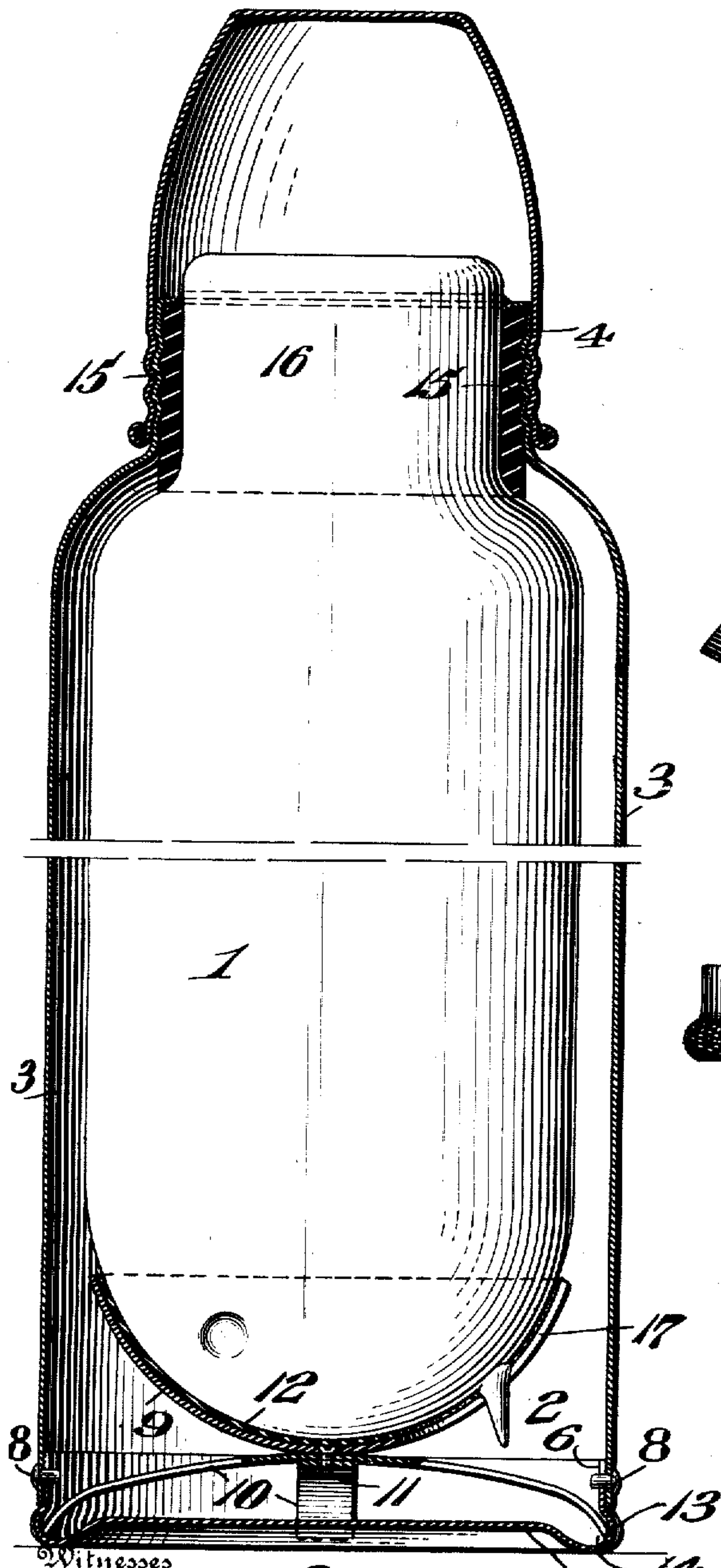


P. O. E. FRIEDRICH.  
CASING FOR VACUUM BOTTLES.  
APPLICATION FILED NOV. 13, 1908.

922,125.

Patented May 18, 1909.

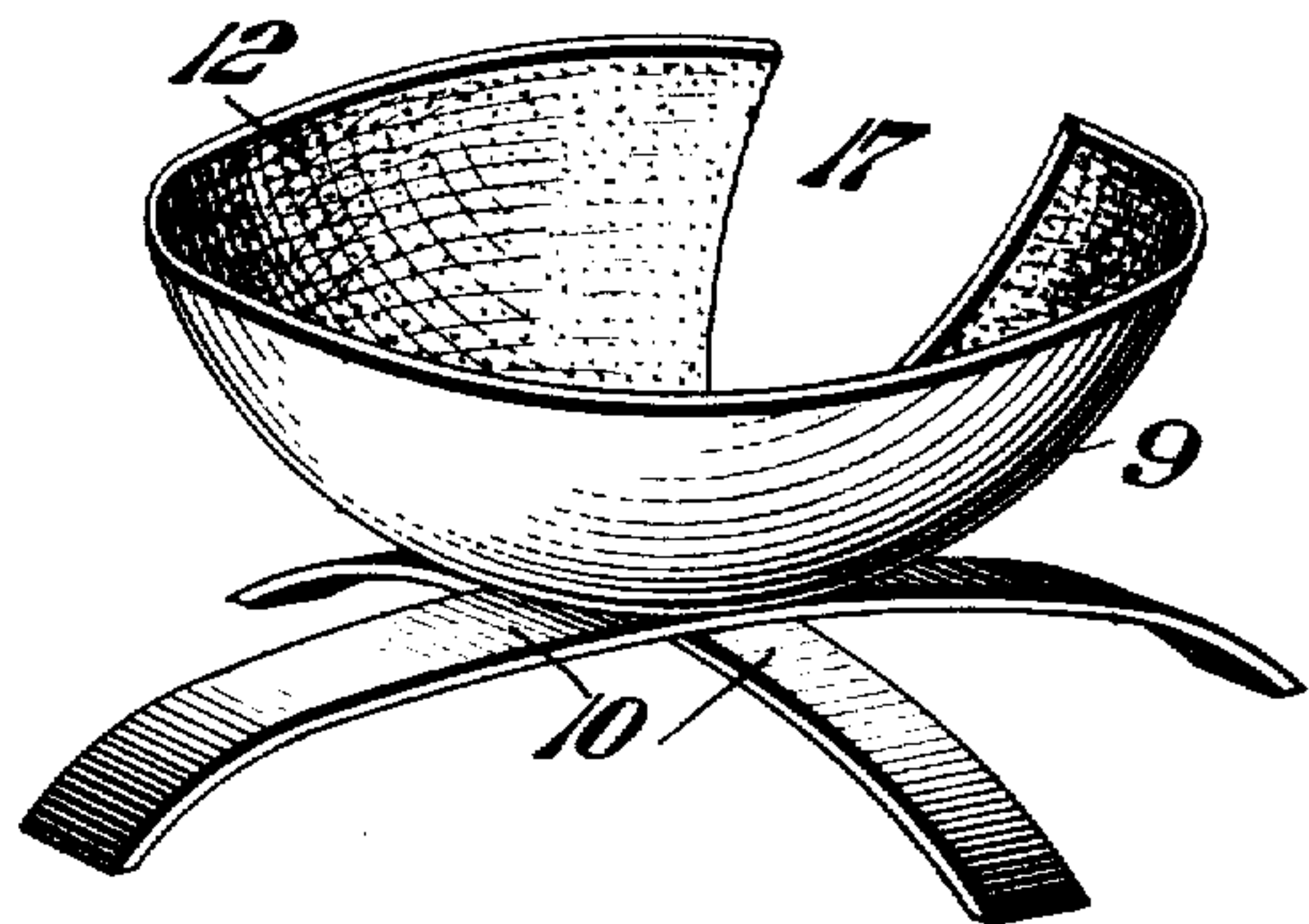
*Fig. 1.*



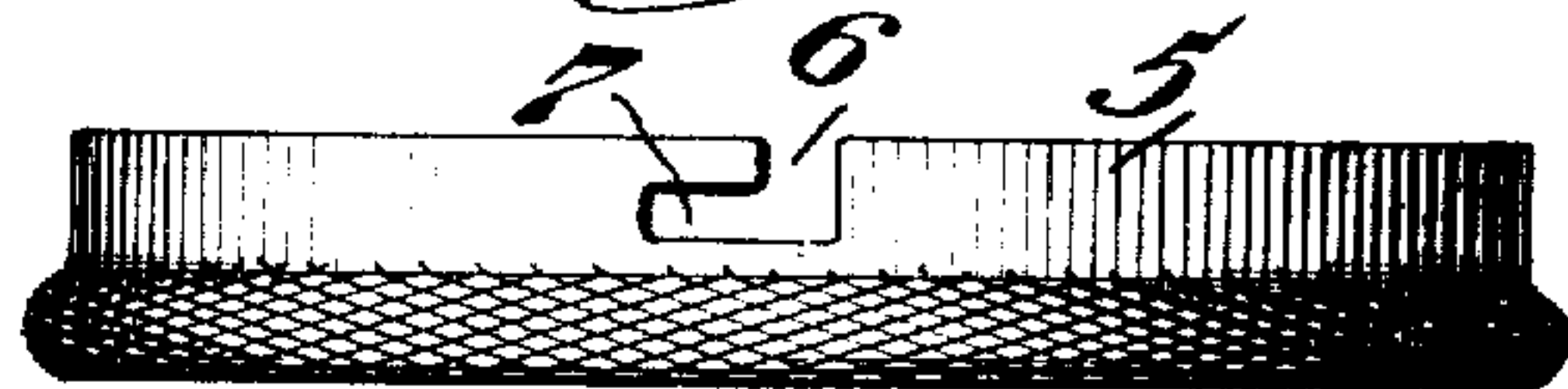
Witnesses

*Henry G. Dieterich*  
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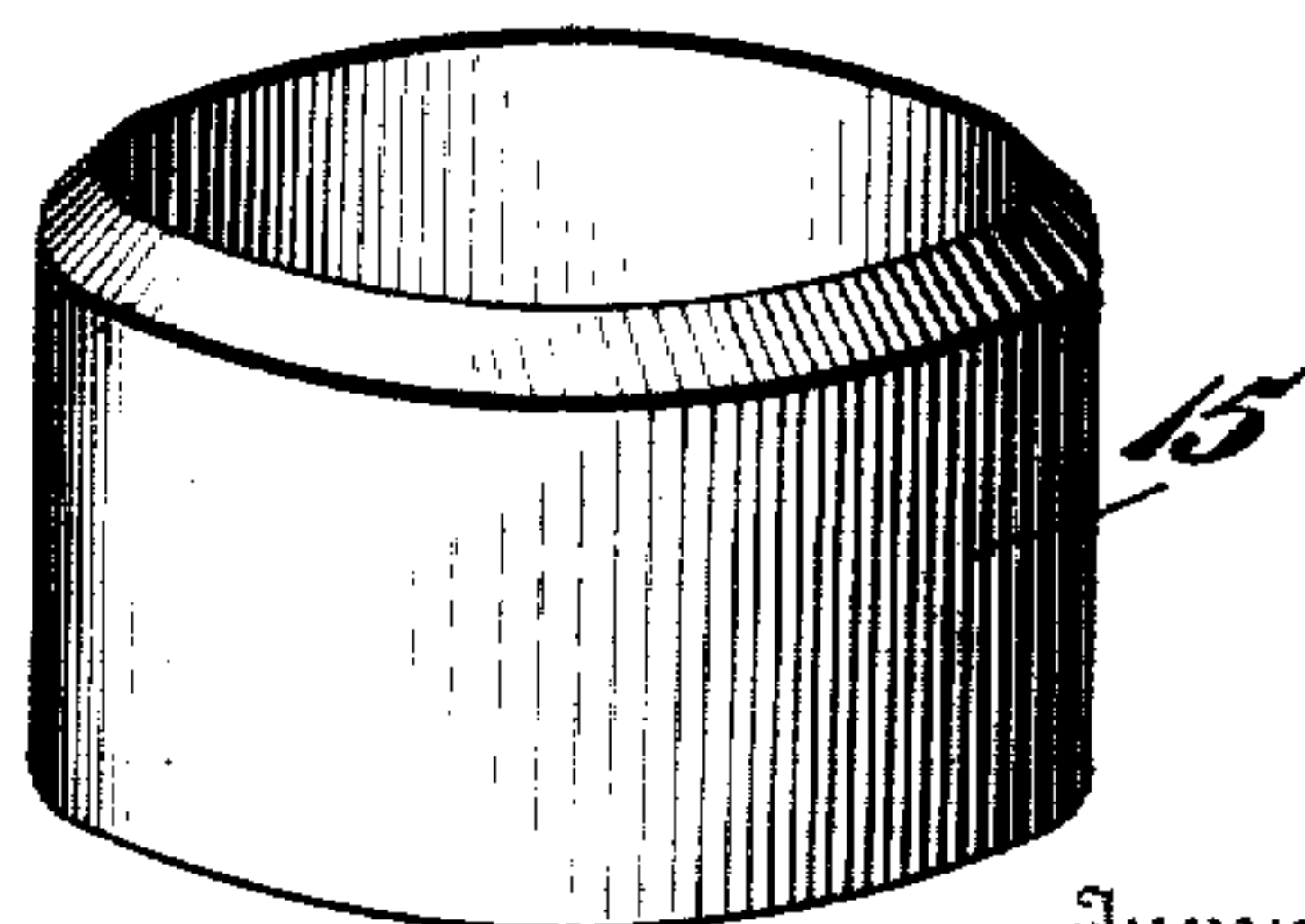
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Inventor

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# UNITED STATES PATENT OFFICE.

PAUL O. E. FRIEDRICH, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO CALORIS MANUFACTURING COMPANY, A CORPORATION OF DELAWARE.

## CASING FOR VACUUM-BOTTLES.

No. 922,125.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed November 13, 1908. Serial No. 462,471.

*To all whom it may concern:*

Be it known that I, PAUL O. E. FRIEDRICH, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Casing for Vacuum-Bottles, of which the following is a specification.

My invention relates to a new and useful case for vacuum or other bottles and consists in providing an outer casing having a suitable receptacle therein resiliently supported and adapted to receive and embrace the lower portion of the bottle.

It further consists of a resilient support for the neck of the bottle.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

Figure 1 represents a sectional view of a casing embodying my invention showing the bottle in position. Fig. 2 represents a perspective view of the resilient support for the bottle in detached position. Fig. 3 represents a side elevation of the closure for the bottom of the casing. Fig. 4 represents a perspective view of the resilient support for the neck of the bottle.

I have found in practice that in the vacuum bottles now in use that owing to the usage to which they are subjected and the liability to breakage owing to falls, etc. that it is necessary to provide a suitable support for the bottle within the outer casing which support will not only serve to take up the shocks but will also hold the bottle in its proper position in the case.

In the drawings I have shown a construction which I have found in practice operates successfully, but it will be evident that various changes may be made in the construction, other instrumentalities may be employed and the arrangement of the parts may be varied without departing from the spirit of my invention and I do not therefore desire to be limited in every instance to the exact form as herein shown and described but desire to make such changes as may be necessary.

I desire it understood that in Fig. 1 I have simply shown the exterior of the bottle, which may be of any desired construction but is preferably of what is known as a vacu-

um bottle; which consists of two bottles preferably formed of glass and suitably connected together and the air from the space formed between these bottles being evacuated or exhausted forming a vacuum and in the drawings 1 designates such a bottle having a suitable sealing teat 2, as usual.

3 designates the outer casing or case which is provided with the threaded portion 4 and is adapted to receive the closure or bottom 5 which in the present instance is provided with the slot 6 having the off set portion 7, while the casing is provided with the pins 8 adapted to be inserted in the slot 6 and by the suitable rotation of the closure 5, to enter the off set 7, thus forming a bayonet joint for removably holding the case and bottom in locked position.

9 designates the support for the bottle within the casing 3, which support may extend sufficiently upwardly around the lower portion of the bottle to suitably embrace the same to prevent side movement thereof; and as shown, the support may be in the form of a cup-shaped receptacle and is connected in any suitable manner with a spring support 10, in the present instance by means of a screw 11, and said receptacle forming the support 9, being lined with a suitable fabric 12 forming a cushion between the bottle 1 and the support 9. It will be noted that the lower portion of the closure 5 is curved outwardly as at 13 forming an annular recess 14 and that the ends of the springs forming the support 10 are adapted to be inserted and rest in this annular recess 14 in order to hold the parts in position to prevent accidental displacement of the springs 10 and the receptacle support 9, although providing that the same can be removed therefrom, as desired.

15 designates a ring formed of resilient material such as rubber, which is adapted to be placed around the neck 16 of the bottle and to completely fill the space between said neck and the neck portion of the casing 3, said ring contacting with the shoulders of the bottle so that any movement of the neck of the bottle is positively prevented, whereby the said ring serves as a resilient support for the neck of the bottle and in conjunction with the receptacle support 9 serves to hold



the bottle in proper position in the case 3 and serve as a resilient support for the bottle proper.

17 designates a recess or cut away portion 5 in the receptacle support 9 which permits seating of the sealing teat 2 so that the receptacle 9 is prevented from contact therewith, thus preventing breaking of the same.

From the above it will be understood that 10 I have provided a resilient support for the bottle which can be removed or replaced in position as desired, and that the shocks or jars incident to the use of the article will be taken up by the spring support and the resilient ring 15 so that breakage of the bottle 1 is prevented.

It will be apparent that by my novel construction the vacuum bottle can be readily inserted into or withdrawn from the case for 20 purposes of cleaning, inspection or sterilization. One of the hitherto previous drawbacks to all metal covered temperature bottles has been the difficulty of replacing the glass part, if by any chance it should become 25 broken, which has heretofore required the returning of the case to the factory for a new glass part, making it almost as expensive to repair a broken bottle as to purchase a new one. Another drawback has been that to 30 put the old style bottle with its metal case in boiling water in order to cleanse or sterilize it, usually meant the end of the bottle, because the cement fastening of the bottle in the case gave way and the water and liquid 35 would work down between the two, making both foul and subject to breakage from the slightest knock. By my present invention wherein the detachable closure or bottom is employed the latter can be readily removed 40 by a simple twist and the glass bottle being entirely disconnected at all times from the case can be withdrawn and replaced at a moment's notice, whereby the cleaning and sterilizing of the bottle is rendered an easy 45 matter so that it can also be used for all liquids especially those subject to fermentation.

So far as I am aware, I am the first in the art to produce the concrete, unitary structure herein described and claimed and my 50 claims to the herein described features are therefore to be interpreted with corresponding scope.

Having thus described my invention, what 55 I claim as new and desire to secure by Letters Patent, is:—

1. In a device of the character described, bottles suitably connected and having a vacuum therebetween, a case for said 60 bottles, a removable closure for the lower portion of said case, a support for said bottles within said case, and resilient means intermediate said support and removable closure.

65 2. In a device of the character described,

bottles suitably connected having a vacuum therebetween, a case for said bottles, a support embracing the lower portion of said bottles, a removable closure for the lower 70 portion of said case and a resilient device intermediate said support and closure.

3. In a device of the character described, bottles suitably connected and having a vacuum therebetween, a case for said 75 bottles, a closure for the lower portion of said case, a support for said bottles within said case, and a resilient device for carrying said support, said resilient device being located intermediate of said closure and support. 80

4. In a device of the character described, bottles suitably connected having a vacuum therebetween, a case for said bottles, a detachable closure for the bottom of said case, a support embracing the lower portion of 85 said bottles, and a resilient device for carrying said support, said resilient device being located intermediate of said support and closure.

5. In a device of the character described, 90 bottles suitably connected and having a vacuum therebetween, a case for said bottles, a removable closure for the lower portion of said case, interlocking devices common to said closure and case, a support 95 for said bottles, resilient carrying means for said support, said resilient means being located intermediate of said closure and said support and a cushion between said support and bottles. 100

6. In a device of the character described, bottles suitably connected and having a vacuum therebetween, a case for said bottles, a support for the lower portion of 105 said bottles, a detachable closure for the lower portion of said case, a resilient device for supporting said support, said resilient device being located intermediate of said closure and support and a cushion between 110 said support and the bottles.

7. In a device of the character described, bottles suitably connected and having a vacuum therebetween and provided with a sealing teat, a case for said bottles, a support 115 removably mounted in said case and having a recess therein for seating said sealing teat, and resilient carrying means for said first mentioned support.

8. In a device of the character described, bottles suitably connected and having a 120 vacuum therebetween, a case for said bottles, a support for the base of said bottles within said case, a resilient support between the neck of the bottle and the case, and a second resilient device located inter- 125 mediate of said support and the base of said case.

9. In a device of the character described, bottles suitably connected and having a vacu- 130 um therebetween, a case for said bottles, a



support for the base of said bottles within said case a resilient device intermediate the bottom of said case and said support, and a resilient support around the neck of the bottle, abutting the shoulder thereof and situated between the neck of the bottle and the case.

10. In a device of the character described, bottles suitably connected and having a vacuum therebetween, a case for said bottles, a cup-shaped receptacle adapted to embrace the lower portion of said bottles, and a resilient device supporting the receptacle and in removable engagement with the case.

11. In a device of the character described, bottles suitably connected and having a vacuum therebetween, a case for said bottles, a cup-shaped receptacle adapted to embrace the lower portion of said bottles, a resilient device supporting the receptacle and in removable engagement with the case and a resilient support for the neck of the bottle.

12. In a device of the character described, bottles suitably connected and having a vacuum therebetween and provided with a sealing teat, a case for said bottles, a receptacle adapted to embrace the lower portion of said bottles and provided with a recess adapted to seat said sealing teat, a resilient support for said receptacle, an annular recess in said case in which the ends of the springs are adapted to be seated, and a resilient support for the neck of the bottle.

13. In a device of the character described, bottles suitably connected and having a vacuum therebetween and provided with a sealing teat, a cup-shaped receptacle adapted to embrace the lower portion of said bottles and having a recess adapted to seat said sealing teat, a cushion between said receptacle and the bottles, a resilient device for sustaining said receptacle, an annular recess in said case in which the ends of said resilient device are adapted to be seated, and a resilient support for the neck of the bottle.

14. In a device of the character described, a casing, a removable closure for the base of said casing, a bottle contained within said casing, a support adapted to engage the lower end of said bottle and a resilient device intermediate of said support and said removable closure.

15. In a device of the character described, a casing, a removable closure for the base of said casing, a bottle contained within said casing, a support juxtaposed to the lower end of said bottle, a cushion intermediate said

support and bottle, and a resilient device intermediate of said support and removable closure.

16. In a device of the character described, a casing, a removable closure for the base of said casing, a bottle contained within said casing, a support adapted to engage the lower end of said bottle, a resilient device intermediate of said support and said removable closure and a second resilient device intermediate the neck of the bottle and the juxtaposed portion of said casing.

17. In a device of the character described, a casing, a removable closure for the base of said casing, a bottle contained within said casing, a support adapted to engage the lower end of said bottle, a resilient device intermediate of said support and said removable closure, a second resilient device intermediate the neck of the bottle and the juxtaposed portion of said casing and a screw-cap engaging the outer upper portion of said casing.

18. In a device of the character described, a casing, a removable closure for the base of said casing, interlocking devices common to said closure and casing, a bottle contained within said casing, a support engaging the lower portion of said bottle, and a resilient device intermediate of said support and closure.

19. In a device of the character described, a casing, a removable closure for the base of said casing, interlocking devices common to said closure and casing, a bottle contained within said casing, a support for the lower portion of said bottle, a resilient device intermediate of said support and closure, and a resilient ring engaging the neck of said bottle and located intermediate of said neck and the upper portion of said casing.

20. In a device of the character described, a casing, a removable closure for the base of said casing, interlocking devices common to said closure and casing, a bottle contained within said casing, a support for the lower portion of said bottle, a resilient device intermediate of said support and closure, and a resilient ring engaging the neck of said bottle and located intermediate of said neck and the upper portion of said casing in combination with a cap engaging the upper portion of said casing and inclosing said ring and the mouth of said bottle.

PAUL O. E. FRIEDRICH.

Witnesses:

C. D. McVAY,  
F. A. NEWTON.