Feb. 14, 1933. T. B. STEPHENSON 1,897,403

INHALING BOTTLE

Filed March 2, 1931

Fig. 3.

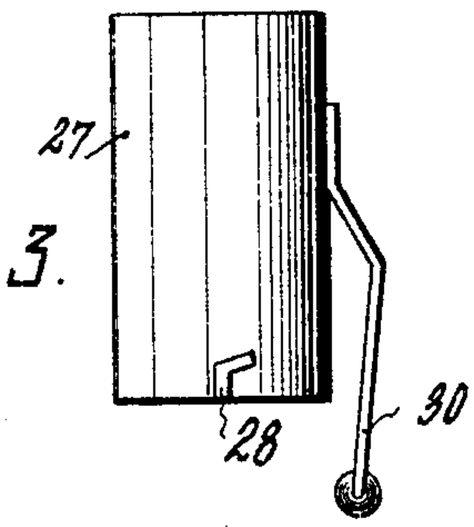


Fig. 1.

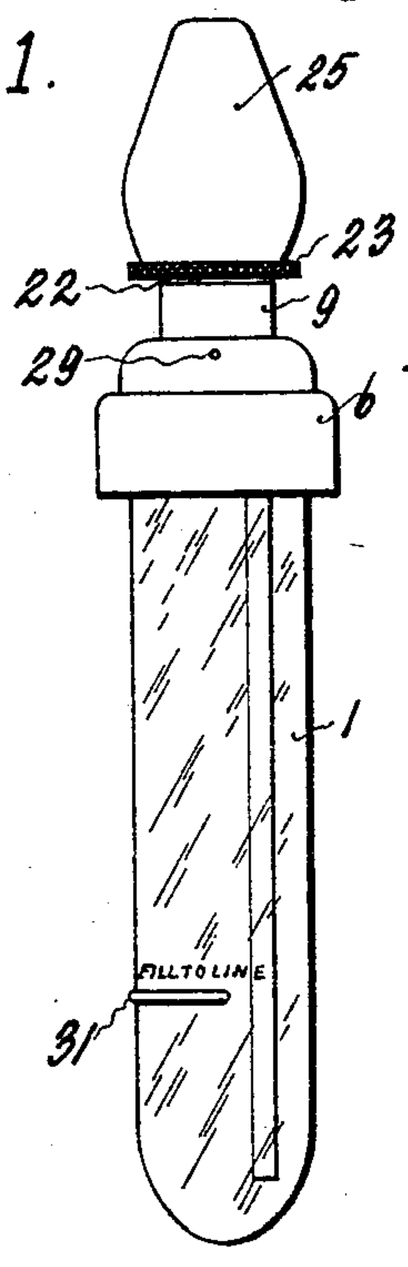


Fig. 4.

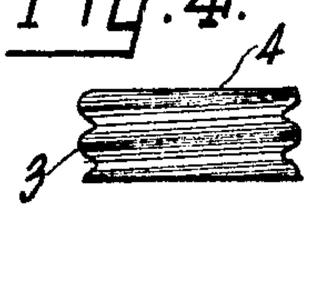


Fig. 5.

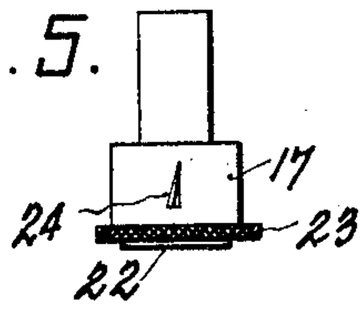
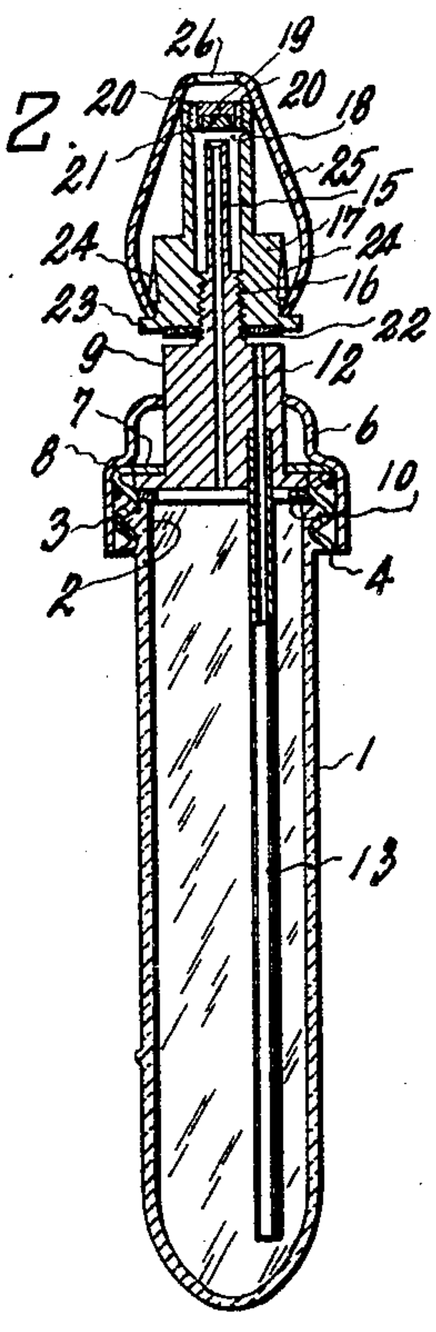


Fig. 2.



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UNITED STATES PATENT OFFICE

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INHALING BOTTLE

Application filed March 2, 1931. Serial No. 519,322.

This invention relates to aspirator or inhaling bottles of the type in which a quantity of liquid is vaporized for breathing through the nose or mouth in the treatment of nose and throat disorders.

It is an object of this invention to provide a bottle or container for the above purpose which shall be efficient in operation and so constructed as to secure economies in the manufacture of its parts and in their assembly. Other and further objects will be apparent from the following specification and claims.

In the accompanying drawing which illustrates one embodiment of the invention:

Fig. 1 is a side view showing the parts in inoperative position;

Fig. 2 is a vertical section showing the parts in operative position;

Fig. 3 is a side elevation of a cap for the bottle;

Fig. 4 is a detail view of a threaded element used in the assembly; and

Fig. 5 is a detail view of a portion of the inhaling head.

Referring to the drawing, 1 designates a container preferably formed of glass, the open end of which is threaded as at 2 for engagement with threads 3 formed in an annular member 4 comprising part of the bottle closure. Member 4 is soldered or otherwise secured in a collar 6 and is provided with a flange 7 engaging the outer face of a flange 8 formed on the lower edge of a cylindrical member 9. Member 4 is formed of relatively thin metal and may be stamped or pressed to shape. As will be clear from Fig. 2, as collar 6 is turned onto the threaded end 2 of the container, flange 7 engages flange 8 and draws cylindrical member 9 into tight engagement with the container, a washer 10 formed of fibre or the like being interposed between the edge of the container and flange 8 to render the connection fluid tight.

Cylindrical member 9 is provided with an eccentrically position duct 12 opening to the atmosphere on the upper face of the cylindrical member and communicating with a pipe 13 secured in member 9 and extending to a point adjacent the bottom of the container. Member 9 is provided with an upwardly extending portion, centrally bored, to form an outlet pipe 15 opening to the inner face of cylindrical member 9. Pipe 15 is threaded as at 16 to receive a head 17 provided with a chamber 18 into which the end of pipe 15 extends. The outer end of chamber 18 is fitted with a threaded plug 19 formed at its edges with ducts 20 and provided on its inner face with a sealing disc 21 of solder or other suitable material adapted, when the head 17 is turned down onto cylindrical member 9, to engage and seal the end of pipe 15. The bottom face of head 17 also carries an annular disc 22 formed of fibre, solder or other suitable material adapted to seal the opening 12 when the head 17 is in lower position. Head 17 is provided with a milled flange 23 to facilitate turning of the head to open and close pipe 15 and duct 12. Burrs 24 are struck out on opposite sides of head 17 and act to hold a pear-shaped shell 25 in position on the head, the shell being formed of relatively thin metal having sufficient resilience to be snapped over the burrs. Shell 25 is provided at its outer end with an aperture 26, communicating with ducts 20.

A cap 27 is adapted to fit over and enclose shell 25 when the device is not in use. Cap 27 is held in place by a bayonet slot 28 engaging a pin 29 secured to collar 6, and is provided with a clip 30 for holding the device in the pocket.

In operation the container is supplied with a suitable liquid to a depth preferably indicated by a ridge 31 molded on the container. With the parts in the position shown in Fig. 2 it will be evident that inhalation through aperture 26 will draw air through duct 12, pipe 13, the liquid in the container, pipe 15 and ducts 20. When not in use, head 17 is turned down tightly on threads 16 to seal the end of pipe 15 and duct 12, preventing escape of the liquid from the container.

What I claim is:

1. An aspirator bottle which comprises a liquid container having inlet and outlet pipes, a portion of the outlet pipe being extended

beyond the end of the container, both said pipes opening endwise of the container, and an inhaling head mounted on the extended portion of the outlet pipe for movement to and from sealing engagement with the outer openings of said pipes.

2. An inhaling bottle which comprises a liquid container having inlet and outlet pipes, a portion of the outlet pipe being extended beyond the end of the container, both said pipes opening endwise of the container, and an inhaling head threaded on the extended portion of the outlet pipe for movement to and from sealing engagement with the ends of the inlet and outlet pipes.

3. An inhaling bottle which comprises a liquid container having inlet and outlet pipes, a portion of the outlet pipe being extended beyond the end of the container, both said pipes opening endwise of the container, an inhaling head threaded axially on the extended portion of the outlet pipe and means carried by the head adapted to seal the inlet and outlet pipes in one position of the head on the outlet pipe.

4. An inhaling bottle which comprises a liquid container, a closure for the container, inlet and outlet pipes carried by the closure and opening endwise thereof, and an inhaling head threaded on the outlet pipe for movement to and from the closure, adapted when turned into tight engagement with the closure to seal the inlet and outlet pipes by endwise contact with said pipes.

5. An inhaling bottle which comprises a liquid container, a closure for the container including a cylindrical member, an inlet pipe extending from the cylindrical member to a point adjacent the bottom of the container and having an opening on the outer end face of the cylindrical member, an outlet pipe extending outwardly from the cylindrical member and having an opening on the inner face of the cylindrical member, and means threaded on the outlet pipe for movement toward and from the cylindrical member adapted when turned into tight engagement with the latter to seal the inlet and outlet pipes.

6. An inhaling bottle which comprises a liquid container, a closure for the container, an inlet pipe carried by the closure and opening endwise of and substantially at the outer surface of the closure, an outlet pipe carried by the closure and extending substantially beyond the outer surface thereof, an inhaling head screw threaded on the outlet pipe, the base of said head being adapted to engage the surface of the closure to seal the opening of the inlet pipe when the head is screwed down on the outlet pipe, and means carried by the head to simultaneously engage and seal the outer end of the outlet pipe.

7. An inhaling bottle which comprises a liquid container, a closure for the container, an inlet pipe carried by the closure and opening endwise of and substantially at the outer surface of the closure, an outlet pipe carried by the closure and extending substantially beyond the outer face thereof, an inhaling head screw threaded on the outlet pipe, the base of said head being adapted to engage the surface of the closure to seal the opening of the inlet pipe when the head is screwed down on the outlet pipe, and means carried by the head to simultaneously engage and seal the outer end of the outlet pipe, said means and the base of the head being provided with a covering of solder or the like on their sealing surfaces.

8. An inhaling bottle which comprises an elongated substantially cylindrical liquid container, a closure for the container, an eccentrically positioned inlet pipe carried by the closure and opening endwise of and substantially at the outer face of the closure, an axially positioned outlet pipe carried by the closure and extending substantially beyond the outer surface thereof, an inhaling head screw threaded on the outlet pipe, the base of said head being of a diameter to overhang the opening of the inlet pipe, and a member carried by the head having a central portion in alignment with the end of the outlet pipe and provided with at least one outlet passage adjacent its edge, the base of said head and the central portion of said member being adapted to engage and seal the inlet and outlet pipes respectively when the head is screwed down on the outlet pipe.

9. An inhaling bottle which comprises a liquid container, a closure for the container, inlet and outlet pipes carried by the closure, an inhaling head threaded on the outlet pipe, an enlarged bore formed in the head in which the outer end of the outlet pipe is positioned, a plug threaded into the outer end of the bore to form a chamber, at least one eccentric passage in the plug connecting the interior of the chamber with the outside of the head, and means carried by the plug, and positioned by the latter, to engage and seal the outer end of the outlet pipe in one position of the head on the outlet pipe.

10. An inhaling bottle which comprises a liquid container, a closure for the container, inlet and outlet pipes carried by the closure, an inhaling head threaded on the outlet pipe, an enlarged bore formed in the head in which the outer end of the outlet pipe is positioned, a plug threaded into the outer end of the bore to form a chamber, at least one eccentric passage in the plug connecting the interior of the chamber with the outside of the head, means carried by the plug, and positioned by the latter to engage and seal the outer end of the outlet pipe in one position of the head on the outlet pipe and a shell fitted over said head to give a generally pear-shaped contour to the head.

11. An inhaling bottle which comprises a liquid container, a closure for the container, inlet and outlet pipes carried by the closure, an inhaling head threaded on the outlet pipe, means carried on the base of the head to seal the outer end of the inlet pipe when the head is screwed down on the outlet pipe, an enlarged bore formed in the head in which the outer end of the outlet pipe is positioned, a plug threaded into the outer end of the bore to form a chamber, at least one eccentric passage in the plug connecting the interior of the chamber with the outside of the head, and means carried by the plug, and positioned by the latter, to engage and seal the outer end of the outlet pipe when the head is screwed down on the outlet pipe into sealing engagement with the inlet pipe.

In testimony whereof I have affixed my signature.

THOMAS B. STEPHENSON.