1 is a side sectional view of a bottle containing our improvements; and Fig. 2 an enlarged detail of the walls and one of the spacing blocks in preferred position.

It is obvious that any number of blocks may be used, but we prefer to use not less than two, as shown.

In these drawings our block is shown as consisting of a combination block composed of layers 1, of mica, firmly cemented together by means of cement 2, which cement must possess a high degree of resistance to heat, and be non-destructive of mica. Any suitable cement of this character may be employed. In practice "cementum" has be found satisfactory. The spacing block is preferably cemented to the outer wall of the inner vessel 3, and is preferably located at a point slightly below the vertical portion of the wall of said vessel 3. The outer face of said block is caused to contact with an inwardly directed projection 5, which may be formed by merely denting in the outer wall when sufficiently hot and pliable for this purpose, said block having merely a frictional engagement with said projection.

When located as shown, it will be seen that the inner vessel is firmly supported by means of the spacing blocks, and any expansion which takes place will generally be found to be taken care of by the slight flexibility of that portion of the glass of the outer vessel which supports the point 5. The point 5 will be resilient to a degree incident to the flexibility of the bent in portion of the outer wall or vessel which carries this point. This is also augmented by the slight degree of compressibility possessed by the mica block, and any extraordinary expansion of the inner vessel will merely cause the block to slide on the projection 5, the friction thereon being insufficient to prevent such movement under such conditions. It will also be seen that by reason of the particular arrangement of the spacing block and contacting projection, the block will serve its purpose of holding the inner vessel against substantial movement, even though the latter be contracted considerably by reason of a cold liquid having been placed therein.

It is obvious that many modifications and changes may be made in our invention without departing from the spirit thereof, and we do not mean to limit ourselves to the particular form shown and described, but

What we claim and desire to secure by Letters Patent is:

1. A bottle or receptacle comprising inner and outer walls with a vacuum therebetween, and a spacing block between said walls composed of layers of sheet mica cemented together by a heat-resisting cement.

2. A bottle or receptacle comprising inner and outer walls with a vacuum therebetween, and a spacing block between said walls composed of layers of sheet mica cemented together by a heat-resisting cement, said spacing block being cemented to the inner wall of the vessel only.

3. A bottle or receptacle comprising inner

and outer walls with a vacuum therebetween, and a spacing block between said walls composed of layers of sheet mica connected together by a heat-resisting cement, said spacing block being cemented to the inner wall of the vessel only and contacting with a projection on the outer wall.

4. A bottle or receptacle comprising an inner wall and an outer wall, said walls being secured together at one end and being free from each other at the other end, the outer wall having a flexible bent in portion adjacent the free end and a mica spacing block secured to the inner wall in position to contact with the said flexible bent in portion of the outer wall.

5. A bottle or receptacle comprising an inner wall and an outer wall, said walls being secured together and free to move one relatively to the other at the other end, there being a vacuum between said walls, the outer wall having a flexible bent in portion adjacent the said free end and a mica spacing block secured to the inner wall and having a sliding contact with the said flexible bent in portion.

6. A bottle or receptacle comprising inner and outer walls with a vacuum therebetween, said walls being secured together at one end and free from each other at the other end, a mica spacing block, formed of a plurality of layers of mica cemented together by a heat-resisting cement, secured to the inner wall at the free end thereof and having a sliding contact with an adjacent portion of the outer wall.

In witness whereof we have hereunto set our hands in the presence of two subscribing witnesses.

HOMER M. DAGGETT, JR.
LOUIS J. STILLING.

Witnesses:
WM. C. DUNN,
CHAS. LYON RUSSELL.