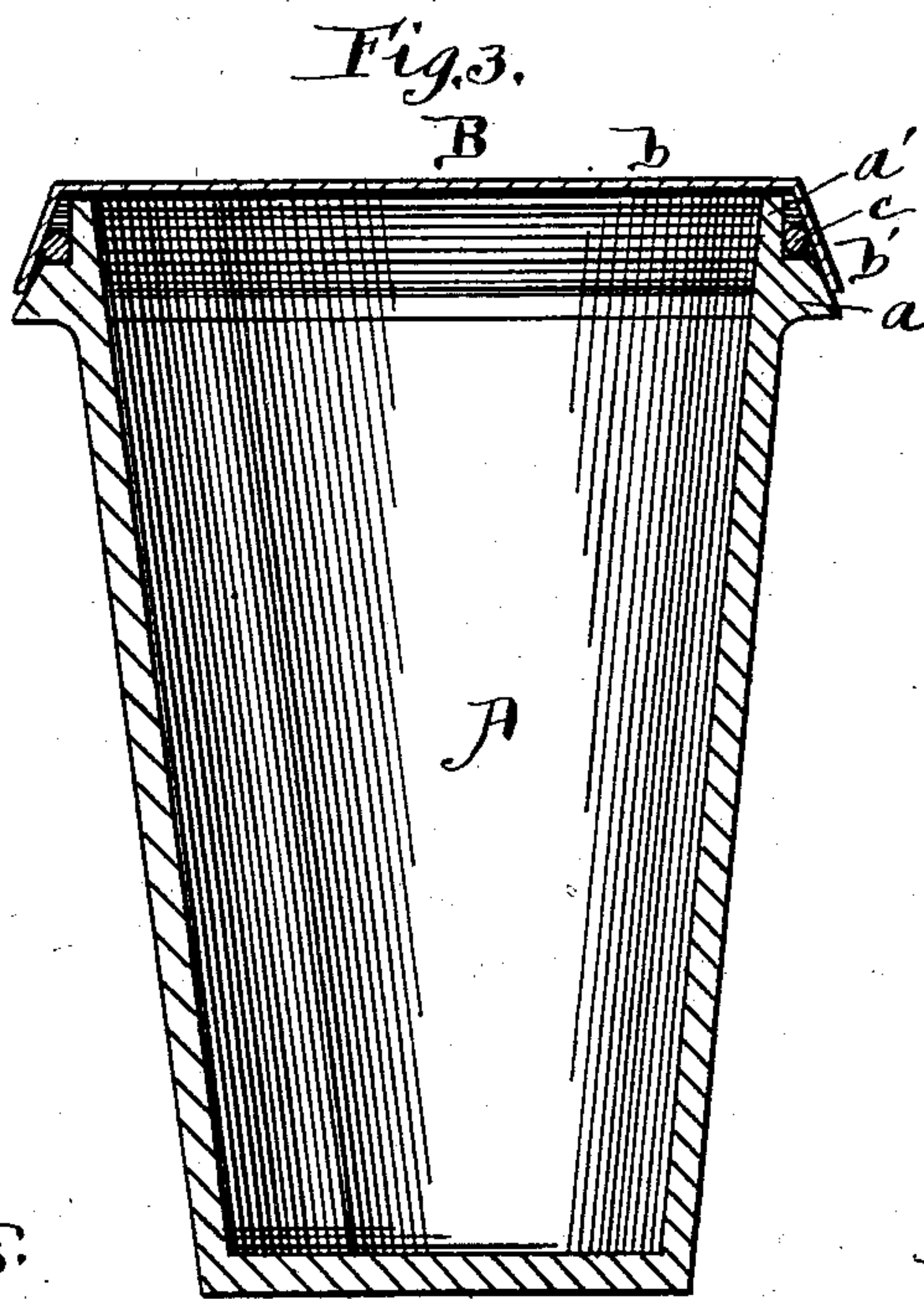
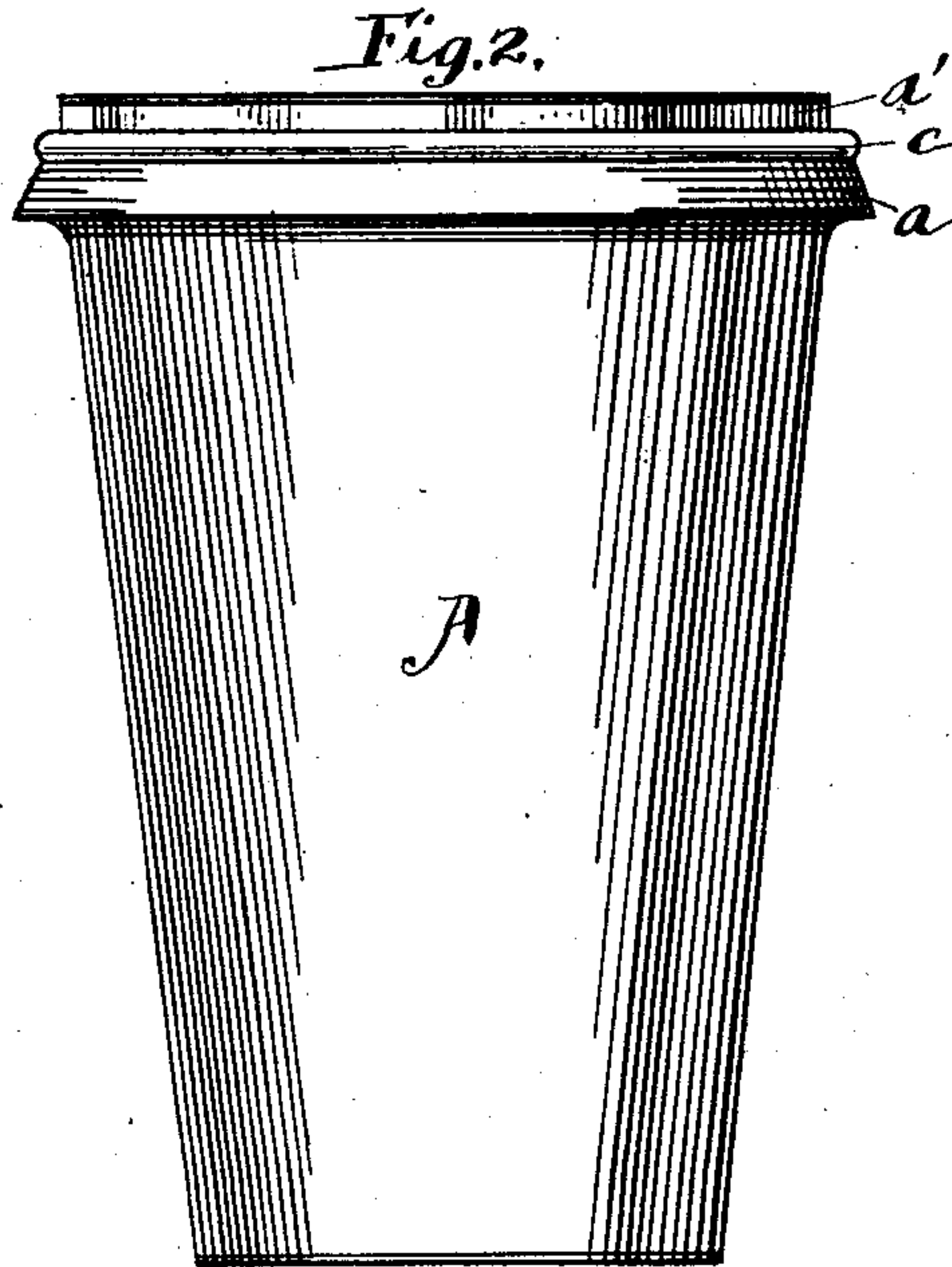
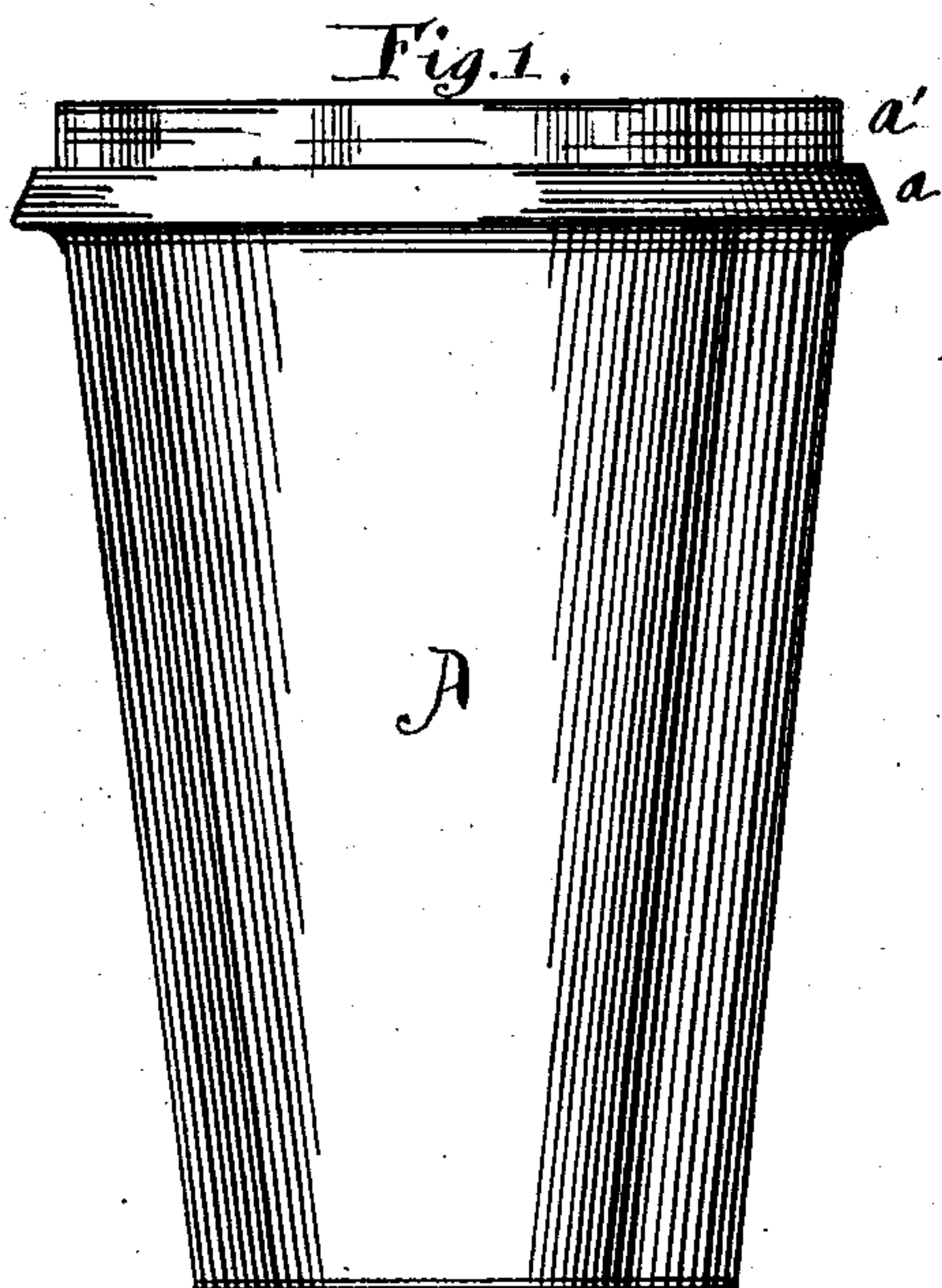


No. 720,129.

PATENTED FEB. 10, 1903.

C. C. GILES & G. H. GRAY.  
VACUUM PRESERVING JAR.  
APPLICATION FILED DEC. 13, 1901.

NO MODEL.



Witnesses:  
Samuel W Banning  
Oscar W Bond

Inventors.  
Carl C Giles  
Granville H Gray  
By Banning & Banning,  
Attys.



# UNITED STATES PATENT OFFICE.

CARL C. GILES AND GRANVILLE H. GRAY, OF UPLAND, INDIANA, ASSIGNORS  
TO JOHN S. GILES, OF CHICAGO, ILLINOIS.

## VACUUM PRESERVING-JAR.

SPECIFICATION forming part of Letters Patent No. 720,129, dated February 10, 1903.

Application filed December 13, 1901. Serial No. 85,834. (No model.)

*To all whom it may concern:*

Be it known that we, CARL C. GILES and GRANVILLE H. GRAY, citizens of the United States, and residents of Upland, in the county of Grant and State of Indiana, have invented a certain new and useful Improvement in Vacuum Preserving-Jars, of which the following is a specification.

It is common in the art of preserving different articles to employ what is known as the "vacuum" process, in which the article to be preserved is contained in glass or other similar jars, and the jars, with the covers thereon, are placed in a vacuum-receiver, so that with the exhausting of the receiver a vacuum will be attained in the jar beneath the cover, by which, with the cover retained closely around the top of the jar to prevent the admission of air, the vacuum of the jar effectually preserves the article against decomposition or other action which would destroy the article, and for maintaining a tight close joint between the cover and the top of the jar it is the practice to employ a packing-band of rubber or other suitable material, placed between the side flange of the cover and the body of the jar at the top and compressed by the application of the cover and held compressed, together with the cover, by the force of pressure on the outer face of the cover when in place with a vacuum in the jar below the cover. It has been found in practice, in the use of jars, especially of glass, which are molded, that such jars are objectionable owing to the ridge, no matter how slight, left from the molds on the outer face of the jar, which ridge or ridges operate to prevent the packing or gasket from fitting snugly against the exterior face of the jar around the top, leaving an opening which, no matter how fine the opening may be, allows air to enter, breaking the vacuum within the jar and rendering the contents of the jar liable to spoil. Numerous efforts have been made to provide a glass jar which when produced in its normal condition from the mold or other appliance will have a formation that will insure against leakage around the packing-band or gasket when applied and held in place by the cover, but without practical results.

The primary object of this invention is the

formation of a jar, preferably of glass, having at its top or upper end a projecting ledge and an upwardly-extending rim from the ledge, with a perfectly smooth plane face for the upper side of the ledge and the exterior of the rim, which when the packing-band or gasket is entered in place around the rim resting on the ledge will fit snugly in place, making a tight joint when the cover is applied and the vacuum obtained, forming an effectual guard against the admission of air to destroy the vacuum.

The invention consists in the features of formation and the combination of the parts hereinafter described and claimed.

In the drawings, Figure 1 is an elevation of a jar embodying the novel features of the invention with the packing-band or gasket removed; Fig. 2, a similar view to Fig. 1 with the packing-band or gasket in place; and Fig. 3, a sectional elevation of the jar complete with the cover thereon, the jar, however, being shown unfilled.

The jar A in the formation shown is of small capacity and has a tapered body smallest at the bottom, but could have a straight body or a body of any shape desired, either plane or otherwise formed. The top of the jar below its extreme upper edge has therearound a circumferential flange *a*, which, as shown, is inclined on its side face and has its upper face in a straight horizontal plane, leaving a smooth surface, and extending up vertically from the upper face of the flange or bead *a* is an annular rim or wall *a'*, forming the top or upper end of the jar. The jar as a whole is formed so as to have no side ridges, and this is also true of the top, consisting of the flange or ledge *a* and the annular rim or wall *a'*, leaving the flange or ledge and the rim or wall *a'* with smooth contact-faces for the packing-band or gasket, and in forming the jar as a whole the top or upper end is united with the body proper by a transverse or horizontal seam instead of a perpendicular or vertical seam, as is the general practice in making glass jars, which enables the top or upper end to be formed so as to have a smooth plane surface without any projecting ridge or ridges for the reception of the packing-band or gasket.



The cover preferably is made of sheet metal and has an imperforate top *b* and a side wall *b'*, which, as shown, has an outward flare corresponding in inclination to the outward flare of the side face of the flange or ledge *a*, so as to overlap and fit snugly against the side face of the flange or the ledge when the cover is down to place, with its top firmly seated on the end edge of the top of the jar, as shown in Fig. 3, and when the cover is down the packing-band or gasket, which has been placed around the top or upper end of the jar, contacting the surface of the rim or wall and the upper surface of the flange or ledge, will be compressed and held firmly in place by the cover, as shown in Fig. 3.

The glass jars heretofore used are formed in a mold which opens vertically, so that the line of opening is increased as the mold is used, with the result of producing a vertical or longitudinal ridge on the body of the jar, extending from the bottom to the top, making the ridge at the top of sufficient prominence to permit air to enter and destroy the vacuum. The glass jar of the present invention is formed in a mold which opens transversely or horizontally at a point in line with the lower face of the flange or ledge, so that the opening will form a ridge horizontally or transversely of the body of the jar, at the upper end thereof, in line with the lower edge of the flange or ledge, or approximately so, which ridge will be below and entirely clear of the upper face of the flange or ledge and the extended rim or wall, leaving the contact-faces of the flange or ledge and the rim or wall for the packing perfectly smooth and plane, without any projection or prominence that would create an opening for the admission of air. It will thus be seen that with the packing-band or gasket in place and the cover on no leakage of air into the jar can take place, as the sealing from the packing-band or gasket is perfect, making a tight joint, through which it is impossible for air to enter the interior of the jar. The jar is filled and sealed, as usual, by pouring or placing the article to be preserved therein until the jar is full, applying the packing-band or gasket around the top, and pressing the cover down to place, and for vacuum treatment the cover can be held in place either by the usual and well-known spring-retainer or by a bar or weight or otherwise, so long as the retaining means is sufficient to hold the cover down against being drawn off with the creation of the vacuum and at the same time have the vacuum operation extend to the inside of the jar, withdrawing the air therefrom, so that the jar will be under as perfect a vacuum as it is possible to produce, which vacuum is sufficient for preserving purposes. The jars are removed at the completion of the vacuum operation, and when removed the pressure of the air on the top *b* of the cover will serve to hold the cover tightly down with the packing-band or gasket held firmly and snugly in

place and in perfect contact entirely around the top of the jar, preventing the admission of air to the jar to destroy the vacuum.

The making of the jar in the manner described insures a perfectly plane and smooth contact-surface for the packing-band or gasket without any ridges or depressions, thus insuring a positive tight fit for the gasket. The construction of the top of the jar in the manner described, so as to leave a perfectly even, smooth, and plane contact-surface for the packing-band or gasket, enables the successful use of the jars to be attained in packing and preserving articles under vacuum with but little if any liability of deterioration or spoiling of the article from the admission of air, as the seal formed by the packing-band or gasket is a safeguard against the admission of air to the interior of the jar around the packing-band or gasket.

The jar of the invention, while described in connection with a cold vacuum process, is adapted for use and can be used with a process employing heat for creating the vacuum in the jar, as in either process the prevention of leakage into the jar to break the vacuum therein is effectually guarded against by the smooth plane formation of the surfaces or faces for contacting the packing-band or gasket. It will be understood, of course, that with jars having a straight body or an outwardly-curved body, which would interfere with the withdrawal of the jar from the mold, it will be necessary to use a vertically-split mold, as usual, and a drop-ring for the top of the jar, the drop-ring having a continuous circular formation, and with this arrangement, while the body of the jar would have a vertical ridge or ridges, such ridge or ridges would be below the flange or ledge, and the contacting faces of the flange or ledge and the rim or wall would present straight plane surfaces, as described.

What we regard as new, and desire to secure by Letters Patent, is—

1. A vacuum preserving-jar made of vitreous material, having at its upper end a laterally-projecting circumferential flange or ledge provided on its top with a smooth and plane horizontal contact-face and provided on its periphery with a smooth engaging face and having, extending up from the flange or ledge, a wall or rim provided on its exterior with a smooth plane vertical contact-face, the horizontal and vertical contact-faces forming a compressing-space at their juncture for the reception of a packing-band or gasket to lie in close contact with and fit snugly against both faces without a break in the continuity of the impingement of the packing-band or gasket with both faces, making a perfect airtight joint, in combination with a packing-band or gasket entered into the compressing-space between the horizontal and vertical contact-faces and impinging against both faces closely at all points, and a cover pressed onto the top of the jar and down over the packing-



band or gasket and down onto and around the peripheral edge face of the flange or ledge, substantially as described.

2. A vacuum preserving-jar made of vitreous material, having at its upper end a laterally-projecting circumferential flange or ledge provided on its top with a smooth and plane horizontal contact-face and provided on its periphery with an outwardly diverging or inclined smooth engaging face and having, extending up from the flange or ledge, a wall or rim provided on its exterior with a smooth plane vertical contact-face, the horizontal and vertical contact-faces forming a compressing-space at their juncture for the reception of a packing-band or gasket to lie in close contact with and fit snugly against both faces without a break in the continuity of the

impingement of the packing-band or gasket with both faces, making a perfect air-tight joint, in combination with a packing-band or gasket entered into the compressing-space formed by the horizontal and vertical contact-faces and impinging against both faces closely at all points, and a cover having its rim at the lower end outwardly diverging or inclined coincident with the outward divergence or incline of the periphery of the flange or ledge and pressed onto the top of the jar and over the packing and the periphery of the flange or ledge, substantially as described.

CARL C. GILES.

GRANVILLE H. GRAY.

Witnesses:

NORMAN G. LENHART,  
U. W. VON ARDLE.