Oct. 7, 1952 S. A. AKINS 2,612,894

NASAL CLEANSING DEVICE

Filed May 3, 1948

FIG. 1.

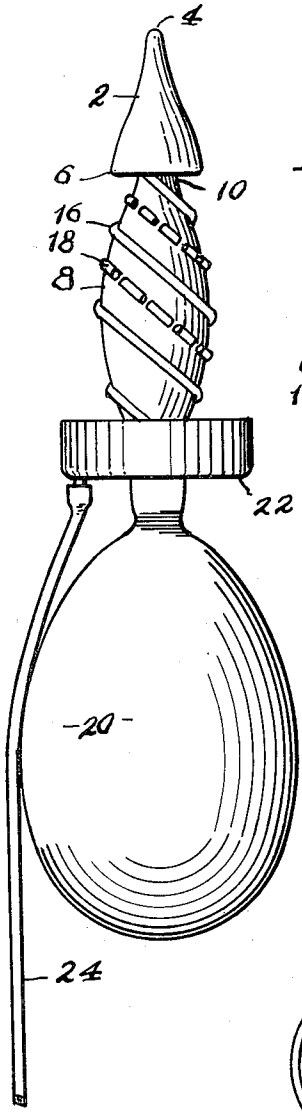


FIG. 4.

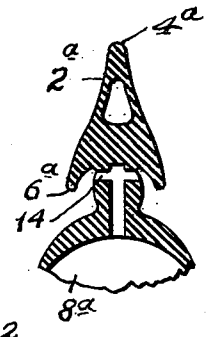


FIG. 2.

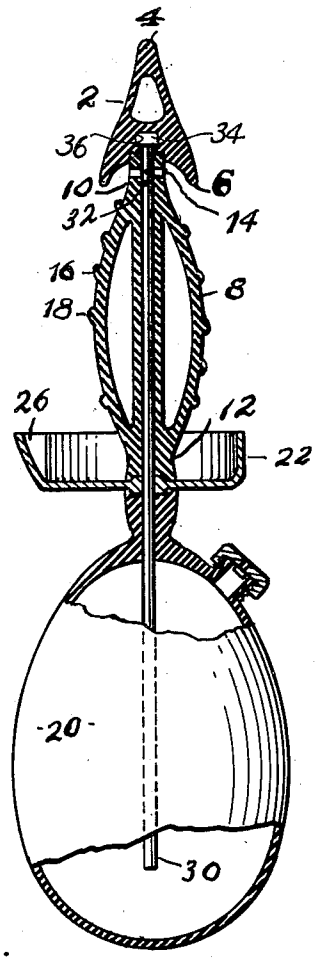
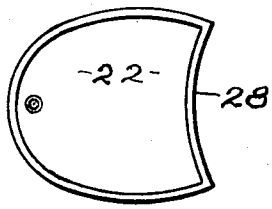


FIG. 3.



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NASAL CLEANSING DEVICE

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5 Claims. (Cl. 128—250)

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My invention relates to devices for cleansing the nasal cavity and one object of the invention is to provide a device of this character whereby water or other liquid may be injected into the nasal cavity for the purpose of softening the foreign matter therein and thereby facilitate the removal thereof.

Another object is to provide a device of this character having a flexible pilot at its upper end for sealing the upper portion of the nasal cavity and thereby preventing the liquid from flowing through the duct leading from the nasal cavity to the oral cavity.

A further object is to provide a device of this character with a cleansing member having one or more discharge ports through which the liquid is forced into the nasal cavity, said cleansing member also having peripheral elements whereby the softened foreign matter is dislodged and removed from the nasal cavity by manually rotating said cleansing member.

Another object is to provide a device of this character with a receptacle for catching the fluid and foreign matter as they flow from the nasal cavity.

A further object is to provide a device of this character which is sufficiently flexible to prevent injury to the delicate membranes, which can be made in different sizes for both infant and adult use, and which is efficient in practice.

In order that the invention may be fully understood, reference will now be had to the accompanying drawing, in which:

Fig. 1 is an enlarged side elevation of the device.

Fig. 2 is a vertical longitudinal section of the device.

Fig. 3 is a plan view of the receptacle.

Fig. 4 is a modification of the upper portion of the device.

Referring in detail to the different parts, 2 designates the pilot which tapers towards its upper end 4 and terminates at its lower end in a skirt 6. The pilot 2 may consist of rubber, plastic, or other suitable flexible material and is preferably of hollow formation as disclosed by Fig. 2.

Arranged below the pilot 2 is a nasal cleansing member 8, preferably of circular form and tapering towards its upper and lower ends 10 and 12, respectively, to facilitate its entrance and removal from the nasal cavity. The upper end 10 of the cleansing member extends into the skirt 6 and is provided with one or more outlet ports 14 through which the liquid is discharged into the nasal cavity. The cleansing member 8 is preferably of hollow formation as shown by Fig. 2 to render it sufficiently flexible to conform to the shape of the nasal cavity, and it consists preferably of the same material as the pilot 2. Preferably, one or more spiral elements 16 are formed on the outer surface of the cleansing member as shown by Fig. 1, and alternately arranged with respective individual peripheral elements 18 to facilitate removal of the foreign matter from the nasal cavity.

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Arranged below the nasal cleansing member 8 is a flexible bulb 20 adapted to hold a liquid which is sucked into the bulb through the inlet ports 14 from a supply when the bulb is allowed to expand after being manually compressed.

A receptacle 22 is interposed between the lower end of the nasal cleansing member 8 and the upper reduced end of the bulb 20. Said receptacle may be emptied through a flexible drainage tube 24, or spout 26. The rear end 28 of the receptacle is of concave formation as shown by Fig. 3, to conform to the shape of the upper lip against which it is pressed when in use.

The pilot 2, the nasal cleansing member 8, the receptacle 22 and the bulb 20 are held in assembly by means of an axially disposed tube 30 extending upwardly from the lower portion of the bulb into the pilot 2. The tube 30 is provided at its upper portion with one or more outlet ports 32 adjacent to the ports 14. Cleansing member 8 and bulb 20 are fixed non-rotatively on the tube, and receptacle 22 is swivelled thereon. At its upper end tube 30 is provided with an enlarged head 34 which extends into a recess 36 formed in pilot 2, whereby said pilot may rotate relative to said tube.

In practice, the bulb 20 is supplied with a liquid which, if desired, may be medicated for treatment of nasal diseases. The pilot 2 and the nasal cleansing member 8 are inserted in a nostril, and the concaved rear end 28 of the receptacle 22 is pressed against the upper lip with one hand while the other hand operates the bulb to force the liquid upward through the tube 30, from which it is discharged through the ports 32 and 14, respectively, against the inner surface of the skirt from which it flows into the nostril and softens the foreign matter, which is then removed by the spiral elements 16 and individual elements 18 as the cleansing member 8 is rotated manually by turning bulb 20. The cleansing member 8 and bulb 20 are fixed to tube 30, whereby the cleansing member is caused to turn with the bulb. The liquid and foreign matter flow downward from the nostril into the receptacle

22 and escape through the drainage tube 24, the lower end of which may be placed in a basin or other receptacle. If the receptacle 22 is provided with the discharge spout 26 instead of the tube 24, the liquid may be discharged from the spout into the basin by inclining the head over the latter to prevent wetting the garments of the user. After one nostril has thus been cleansed the other nostril is cleansed in a similar manner.

The pilot 2 may be fixed upon the tube 30 to rotate therewith during the operation of the device, or it may be swiveled, as shown, upon the tube so that it may be held stationary by frictional contact with the inner surface of the nasal cavity, as the cleansing member 8 and the bulb 20 are rotated. The receptacle 22 is swiveled upon the tube 30 so that it may be held stationary with one hand, while the bulb 20 is being rotated as above stated.

As disclosed by Fig. 4 the pilot 2*a* having point 4*a* and skirt 6*a*, the cleaning member 8*a*, and the bulb 20 (not shown), may be molded in one piece and the tube 30 may be dispensed with if desired. The receptacle 22 would then be applied by connecting it rotatively to the reduced juncture of the cleaning member and the bulb.

From the foregoing description it is apparent that I have provided an efficient nasal cleansing device, and while I have shown two forms of the device it is apparent that other forms, falling within the scope of the invention as claimed, may be provided.

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

1. A nasal cleaning device comprising an imperforate pilot provided at its lower portion with a flexible skirt, a cleaning member tapered toward each end and arranged below said pilot provided with a plurality of discharge ports within said skirt, and means communicating with said cleaning member and adapted to force a liquid through said discharge ports and against the inner surface of the skirt.

2. A nasal cleaning device comprising a pilot, a cleaning member arranged below said pilot and provided with discharge ports, a plurality of spiral elements extending around the outer surface of said cleaning member, a plurality of spaced individual elements on the cleaning member alternately arranged with respect to the spiral members, and means connected to the cleaning member and adapted to force a liquid through said discharge ports.

3. A nasal cleaning device comprising an upwardly tapered flexible pilot, a cleaning member arranged below said pilot and provided with discharge ports, means communicating with said cleaning member and adapted to force a liquid through said discharge ports, a receptacle interposed between the cleaning member and said means for forcing a liquid through the discharge ports, and means for holding the aforementioned parts in assembly and for conducting the liquid to the discharge ports.

4. A nasal cleaning device comprising a tube, an imperforate, substantially conical pilot of flexible material carried rotatably on one end of said tube, a hollow cleaning member carried non-rotatively on said tube adjacent said pilot, said cleaning member being adapted to receive liquid through said tube and having discharge openings adjacent said pilot, a receptacle carried rotatively on said tube at the opposite end of said cleaning member and opening toward said pilot, means for rotating said tube and cleaning member independently of said pilot and receptacle, and means for forcing liquid through said tube and through the discharge openings of said cleaning member.

5. A nasal cleaning device comprising a tube having apertures formed through the walls thereof adjacent the upper end thereof, an imperforate, substantially conical pilot of flexible material carried rotatably on the upper end of said tube, said pilot having a depending circular skirt at its lower end, a hollow cleaning member carried non-rotatively on said tube beneath said pilot, said cleaning member having discharge outlets formed therein within said skirt and in registering relationship with the holes in said tube, a receptacle carried rotatably on said tube beneath said cleaning member and opening upwardly and a compressible bulb fixed non-rotatively on and encompassing the lower end portion of said tube said bulb being adapted to force liquid contained therein through said tube and outwardly through said discharge outlets.

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