

No. 686,623.

Patented Nov. 12, 1901.

A. A. LOW.
SEALING CAP FOR VESSELS.

(Application filed May 29, 1900.)

(No Model.)

Fig. 1.

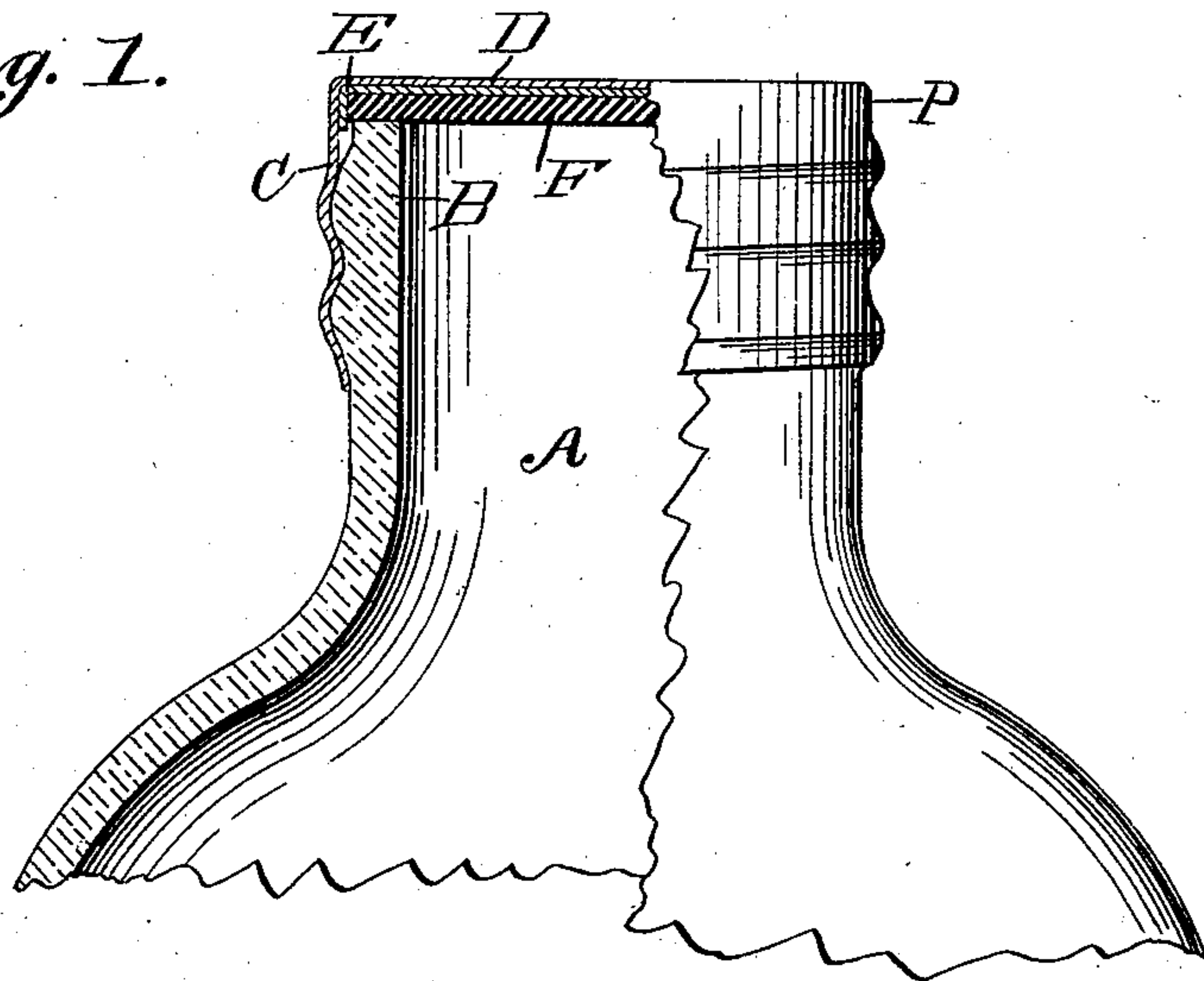


Fig. 2.

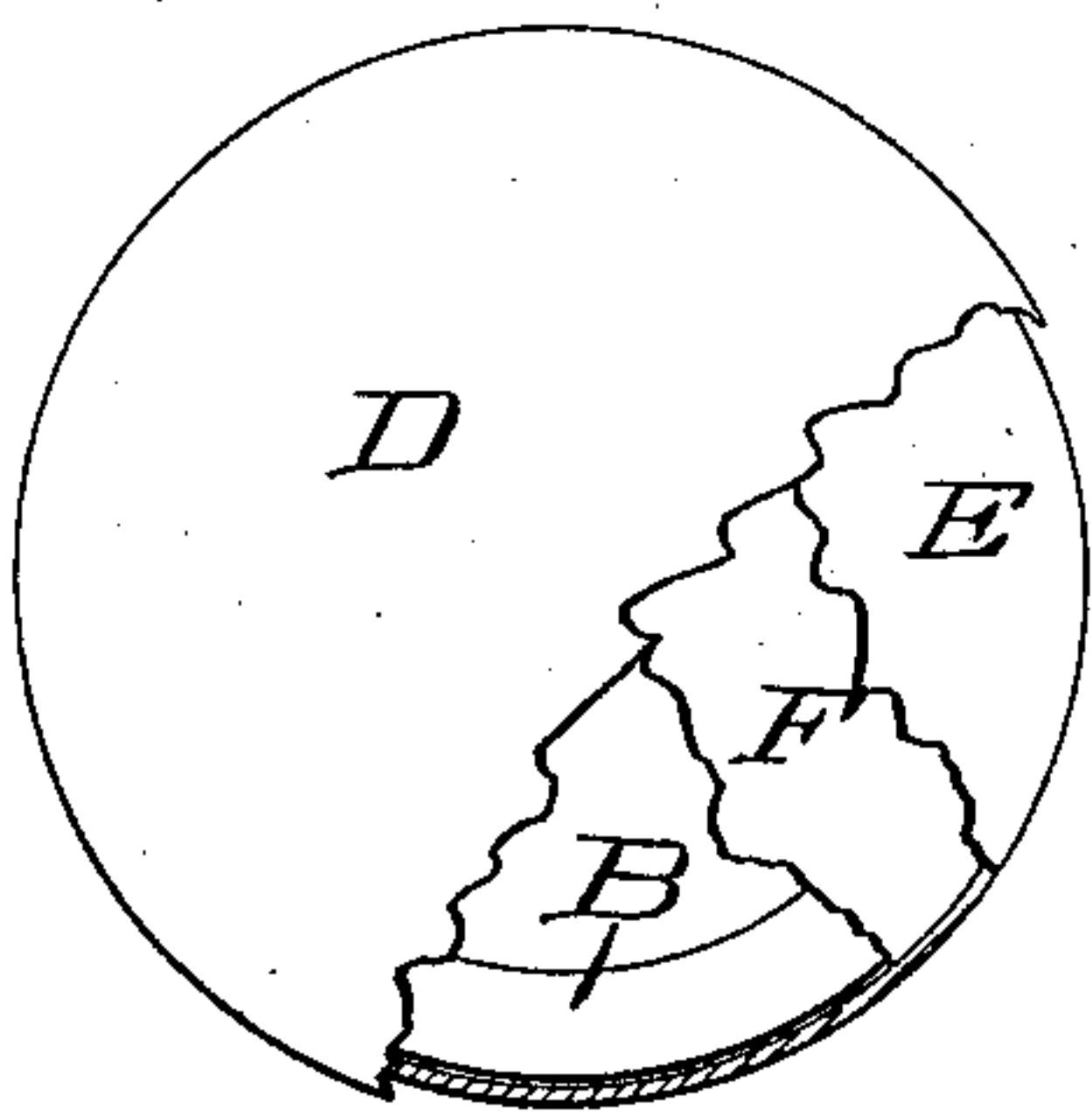
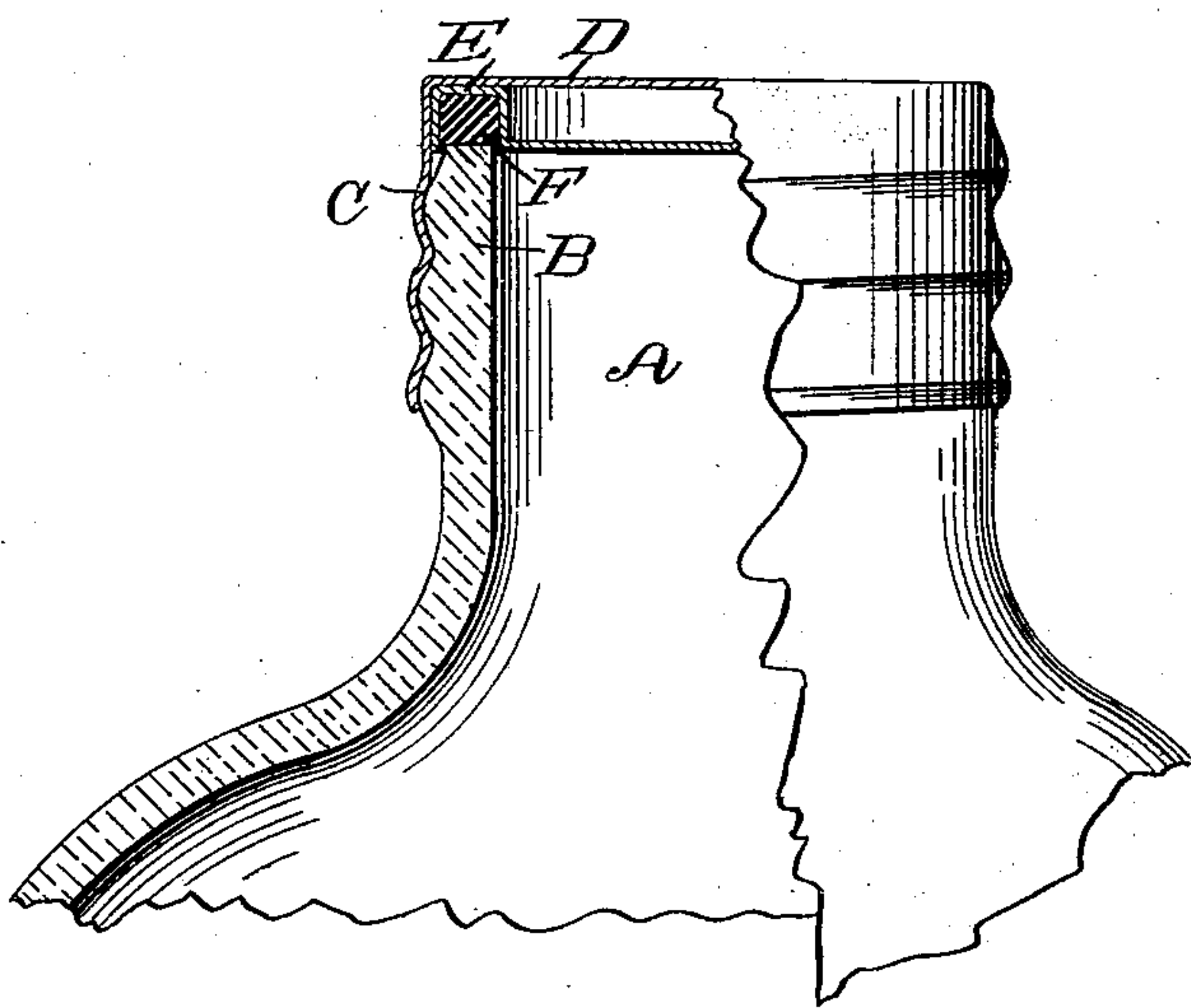


Fig. 3.



WITNESSES

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SEALING-CAP FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 686,623, dated November 12, 1901.

Application filed May 29, 1900. Serial No. 18,374. (No model.)

To all whom it may concern:

Be it known that I, ABBOT AUGUSTUS LOW, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Sealing-Cap for Vessels, of which the following is a specification.

My invention relates to caps for sealing vessels, and its object is to provide a means for sealing hermetically free from the inefficiencies of former means; and to this end it consists in certain elements and combinations fully specified and claimed herein.

In order that persons skilled in the art may understand, construct, and use my invention, I will proceed to describe it, referring to the drawings herewith, in which—

Figure 1 is a vertical central section of one form of my invention, showing the cap in a partially-closed position and the edges of the inner shell depending below the upper edges of the vessel-mouth to guide and center the said inner shell and its packing over the mouth of the vessel; and Fig. 2 is a plan view broken away to show the interior shell which controls and contains the packing material. Fig. 3 is another form of the same, as to the said interior shell, showing the cap in a closed position and the packing in the inner shell compressed upon the top of the walls of the vessel-neck and in between the depending walls of the inner shell, and consequently causing the packing in said inner shell to be closely confined over the top edges of the walls of the vessel-neck.

A is the vessel-neck, and B the walls of same, provided in this instance with screw-thread.

C is the barrel of the cap, provided with screw-thread to match and engage with the thread upon the walls B in a well-known manner.

D is the top of the cap, flanged centrally from the top edges of barrel C, and may be a disk extending wholly or a flange extending partially over the top of the vessel.

E is a cup-shaped inner shell, as in Fig. 1.

F is a packing contained in shell E, filling the cup of same, as in Fig. 1. The width of the packing in the shell in Fig. 3 is intended to be wider than the width of the top of the walls of the vessel, so that when forced down

hard upon said walls the packing will embrace the edges of the said walls. In Fig. 1 the cup-shaped shell is preferably broader somewhat than the diameter of the vessel-neck outside the walls of the same, and the packing contained in said shell when forced down upon the said walls embraces the outer edge of the top of said walls, and in both cases the packing within the shell is held firmly in well-defined bounds, so that when embracing the edges of the top of the walls B the packing is held firmly and cannot spread or break away, as it usually does in other previous devices, but hugs the said edges tightly, and thus secures an absolutely-hermetical sealing and a result long sought for.

Inasmuch as the top D of the cap is independent of the inner shell the one slides over the other without disturbing the packing after it has seated itself over the walls of the vessel. This is an important point in addition to the fact that the packing overlaps the top of the said walls and embraces the edge thereof.

The thread of the barrel C does not reach the top of the barrel; but a plain portion underneath lies between the top of the thread and the top of the barrel, where it joins the top D, and the inner shell sets closely in the plain portion, so that no injurious result is produced by screwing on the cap. A vertical movement of the inner shell is the only one effected.

I am aware of the English patent to Rylands, No. 868 of 1887, and United States patent to Bouneu, No. 574,379, dated January 5, 1897, and do not claim anything set out in either of said references.

Having now fully described my invention and the manner in which I have embodied it, what I claim as new and as my invention, and desire to secure by Letters Patent, is—

1. In a sealing-cap for vessels, the combination consisting of the barrel of the cap; means for securing it upon and releasing it from the vessel, flange turned centrally from the upper part of the barrel to form the top of the cap; a recessed packing-shell constructed to contain and containing packing material within said recess, said shell being constructed to conform to the outer circumference of the top of the said barrel, and cap and to be

entirely controlled thereby, as to the vertical movements of the said inner shell, and guided in its horizontal movements by the outer surface of the neck of the vessel, through or by means of, the depending vertical sides of the inner shell but unattached thereto, all constructed, arranged and combined when applied to a vessel, to compress and closely confine the said packing directly over the edges of the top of the walls of the vessel, and between the depending sides of the said inner shell and the outer surfaces of the vessel-neck and to permit the cap to move over the inner packing-shell, without in any way disturbing the sealing means, all constructed, arranged and combined to operate substantially as and for the purposes hereinbefore specified.

2. In a device for sealing vessels; the combination consisting of an outer cup-shaped cap, provided with means for attaching it to

and removing it from a vessel-neck; an inner shell provided with packing material and constructed to closely fit the inner surfaces of the upper part of the outer cap, but unattached thereto, the rim of said inner shell being constructed and arranged, when applied to a vessel to embrace the outer circumference of the walls of the vessel-neck and to center said shell thereon, and when the outer cap is forced down upon it, to compress the packing over the top and edges of said walls and between the rim of the said inner shell and the outer circumference of the said walls of the neck substantially as specified.

Signed at New York, in the county of New York and State of New York, this 10th day of May, A. D. 1900.

ABBOT AUGUSTUS LOW.

Witnesses:

JAMES W. EATON,
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