

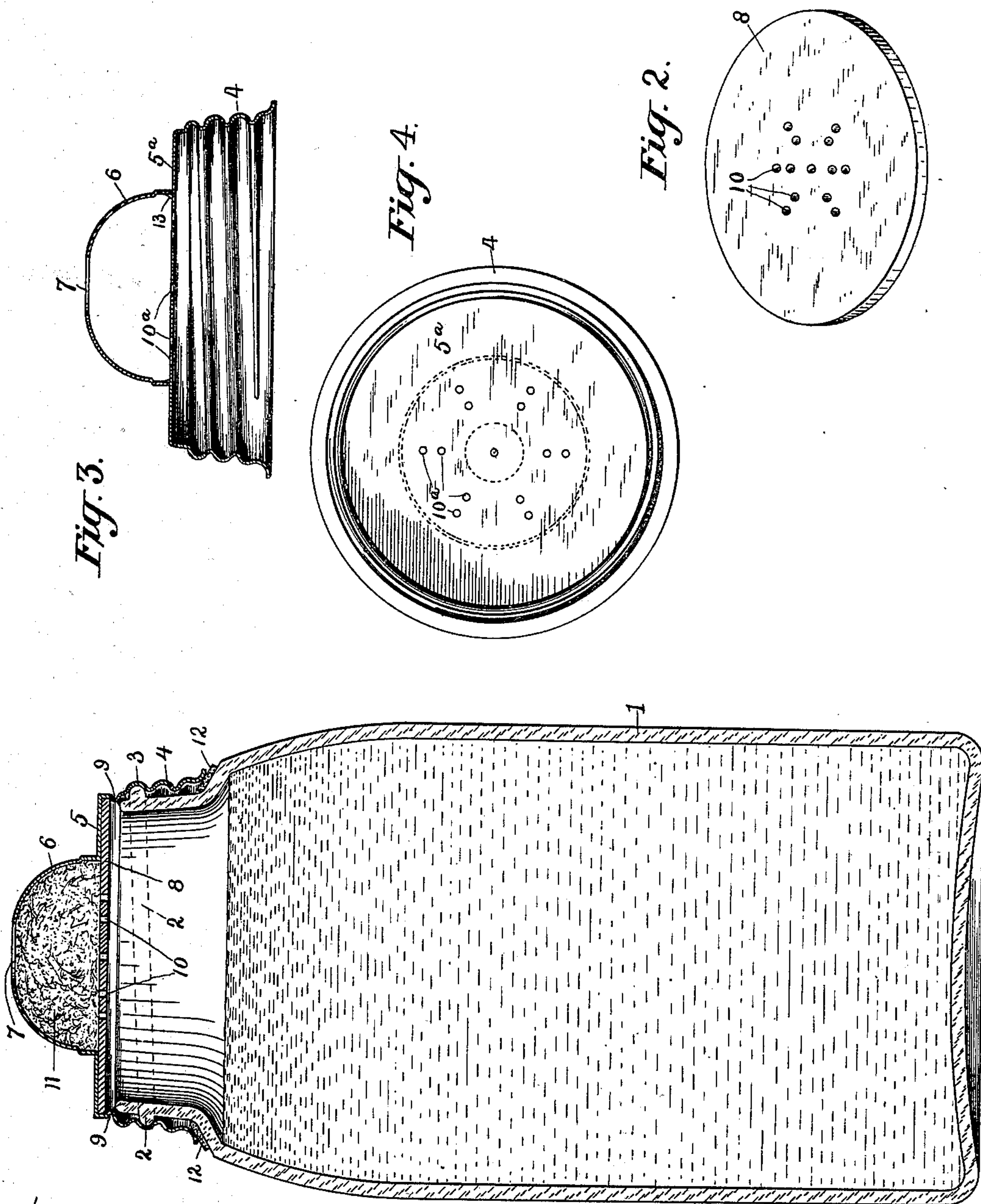
No. 672,692.

Patented Apr. 23, 1901.

A. R. BAILEY.  
AERATING CAP FOR JARS, &c.

(Application filed Aug. 11, 1898.)

(No Model.)



WITNESSES:

*K. V. Donovan*  
*H. H. Stahl*

*Fig. 1*

INVENTOR

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ATTORNEY



# UNITED STATES PATENT OFFICE.

ARTHUR R. BAILEY, OF BROOKLYN, NEW YORK.

## AERATING-CAP FOR JARS, &c.

SPECIFICATION forming part of Letters Patent No. 672,692, dated April 23, 1901.

Application filed August 11, 1898. Serial No. 688,338. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR R. BAILEY, a citizen of the United States, and a resident of the borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Aerating-Caps for Jars, Bottles, &c., of which the following is a specification.

10 The main objects of my invention are to provide a ventilating cap or cover for jars, bottles, or the like and also one which shall at the same time be capable of excluding germs and bacteria from the interior of the vessel; and to these main ends my invention consists in the several features of construction and combinations of devices hereinafter more fully described, and particularly pointed out in the appended claims.

20 In the accompanying drawings, Figure 1 is a longitudinal vertical section of a jar or bottle provided with a cap embodying my improvements. Fig. 2 is a detailed perspective view of the perforated disk shown at Fig. 1. Fig. 3 is a central vertical section of a cap embodying my improvements carried out in another form, and Fig. 4 is a bottom plan view of the construction shown at Fig. 3.

Referring to Figs. 1 and 2, 1 designates a bottle or jar of the ordinary "Mason" type, having on its neck an exteriorly-formed screw-thread 2, of any desired number of turns, to receive the interiorly-threaded portion 3 of the flange 4 of the cap. In addition to the threaded flange 4 the cap is provided with a horizontal top 5, annular in form, so as to provide a large central opening, and with a raised dome or bulb 6, having a central opening 7 at its top. The threaded flange 4, the annular top 5, and the dome 6 are preferably all made of a single piece of sheet metal. Beneath the top 5 is arranged a disk or plate 8, which is preferably held in place by spinning or grooving the metal of the flange 4, so as to provide a circular seat 9 for said plate. Said plate is perforated, as indicated at 10, which perforations may be of any desired number and may be variously located. If desired, they may be arranged at the edge of the plate, or the plate may be so loosely fitted or held in posi-

tion as to provide an air-space or air-spaces between the interior of the vessel and the surmounted dome 6.

The perforated plate is preferably made of porcelain, glass, or other vitreous material, and that portion of the plate beneath the dome is utilized as a support for a bunch, wad, or tuft of absorbent cotton or other suitable filtering material 11, which is stuffed down into the interior of the dome through the top opening 7 thereof. The cotton or air-filtering material 11, however, need not entirely fill the space encompassed by the dome, as illustrated, it being sufficient if said material be of such size or quantity as to fully or completely cover the opening 7, so that no air may enter through said opening without striking upon and passing through said cotton or filtering material. Upon the shoulder of the bottle is arranged a rubber ring 12, upon which the cap as a whole is screwed down tight, so as to effectually exclude the entrance of air at this locality.

The bottle or jar may of course be used to contain any desired liquid or solid. I have indicated the vessel as containing water, since my novel cap has been made more particularly for use in connection with bottles or jars containing distilled water, where it is very desirable that the bottled water should be aerated, and yet at the same time be kept free from bacteria. It is well known that air will pass through loosely-packed absorbent cotton, while at the same time the cotton will arrest any dust, bacteria, or other matter with which the air may be laden, and hence the closed jar or bottle may be constantly ventilating or receiving pure air and without danger of the incoming air carrying with it germs or other obnoxious matter, thus maintaining the distilled water or other contents in the bottle in a pure state for a much longer period of time than would be possible without the provision of some means for supplying the same with fresh oxygen. The absorbent cotton or filtering material may be changed as often as may be desired or as occasion may require.

It will be understood, of course, that the vented air and the fresh air pass through per-



forations in the plate 8, through the filtering material, and through the opening 7 at the mouth of the filtering-material receptacle.

Referring now more particularly to Figs. 3 and 4, the interiorly-threaded flange 4 has in this case a disk-like top 5<sup>a</sup>, that is perforated centrally, as at 10<sup>a</sup>, and to this top is attached, preferably by solder 13, the base of the dome 6, made of a separate piece, but having an aperture, as 7, at its mouth, as in Fig. 1. As will be observed in Figs. 3 and 4, the cap is unprovided with the separate porcelain top plate shown in Fig. 1, but in place thereof the metallic top extends entirely across the cap beneath the dome 6 and forms the support for the air-filtering material. The cap shown at Fig. 4 is adapted to be applied to the jar in the same manner as the cap shown in Fig. 1, and when so applied the space between the top of the cap proper and the opening in the dome or filtering-material holder may be filled with absorbent cotton or the like, as illustrated at Fig. 1.

It will be observed in both instances of my invention that means are provided for aerating the contents of the jar, and that the air

passing into the vessel must first strain through a suitable filtering substance or material.

What I claim as new, and desire to secure by Letters Patent, is—

1. A cap for jars, &c., having a screw-threaded flange, a perforated top plate, a perforated dome surmounting said plate, and an intermediate filling of filtering material within said dome and supported on said plate.

2. A cap for jars, &c., comprising in one piece a screw-threaded flange 4, an annular top 5 and a perforated filtering-material holder 7, and a separate top plate 8 having an air passage or passages communicating with said holder and attached to said cap below said holder, and supporting the filtering material.

Signed at the borough of Manhattan, in the city of New York, in the county of New York and State of New York, this 9th day of August, A. D. 1898.

ARTHUR R. BAILEY.

Witnesses:

PAUL ARMITAGE,  
K. V. DONOVAN.