Nov. 23, 1926. 1,607,726

A. DE SUSZKO

NASAL SYRINGE

Filed July 19, 1926

Fig. 1.

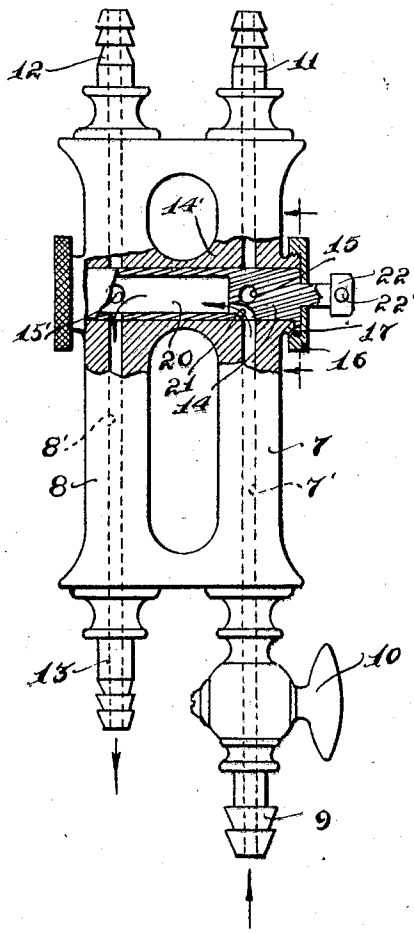


Fig. 2.

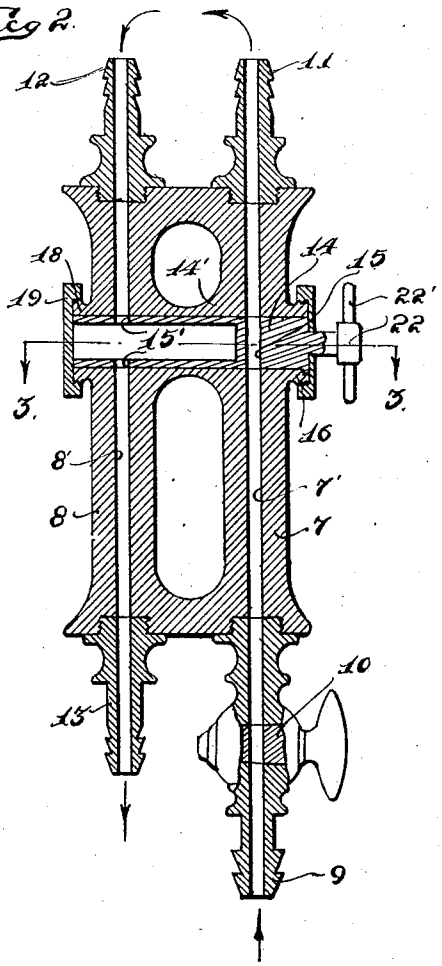


Fig. 3.

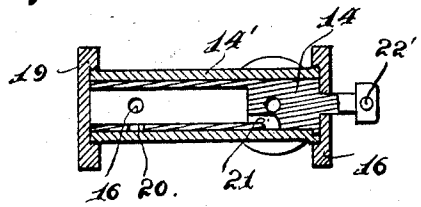
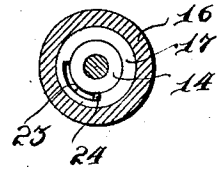


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALEXANDER DE SUSZKO, OF HAMTRAMCK, MICHIGAN.

NASAL SYRINGE.

Application filed July 19, 1923. Serial No. 123,413.

My invention relates to a new and useful improvement in a nasal syringe, and particularly that type in which a siphon draining is effected.

In this type of nasal syringe an inlet member is introduced into one of the nostrils and an outlet member introduced into the other nostril, so that the cleansing liquid which enters one nostril may be drained through the drain tube or outlet from the other nostril. In operating such a syringe it is desirable that the drain be effective from the beginning of the introduction of the cleansing liquid into the nostril to prevent an overflowing of the nasal cavity, the Eustachian tubes and also to prevent the deviation of the cleansing fluid into the throat cavity.

The present invention has, as its object, the provision of a device in which these advantages may be obtained as well as the avoidance of disadvantages of other devices which have been adopted for this purpose.

It is another object of the invention to provide a device, whereby a condition is set up in the outlet nostril which will encourage and facilitate draining of the nostril so as to prevent clogging, etc.

Another object of the invention is the provision of a device in which a preinduced siphonage is effected in the outlet nostril just preliminarily to the entry of the cleansing fluid into the inlet nostril.

Other objects will appear hereinafter.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

The invention will be best understood by a reference to the accompanying drawings which form a part of this specification and in which,

Fig. 1 is a side elevational view showing a part broken away and in section.

Fig. 2 is a central longitudinal sectional view of the invention.

Fig. 3 is a sectional view taken on substantially line 3—3 of Fig. 2.

Fig. 4 is a sectional view taken on substantially line 4—4 of Fig. 1.

In the invention I provide a frame work which may be termed the main body, and which comprises a pair of tube forming members 7 and 8, having central passages 7′ and 8′ formed therein respectively. A nipple 9 is attached to the lower end of the tube forming members 7 and provided with a stop cock 10, the nipple 9 serving as a means for attaching a hose or other similar conduit which may be connected to a water supply under pressure. A stop cock 10 is mounted in the nipple forming member 9 for controlling the flow of water through the passage 7′. A nipple 11 is mounted on the other end of the tube forming member 7 for the reception of a suitable element for insertion into the nostril of a patient. A nipple 12 is fastened to the end of the tube forming member 8 and also adapted for the reception of a nostril entering member. Attached to the lower end of the tube forming member 8 is a nipple 13, to which may be attached one end of a suitable conduit for conducting the drain to a desired location. Mounted in the frame work is a barrel 14, in which is formed a diametrically extending passage 15 adapted upon a turning of the barrel 14 in one direction, for registering with the bore of the tube forming member 7, thus permitting the passage of the liquid from the stop cock 10 through the bore 7′. This barrel is retained in position by means of a disc 16 which is threaded on a shoulder 17 formed on the frame, a similar disc 19 being threaded on a shoulder 18. Formed in the barrel 14, adjacent one end so as to register with the bore 8′, when the barrel 14 is turned to a predetermined position, is an opening 20, which communicates with a passage 21 formed in the barrel 14, this passage 21 communicating with the bore 7′ when the opening 20 is in communication with the bore 8′.

The structure is such that as the cleansing fluid is introduced under pressure through the bore 7′, it passes through the barrel 14, and out through the outlet nipple 13. Formed in the barrel 14 are openings 15′ which register with each other diametrically of the barrel 14, and register with the bore 8′ when the opening 15 is in registration with the bore 7′. A knob 22, which is mounted upon the barrel 14 is provided with a cross bar 22′, whereby the barrel 14 may be rotated in the frame in which mounted so as to cause the liquid passing upwardly through the nipple 9 to pass downwardly through the bore 8′ or outwardly through the inlet nipple 11.

In operation the device will be turned to the position shown in Fig. 1 so that the water or other cleansing liquid introduced into the nipple 9, would be directed through

the bore 7′ to the barrel 14, and then through the barrel 14 outwardly through the bore 8′. After a flow of the liquid had been established through the bore 8′ in this manner, the barrel 14 would be turned to permit the cleansing liquid to pass into the nostril through the inlet nipple 11, the liquid trapped in the bore 8′ flowing outwardly and setting up in the outlet nostril a partial vacuum so that a siphonage is effected, and this induced siphonage is effected preliminarily to the actual draining of the cleaning fluid from the nostril, so that as the cleansing liquid is flowing into the inlet nostril there is already induced in the outlet nostril a siphonage. This assures a proper draining of the nasal cavities and permits a more effective cleansing of these cavities for the purposes desired, thus overcoming the difficulties and disadvantages enumerated above.

While I have illustrated and described the preferred form of structure, I do not wish to limit myself to the precise form of structure shown, but desire to avail myself of such variations and modifications as may come within the scope of the appended claims.

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

1. A nasal syringe of the class described comprising a delivery conduit for delivering fluid to a nasal cavity; a draining conduit for draining from the other nasal cavity the fluid delivered to said first mentioned nasal cavity; and means for directing the flow of said fluid through a portion of said draining conduit in the direction of flow of draining preliminarily to the delivery of said fluid to said first mentioned nasal cavity for effecting an induced draining from said second mentioned nasal cavity of the fluid delivered to said first mentioned nasal cavity.

2. A nasal syringe of the class described comprising a frame having a delivery conduit from therein for conducting a fluid to a nasal cavity; an outlet conduit formed on said frame for draining from the other nasal cavity the fluid delivered to said first mentioned nasal cavity; and manually operable means on said frame for closing communication between said conduits and said nasal cavity and opening communication of said conduits directly with each other for causing the fluid delivered to said delivery conduit to flow outwardly through said drain conduit in the direction of flow of drain for effecting an induced drain through said other nasal cavity upon delivery of fluid to said first mentioned nasal cavity.

3. A nasal syringe of the class described comprising a delivery conduit; a drain conduit; and means operable at will for directing the flow of fluid from said delivery conduit outwardly through said drain conduit.

4. A nasal syringe of the class described comprising a delivery conduit; an outlet conduit; and a valve interposed in said conduits for establishing communication with each other for directing the flow of fluid from said delivery conduit outwardly through said outlet conduit.

5. A nasal syringe of the class described comprising a frame having a delivery passage formed at one side thereof and an outlet passage formed at the other side; a bore formed in said frame extending transversely of said passages and projecting through the same; a cylindrical valve mounted in said bore rotatably, said valve being hollow adjacent one end, said hollow end having a pair of aligning openings formed therein, the other end of said valve being solid and provided with an opening formed therein axially parallel to said openings formed in the hollow end, said hollow end having a third opening formed therein adapted to register with the drain passage upon movement of said valve into position for bringing said first mentioned openings into non-registration with said drain passage, said solid end of said valve having a passage formed therein for establishing communication through said third opening of said delivery passage with said drain passage; a boss on one side of said frame; a cap threaded on said boss for limiting movement of said valve axially in one direction; a boss on the opposite side of said frame; and a cap threaded on said boss for limiting axial movement of said valve in the opposite direction.

In testimony whereof I have signed the foregoing.

ALEXANDER DE SUSZKO.