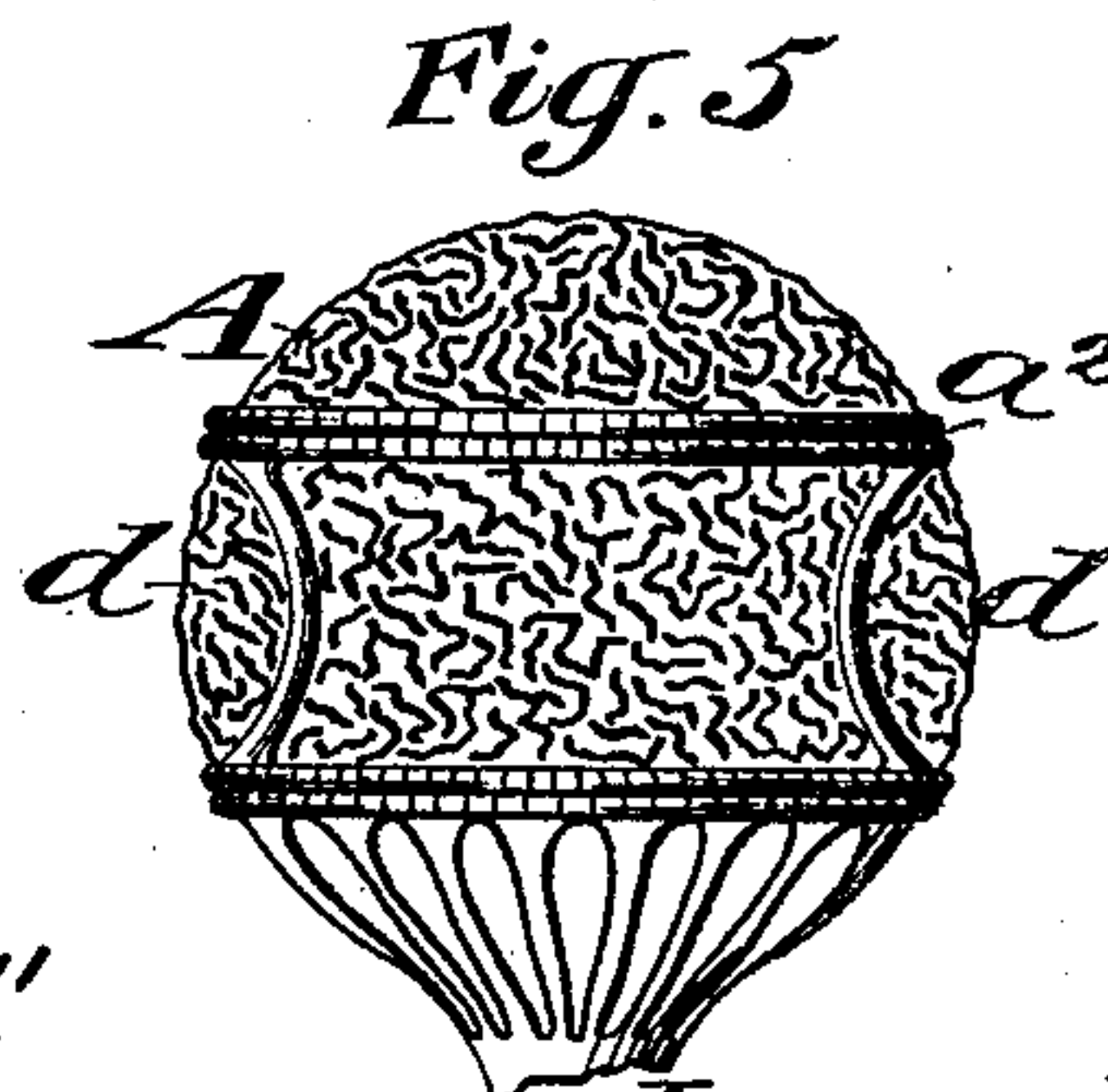
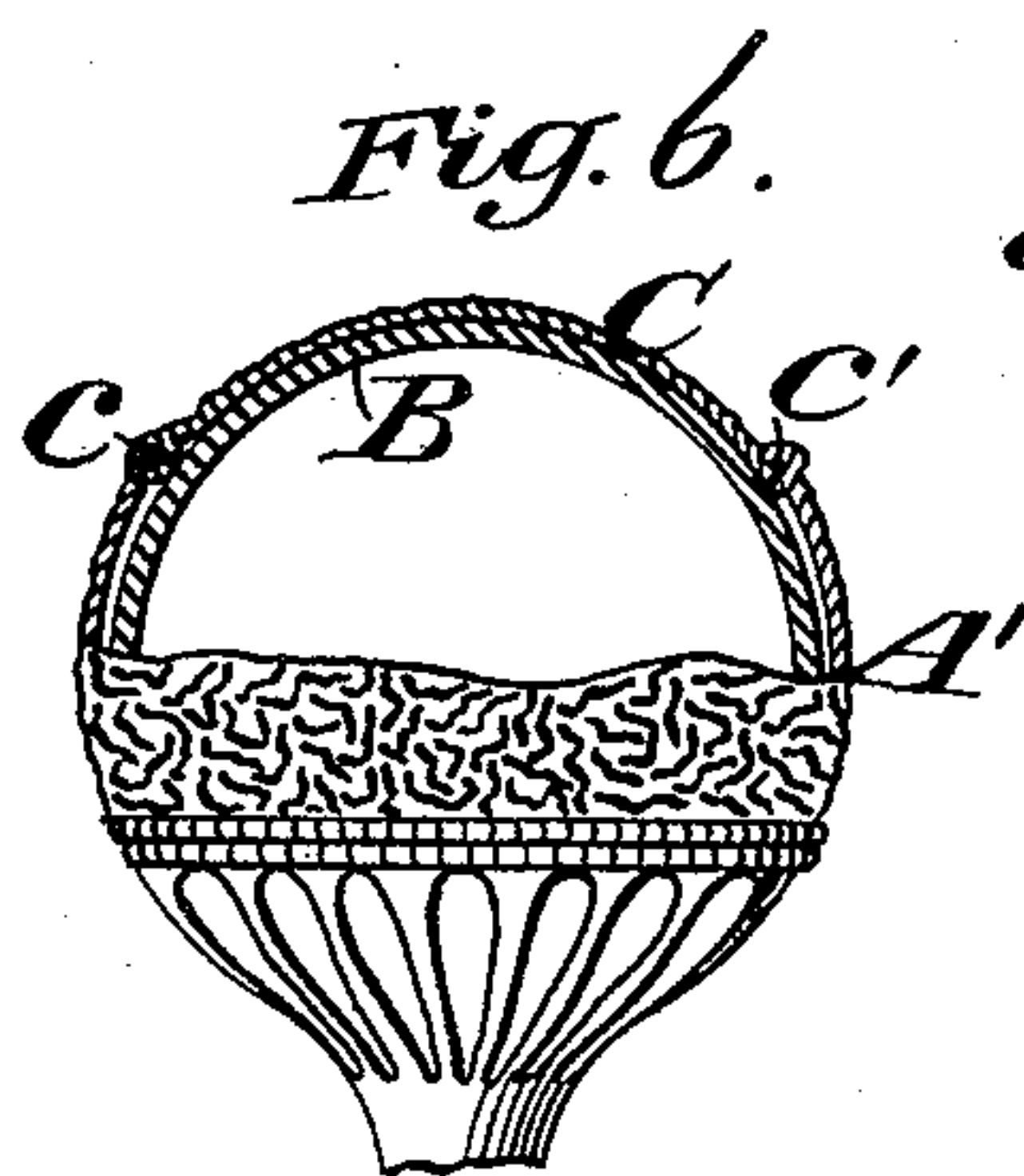
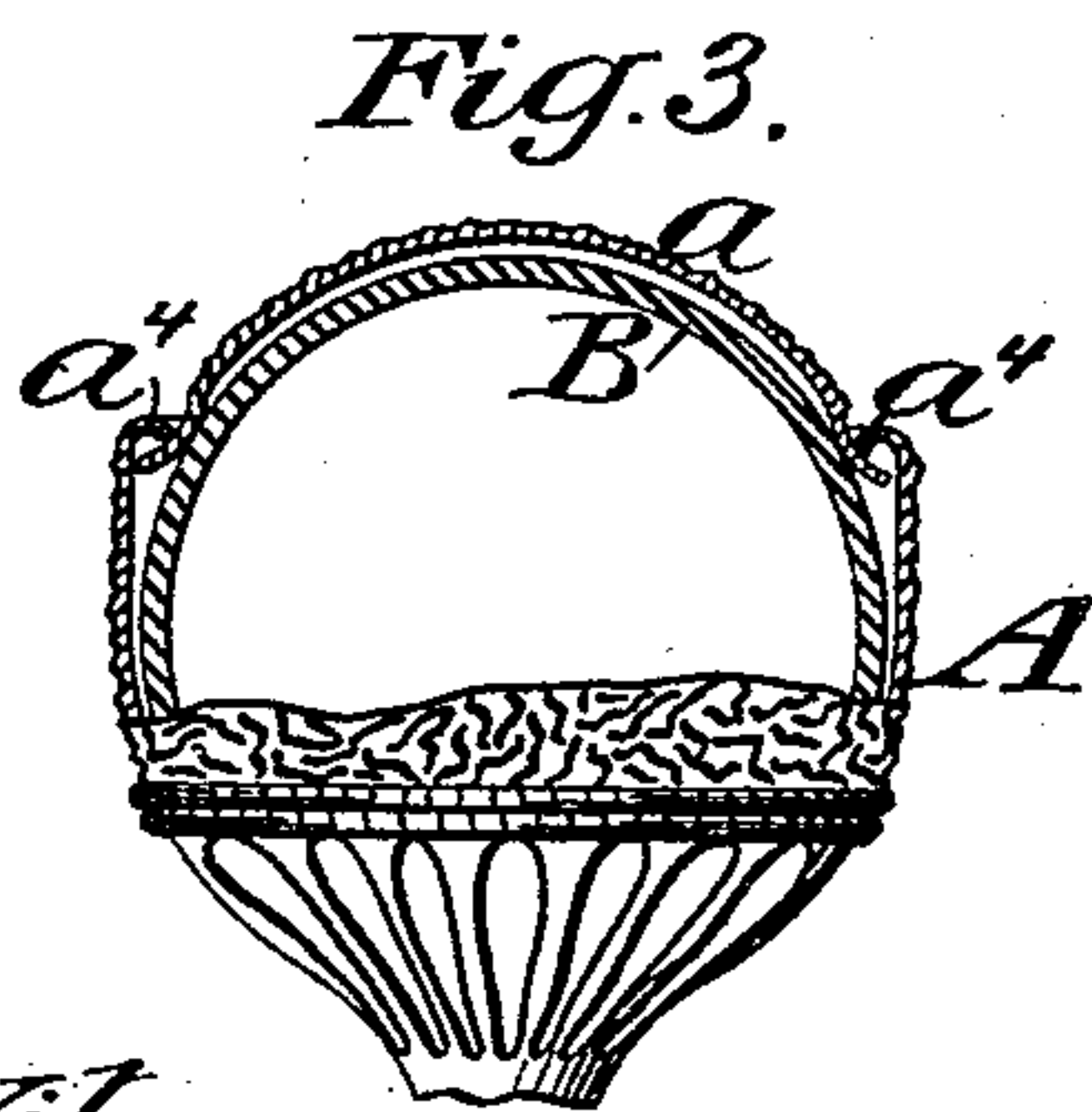
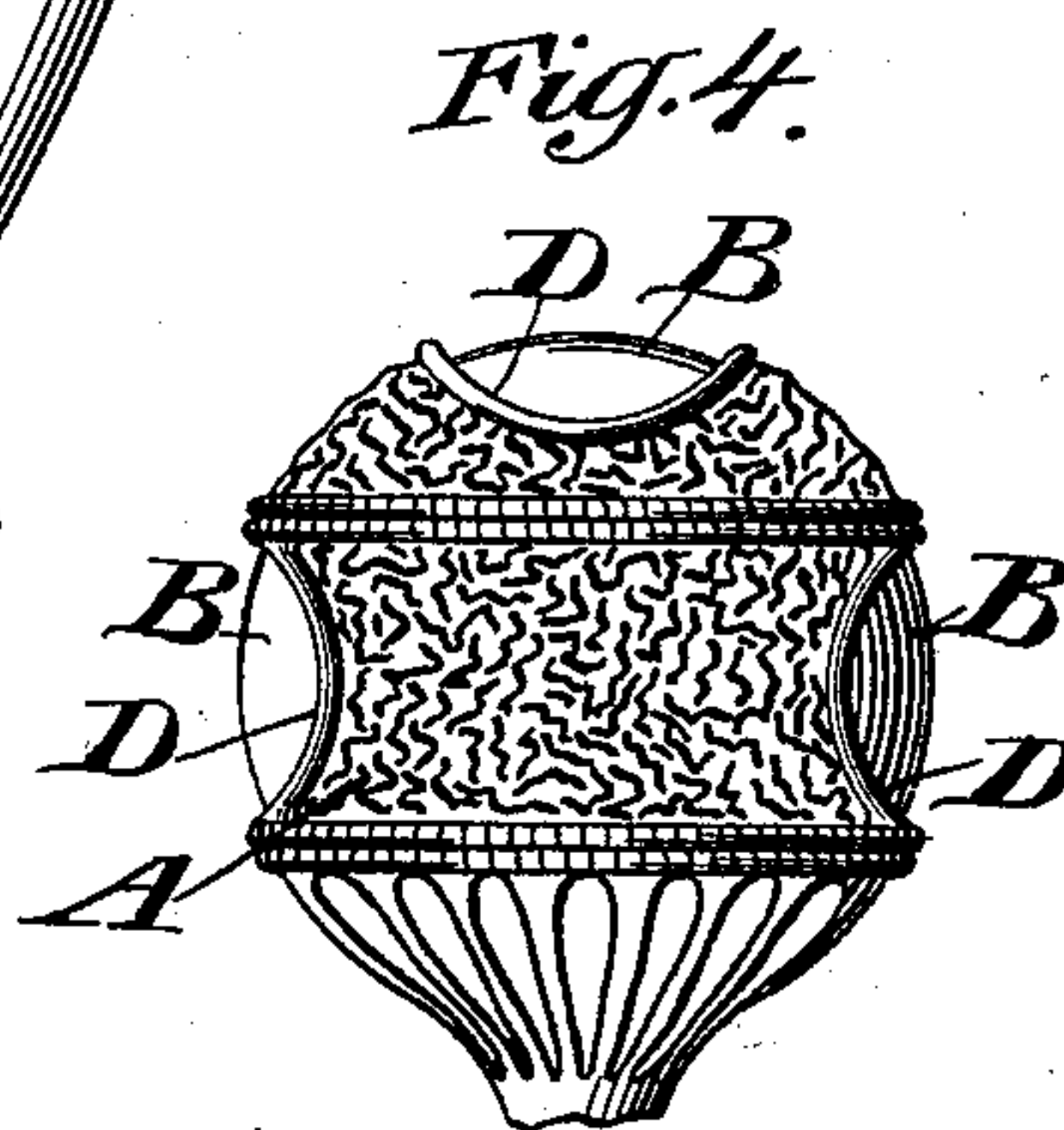
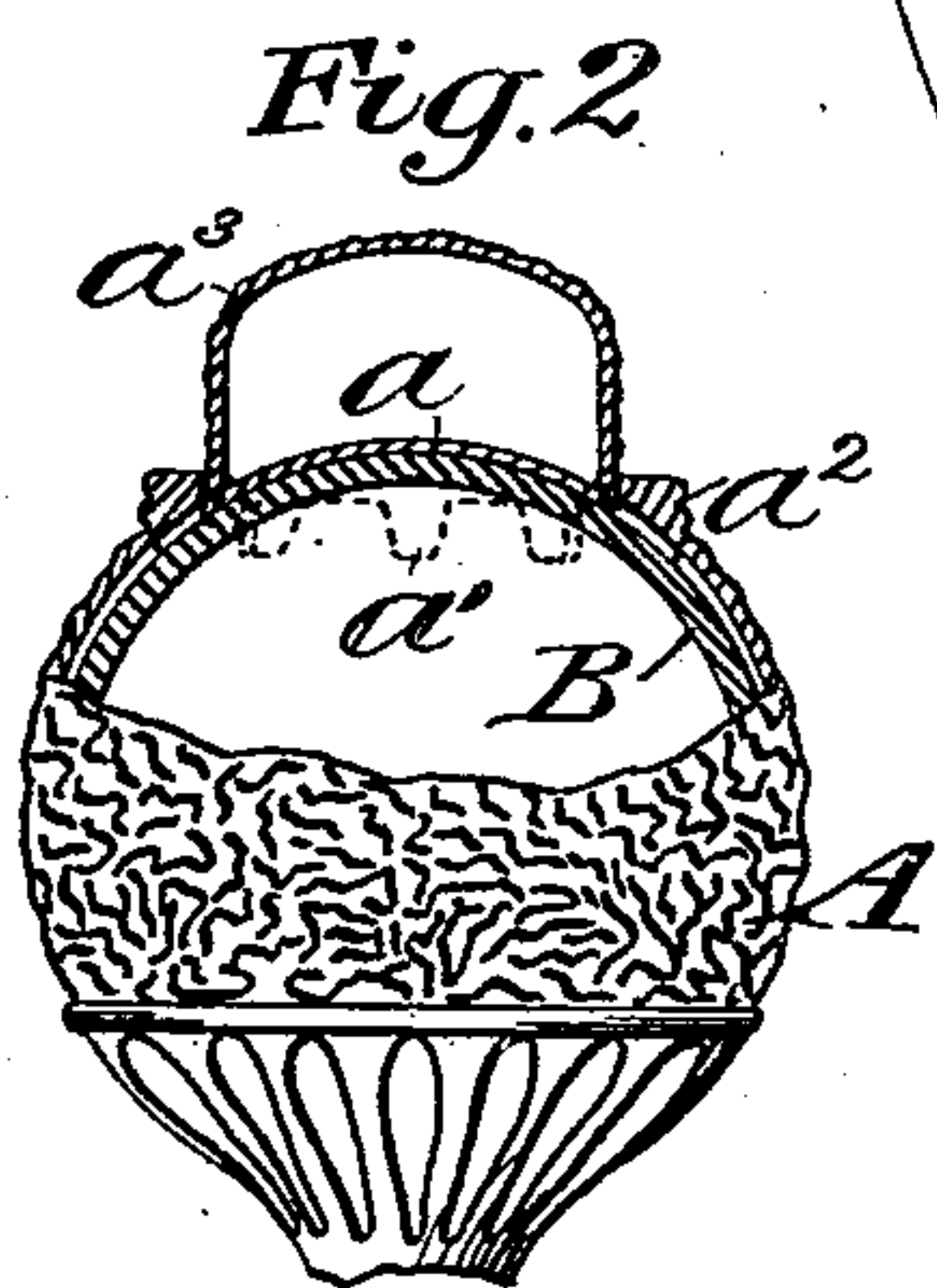


(No Model.)

M. WIRTHS.  
BULB GUARD FOR ATOMIZERS.

No. 477,345.

Patented June 21, 1892.



Witnesses:

C. Sundgren  
W. H. Haywood

Inventor:  
Maurice Wirths  
by attorneys  
Brown & Seward



# UNITED STATES PATENT OFFICE.

MAURICE WIRTHS, OF JERSEY CITY, NEW JERSEY.

## BULB-GUARD FOR ATOMIZERS.

SPECIFICATION forming part of Letters Patent No. 477,345, dated June 21, 1892.

Application filed February 17, 1892. Serial No. 421,847. (No model.)

*To all whom it may concern:*

Be it known that I, MAURICE WIRTHS, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Bulb-Guards for Atomizers, of which the following is a specification.

My invention relates to an improvement in bulb guards or cases for atomizers in which provision is made for operating the collapsible bulb of the atomizer through one or more openings in the guard or casing.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents an atomizer applied to a reservoir, showing the bulb guard or casing partially broken away, the top part of the guard being represented as having a movement bodily toward and away from the lower part of the casing. Fig. 2 represents a form of guard or casing in which the top part of the casing has a movement toward and away from the lower part of the casing and projects upwardly out of the plane of the general contour of the casing. Fig. 3 represents a form of guard or casing in which the top part of the casing is held locked to the lower part of the casing by turning over the upper edge of the lower or body portion of the casing. Fig. 4 shows the casing provided with openings for gaining access to the collapsible bulb within the casing to compress it. Fig. 5 represents the casing provided with movable sections at its opposite sides, the movable sections being secured to the collapsible bulb and adapted to move inwardly beyond the normal contour of the casing to compress the bulb; and Fig. 6 shows a form of guard or casing in which the top part of the casing is hinged at one side to the body portion of the casing and is adapted to swing inwardly and outwardly with the collapsible bulb as the latter contracts and expands.

Referring to Fig. 1, the stationary or body portion of the bulb guard or casing is represented by A. It may consist of thin metal or of any other suitable material of a rigid nature and capable of receiving ornamentation.

The collapsible bulb of the atomizer is represented by B and may be of the ordinary type in common use.

The top portion of the casing A is repre-

sented by  $a$  and is made separate from and movable with respect to the body portion A. In this particular form the top or movable portion  $a$  is fitted to conform to the normal curve of the bulb B when the latter is expanded and is held within the body portion A by means of a plurality of legs  $a'$ , which project within the upper portion of the body A, between it and the exterior of the bulb B. The guard or casing being provided with an ornamental band or ring  $a^2$  at the juncture of the movable and stationary portions, the movable portion  $a$  has the general appearance of forming a continuation of the body portion A, and when it is desired to collapse the bulb B in order to operate the atomizer it is simply necessary to press downwardly upon the movable portion  $a'$ . As the movable part covers an extended area of the collapsible bulb, it will need but a slight depression of the movable part  $a$  in order to expel the required amount of air from the bulb, and the rigid character of the casing or guard will protect the bulb from injury from the outside. The pressure of a considerable portion of the bulb as distinguished from a sharp indentation into the side of it, as in applying the fingers to it, will also prevent it from cracking, and thereby prolong its life.

In the form shown in Fig. 6 the movable top is represented by C and is hinged, as at  $c$ , to the top of the body  $A'$  and rests normally with its free edge  $c'$  inserted within the top of the body  $A'$ , between it and the bulb. In operating the part C it will swing upon its hinge  $c$  and thereby collapse the bulb B, the expansion of the bulb bringing the part C promptly back to its position.

The form shown in Fig. 2 differs from that represented in Fig. 1 in that there is an additional raised portion  $a^3$ , which may be utilized as a handle for operating the movable part and for receiving additional ornamentation. The body portion in the form shown in Fig. 2 is extended farther up around the bulb than in the form shown in Fig. 1.

In the form shown in Fig. 3 the lower edge of the movable part is curved outwardly and interlocked with the turned-over edge  $a^4$  of the body portion to hold the movable portion in position.

In the form shown in Fig. 4 the top of the



body portion is fixed in its position, and one or more openings D—in the present instance three, one on each of its opposite sides and at the top—are applied, through which pressure  
 5 may be exerted by one or more of the fingers in order to collapse the bulb.

In the form shown in Fig. 5 the top of the body portion is fixed in its position, and openings at the opposite sides of the casing are  
 10 provided with covers *d*, attached to the exterior of the collapsible bulb within the casing, so that when pressure is exerted upon the outside of the covers *d* they will enter within the casing and collapse the bulb surrounded  
 15 by the casing.

It is obvious that other changes in the form and arrangement of the movable parts relatively to the fixed portions of the casing might be resorted to without departing from  
 20 the spirit and scope of my invention.

What I claim is—

1. A guard or casing for the bulbs of atom-

izers, comprising a fixed shell of rigid material incasing the bulb and provided with an opening therethrough for gaining access to  
 25 the bulb to compress it, substantially as set forth.

2. A guard or casing for the bulbs of atomizers, comprising a shell of rigid material embracing the bulb and provided with a movable section having a movement toward the  
 30 interior of the shell to collapse the bulb therein, substantially as set forth.

3. A guard or casing for the bulbs of atomizers, comprising a shell of rigid material embracing the bulb and provided with a movable section hinged to the stationary section  
 35 and having a swinging movement toward the interior of the shell to collapse the bulb therein, substantially as set forth.

MAURICE WIRTHS.

Witnesses:

FREDK. HAYNES,  
 GEORGE BARRY.