

March 21, 1939.

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2,151,227

NASAL INSERT

Filed Feb. 12, 1937

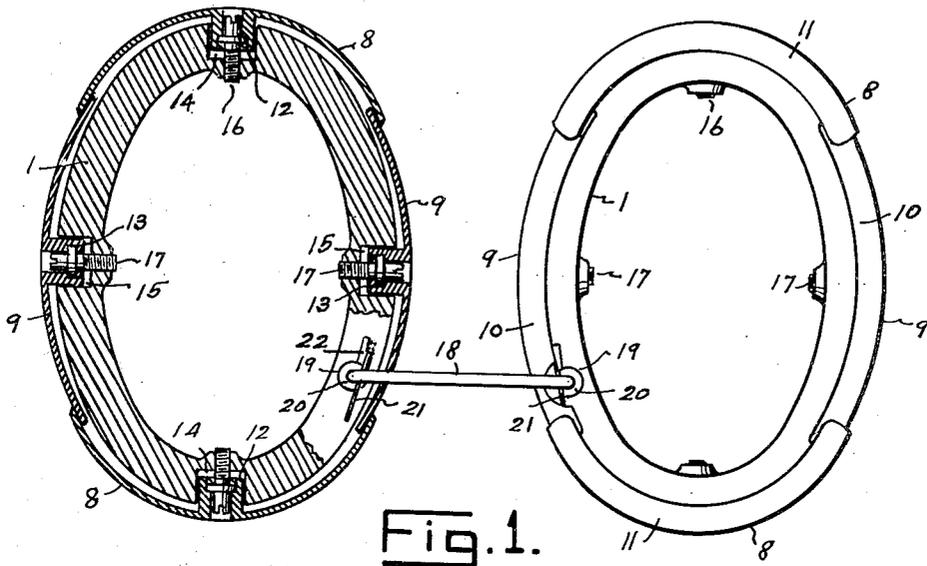


Fig. 1.

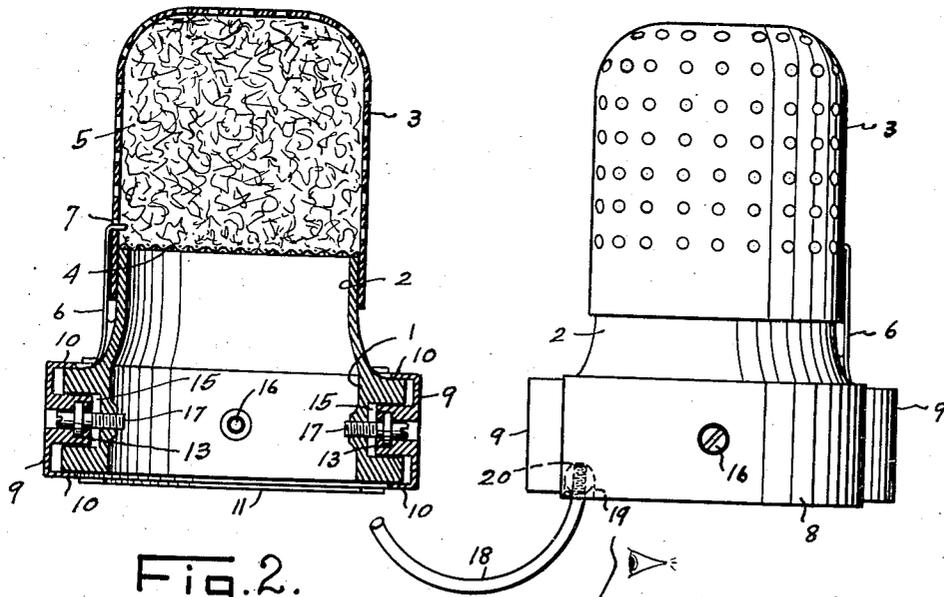


Fig. 2.

Fig. 4.

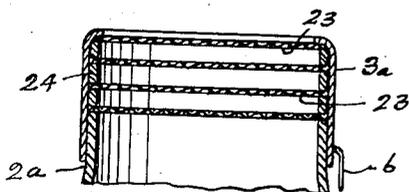


Fig. 3.

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# UNITED STATES PATENT OFFICE

2,151,227

## NASAL INSERT

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Application February 12, 1937, Serial No. 125,383

5 Claims. (Cl. 128—148)

This invention relates to a nasal insert.

It is an object of the invention to provide a nasal insert of the character described specially designed for use in the treatment of hay fever and other similar nasal irritations.

It is another object of the invention to provide an appliance of the character described whereby irritating particles, or matter in the air may be arrested and prevented from reaching the nasal membranes and the cause of the irritation thus removed and by means of which medicinal treatment may be applied to the affected membranes.

It is another object of the invention to provide nasal inserts that may be readily adjusted as required to fit the peculiar contours of the nasal passageways of the various patients to which the appliance is to be fitted.

It is a further object of the invention to provide an appliance of the character described comprising nasal inserts so attached to the connecting yoke that said inserts will automatically adjust themselves so as to nicely fit into the nasal passageways of the patient. If the inserts are not of the proper contour to fit the nasal passageways, or if they are not readily adjustable relative to each other to assume a position in accordance with the natural shape of the passageways, undue pressure will be exerted against certain parts of the passageways causing irritation and discomfort.

It is a prime object of this invention to provide an appliance of the character described wherein the inserts may be properly adjusted as to size and shape, and relative to each other to avoid undue pressure on the nasal passageways and consequently to avoid irritation.

With the above and other objects in view the invention has particular relation to certain novel features of construction, arrangement of parts and use, an example of which is given in this specification and illustrated in the accompanying drawing, wherein:—

Figure 1 shows an end view of the appliance showing one of the inserts in section.

Figure 2 shows a side view thereof showing one of the inserts in section.

Figure 3 shows a fragmentary sectional view showing a modification of the insert, and

Figure 4 shows a diagrammatic view showing an insert as applied in use.

Referring now more particularly to the drawing wherein like numerals of reference designate similar parts in each of the figures, the numerals 1, 1 refer to the frames which are elliptical in

contour and which are of a size and shape to be inserted into the nostrils of the patient and which approximately conform to the contour of the nostrils. These frames have the inwardly extended sleeve-like extensions 2, 2 over which the foraminated caps 3, 3 are fitted. Across the inner ends of the extensions 2 are the foraminated partitions 4, preferably formed of fabric and which are secured to said extensions.

Within the caps 3 there is a suitable loose material 5 such as loose wool or loose cotton which acts not only as a filter to exclude irritating matter but which may contain a suitable medicament by the use of which affected nasal membranes may be treated.

The caps may be secured in place in any suitable manner as by means of the spring dog 6 secured at one end to the corresponding frames and whose other ends are inwardly turned, through the openings 7 of the caps 3. These dogs securely hold the caps in place but are retractable to permit removal of the caps for renewal of the loose material 5.

Completely surrounding the frames 1 are the end and side shields 8, 8 and 9, 9. As shown these shields are channel shaped having the inwardly extended flanges 10, 10 and 11, 11 which embrace the corresponding portions of the respective frames. These shields have the inwardly extending tubular bosses 12, 12 and 13, 13 respectively which fit into the corresponding sockets 14, 14 and 15, 15 of said frames.

Mounted in said bosses and having a swiveling connection therewith are the adjusting screws 16, 16 and 17, 17 whose inner ends have threaded connections with the frames 1 and whose outer ends are transversely slotted to receive the blade of a screwdriver whereby the shields 8 and 9 may be adjusted outwardly or inwardly as desired. The ends of the shields 8 overlap the corresponding ends of the shields 9 and in practice their surfaces will be approximately flush so as to provide a smooth outside surface that will not irritate the contacting parts of the nasal passageways.

The frames are connected by an arcuate yoke 18 and are adjustable relative thereto. Each frame has a socket 19 and each end of the yoke has a spherical head 20 which fits into the corresponding socket. The head may be locked in the socket, against accidental misplacement. As shown it is locked in by means of a small spring wire fastener 21, one end of which is attached to the corresponding frame and whose other end is adapted to be engaged into a J-slot 22 in the frame to lock the corresponding head 55

20 in its socket 19. Universal connections between the ends of the yoke and the frames 1 are thus provided. By disengaging the free end of the fastener 21 from the J-slot 22 the corresponding frame may be readily detached from the yoke.

In Figure 3 a slightly modified form is shown wherein the extension 2a has on its outer end, an assembly of spaced screening elements 23 preferably formed of fabric with intervening spacers 24 between said screening elements and said assembly of screens is held clamped in place by the cap 3a which is fitted thereover and whose outer end is open and which is maintained in place in a manner similar to that shown in Figure 2. These frames 23 act as filters to exclude offending matter and if desired may be medicated for the purpose hereinabove stated.

The drawing and description disclose what are now considered to be preferred forms of the invention by way of illustration only, while the broad principle of the invention will be defined by the appended claims.

What I claim is:—

25 1. A nasal insert comprising an approximately elliptical frame shaped to be inserted into the nostril, a plurality of external independently adjustable arcuate shields surrounding and fastened to the frame.

30 2. A nasal appliance comprising elliptical shaped frames, an arcuate yoke whose ends are detachable from, and have universal connections with, the respective frames, arcuate over-

lapping side shields and end shields mounted on each frame and separate means for adjusting the side shields and end shields radially on the frames.

3. In a nasal device of the character described, 5 a pair of inserts, each insert being composed of a framework, a series of arcuate shields around each framework, the ends of said shields overlapping, each shield having a tubular boss intermediate its ends, each framework having sockets 10 adapted to receive said bosses, screws mounted in the bosses and adapted to be screwed into said framework.

4. A device of the character described comprising a pair of inserts, each insert being composed of a framework, a series of arcuate shields 15 around each framework, the ends of said shields overlapping, each shield having a tubular boss, each framework having sockets adapted to receive said bosses, screws mounted in the bosses 20 and adapted to screw into the corresponding framework, pivotal connecting means connecting said pair of inserts and means for locking said connecting means in active position.

5. In a nasal insert, an elliptical frame, spaced 25 sockets in said frame, a series of arcuate shields adapted to surround said frame, bosses on said shields, adapted to fit in said spaced sockets, said bosses and sockets being threaded to receive a set screw to hold said shields in the desired 30 position.

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