

**Improvements in apparatus for applying medicated and other powders /
[William John Keefer].**

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Publication/Creation

London : Printed for Her Majesty's Stationery Office by Darling and Son, Ltd,
1889.

Persistent URL

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Date of Application, 3rd July, 1889—Accepted, 3rd Aug., 1889

COMPLETE SPECIFICATION.

Improvements in Apparatus for Applying Medicated and other Powders.

I, WILLIAM JOHN KEEFE, residing at Number 14 East Brookline Street, in the city of Boston, County of Suffolk, and State of Massachusetts, United States of America, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

My invention has for its object to furnish a simple and effective receptacle for containing, discharging, and conveying to the seat of disease, antiseptic or medicated powder for the cure of Catarrh, Bronchitis, Asthma, and all diseases of the air passages of the head and throat, which apparatus can also be used for discharging other descriptions of powder employed for other purposes. To this end my invention consists in a hollow elastic bulb or receptacle adapted to contain the powder to be discharged, said bulb or receptacle being partially covered and protected by a shield, through the top of which projects an outlet tube or nozzle provided at its outer end with a removable perforated cap within which is placed a strainer through which the medicated powder is forcibly ejected by the compression of the elastic bulb by the hand, whereby the powder is effectively discharged into the air in such manner that it can be inhaled or drawn in or otherwise reach, with absolute certainty, the seat of the disease.

My invention also consists in the combination with the said hollow elastic powder-containing bulb and its outlet tube, of a removable auxiliary discharge tube or nozzle provided with a strainer and adapted to be substituted for the perforated cap; said auxiliary tube being of the proper shape and of sufficient length to reach the posterior nasal cavities as is often necessary in order to reach the seat of disease.

In the accompanying drawings,—

Figure 1 is an elevation of my improved receptacle for containing, discharging, and applying medicated and other powders for the cure of diseases, &c.

Fig. 2 is a plan of the same.

Fig. 3 is a vertical section of the same.

Fig. 4 is a vertical section illustrating a modification of my invention.

In the drawings A represents a hollow elastic bulb or receptacle, preferably composed of rubber, and of a convenient size to be grasped by the hand and held in close proximity to the nose or mouth of the person to be treated.

Over the upper half of the bulb A is fitted a cup-shaped or concavo-convex metallic shield B which covers and protects a large portion of the said upper-half of the bulb, and serves as a backing or stiffener for the same while the remainder or lower half of the bulb is being compressed by the hand; the shield affording a solid rest for the fingers while the pressure of the thumb is being exerted upon the lower portion of the bulb to compress the same.

At the upper end of the shield B is formed a threaded aperture *a*, through which projects a short outlet tube *b* having an external thread fitting the thread of the aperture *a*, and at the lower end of the tube *b* is a flange *c* which is forced through a small aperture in the top of the rubber bulb so as to lie on the outside of the same and co-operate with the shield, so that when the tube *b* is tightly screwed up, that portion of the rubber bulb between the flange and the shield will be tightly clamped between them and the parts all held firmly and securely together as required. At the upper end of the outlet tube *b* is formed a screw thread over which fits a perforated cap D within which is placed a strainer *f*, preferably composed of fine fabric, which is held tightly in place on the top of the outlet tube when the cap is screwed down thereon.

[Price 6d.]

Keefe's Improvements in Apparatus for Applying Medicated and other Powders.

The antiseptic or other medicated powder to be used, is introduced through the open end of the tube *b* when the cap is removed, and as soon as the latter is replaced the apparatus is ready for use by holding it close to the nose and mouth and compressing the bulb with the hand as described, which causes the fine medicated powder to be forcibly ejected through the strainer *f* into the air, when it can be easily inhaled and thus conveyed in a convenient manner to the seat of the disease, no powder being liberated or caused to pass into the air except from the end of the nozzle or discharge tube, whereby the outside of the powder-containing receptacle is kept in a clean and neat condition to be held in the hand.

When it is desired to reach the posterior nasal cavities and apply the antiseptic powder directly thereto, I remove the perforated cap *D* with its strainer *f*, and substitute therefor an elongated tube *G*, Fig. 4, which may be straight or bent as required, and is adapted to be screwed onto the threaded upper end of the short tube *b*; said tube being provided with a strainer similar to that *f* of the cap *D*.

The nozzle or discharge end of the tube *G* is of suitable size and shape to adapt it for the purpose for which it is to be used.

Having now particularly described and ascertained the nature of the said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. A hollow elastic powder-containing bulb or receptacle *A* provided with an outlet or discharge tube *b* having at its outer end a removable perforated cap *D* provided with a strainer *f* through which the powder is discharged by the compression of the bulb, substantially as and for the purpose set forth.

2. In an apparatus for discharging medicated or other powder, the combination with a hollow elastic powder-containing bulb or receptacle having an outlet or discharge tube, of a rigid protecting shield or cover *B* adapted to closely fit over the same and forming a backing or stiffener for a portion of the said bulb while the remaining portion is being compressed by the hand to eject the powder contained therein through the outlet or discharge tube, substantially as described.

3. The hollow elastic powder-containing bulb or receptacle *A* provided on its exterior with a rigid protecting shield or cover *B*, in combination with the outlet tube *b* projecting through and turning within a threaded aperture in said shield, and having at its upper end a removable perforated cap *D* provided with a strainer *f*; said tube having at its lower end a flange *c* between which and the shield *B*, the bulb is clamped, all operating substantially in the manner and for the purpose set forth.

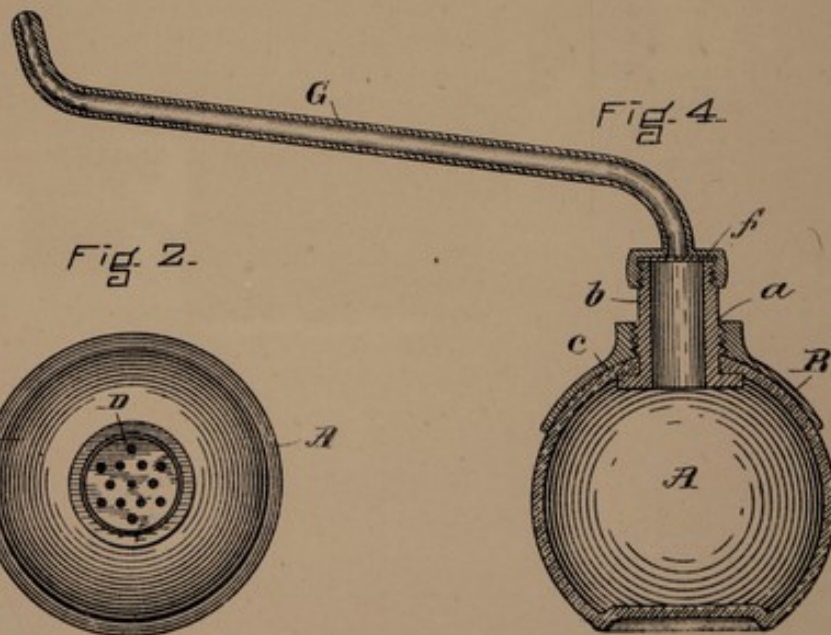
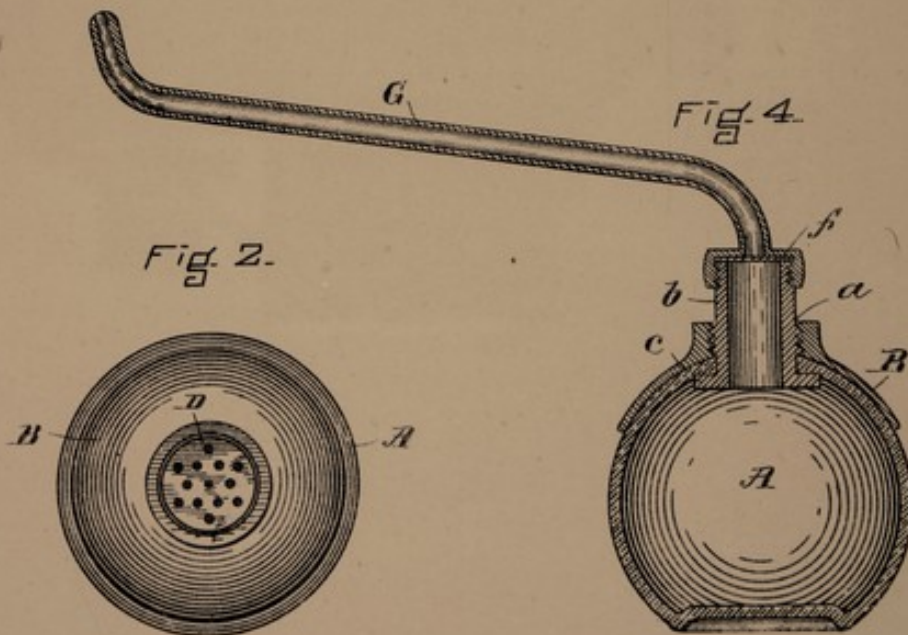
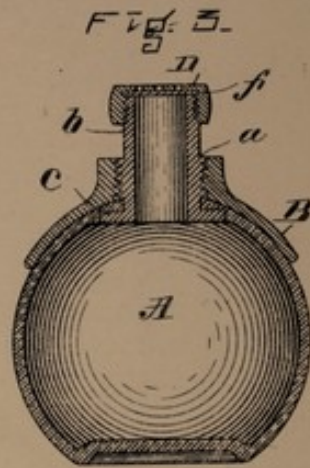
4. In an apparatus for discharging medicated or other powder, the combination with the hollow elastic powder-containing bulb *A* and its outlet tube *b*, and protecting shield or cover *B*, of the elongated removable tube *G* provided with a strainer and a nozzle, and adapted to be secured to the end of the outlet tube *b*, substantially as and for the purpose set forth.

Dated this 3rd day of July 1889.

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London: Printed for Her Majesty's Stationery Office, by Darling & Son Ltd.—1889.





[This Drawing is a reproduction of the Original on a reduced scale.]

