

No. 701,538.

Patented June 3, 1902.

T. CARENCE.  
NASAL SHIELD.

(Application filed Sept. 16, 1901.,)

(No Model.)

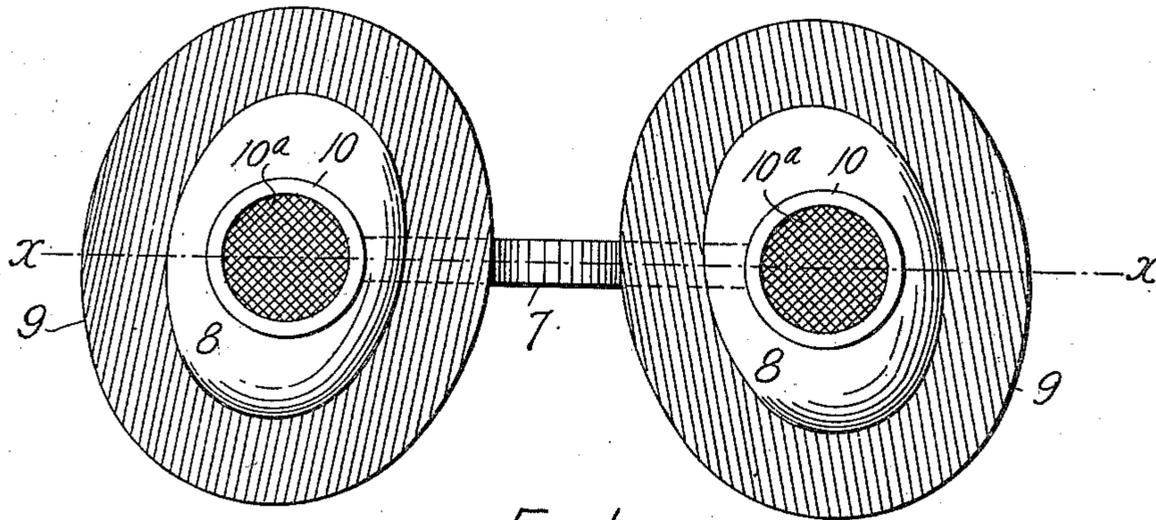


FIG. 1.

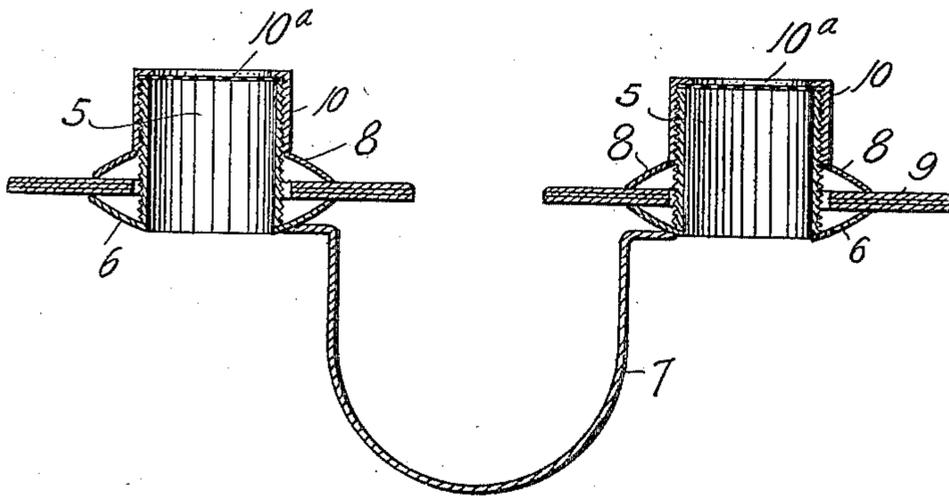


FIG. 2.

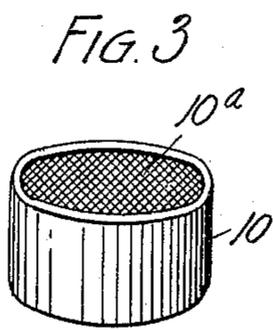


FIG. 3.

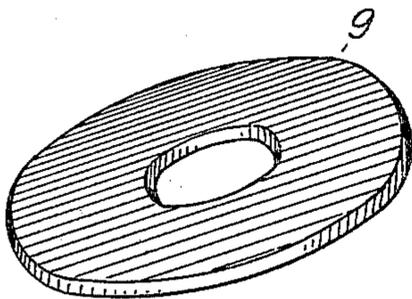


FIG. 5.

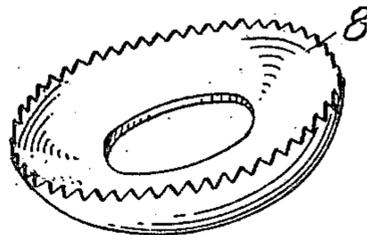


FIG. 4.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

THOMAS CARENCE, OF KANSAS CITY, MISSOURI.

## NASAL SHIELD.

SPECIFICATION forming part of Letters Patent No. 701,538, dated June 3, 1902.

Application filed September 16, 1901. Serial No. 75,638. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS CARENCE, a citizen of the United States of America, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Nasal Shields; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in nasal shields or devices designed to cure hay-fever and prevent a return of the disease.

One object or function of my improved instrument is to prevent the poisonous dust or particles of decayed vegetable matter carried by the atmosphere during certain months of the year from entering the nostrils and coming in contact with the lining membrane of the nose. The instrument is constructed on the theory that this dust irritates the mucous membrane or inner lining of the nose and causes the disease termed "hay-fever." Hence by removing the cause the disease is finally cured. My nasal shield is also provided with absorbent pads, to which is applied a medicine adapted to aid nature in the cure of the malady, the cause being removed.

My improved shield will now be described in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a front view of the shield greatly enlarged beyond the normal size to facilitate clearness of illustration. Fig. 2 is a section of the same, taken on the line  $x x$  of Fig. 1. Fig. 3 is a perspective view in detail of a screw-cap provided with a wire-gauze diaphragm. Fig. 4 is a similar view of the detachable plate. Fig. 5 is a perspective view of an absorbent pad employed in the construction of my instrument.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate each of two short cylindrical exteriorly-threaded open-ended tubes, to each of which is secured a concavo-convex plate 6. These two plates

are connected by a bridge 7. Each cylinder 5 when the parts of the instrument are assembled is surrounded by a detachable plate 8, which is also concavo-convex and arranged to cooperate with the plate 6. The concave faces of these two plates are turned toward each other, the plates being arranged to clamp between them one or more absorbent pads 9. Two of these pads are shown in Fig. 2. They are provided with openings, whereby they are adapted to fit around the cylinder 5. To each cylinder 5 is applied a cap 10, which is interiorly threaded to engage the exterior threads of its cylinder. When the parts are assembled, the cap is screwed on the cylinder to engagement with the plate 8, which is thereby caused to clamp the parts between the plates 6 and 8, as aforesaid.

The opening or passage-way through the cap is crossed or covered by a diaphragm 10<sup>a</sup>, adapted to strain out the particles of dust from the atmosphere before the latter comes in contact with the lining or mucous membrane of the nostrils. This diaphragm is preferably composed of wire-gauze of a mesh adapted to perform the aforesaid function.

The pads 9 and plates 8 are elliptical in shape to conform to the cross-sectional area of the nostril-passages. They are arranged, as shown in Fig. 1, with their upper extremities nearer together than their lower extremities when the parts are assembled. The pads 9 project considerably beyond the plates, whereby the latter, which, as well as the other metal parts, are preferably formed of aluminium, are kept from direct contact with and therefore prevented from irritating the lining of the nose.

From the foregoing description it will be understood that the plates 6 and the bridge 7 are rigidly connected to each other, though the bridge itself has sufficient yielding capacity for the purpose and to permit a reasonable degree of adjustment.

Assuming that the parts are detached or separated, they are assembled by first placing the desired number of pads around each cylinder and pressing them down to contact with the plate 6. The plate 8 is then slipped over the cylinder and pressed down on the pad occupying a position opposite the plate 6. The cap 10 is then screwed to posi-

tion, as aforesaid, when the instrument is ready for use. The pads 9 are medicated to the desired degree before they are applied. It will be understood that the pads may be re-

5 moved and re-medicated at pleasure; also that new pads may be substituted as often as the necessity of the case or experience may seem to demand.

In applying the instrument the parts carrying the pads are inserted or pushed into the nostrils until the front of the bow-shaped bridge 7 engages the septum or cartilage separating the nostrils, the device being held in position so that the closer ends of the pads or

15 those nearer together (see Fig. 1) are uppermost and the opposite ends toward the lower lip.

The device is automatically held in place when applied and may be worn without inconvenience. The wire-gauze diaphragms, while they obstruct or strain out the dust, do not interfere with the free passage of the air through the nostrils for breathing purposes. The bow-shaped bridge has sufficient spring

25 or yielding capacity to permit ease of adjustment, as aforesaid. The outer edges of the plates 6 and 8 are toothed or serrated to facilitate the holding of the pads in place.

Having thus described my invention, what

30 I claim is—

1. In a nasal shield, the combination of two open-ended tubes, respectively provided with exteriorly-projecting plates, a bridge connecting the tubes, an absorbent pad surrounding

35 each tube in contact with the plate, a removable plate surrounding each tube in contact with the pad and opposed to the first-named plate, and a cap applied to each tube to hold the removable plate in position and to cause

40 it to clamp the pad, said cap being provided with a diaphragm adapted to strain out the dust while it allows the air to pass through the tube.

2. In a device of the class described, the

45 combination of two tubular parts, an out-

wardly-bowed bridge-piece connecting said parts, two opposing plates surrounding each tube, absorbent material held between the plates and protruding therefrom, and a cap applied to each tube and provided with a

50 gauze diaphragm for the purpose set forth.

3. In a device of the class described, the combination of two open-ended, cylindrical parts, a bow-shaped bridge connecting said

55 parts, two opposing plates mounted on each cylinder, absorbent pads held by the plates, and a cap applied to each cylinder and provided with a gauze diaphragm for the purpose set forth.

4. The combination of two tubular parts, a

60 bridge connecting said parts, absorbent pads mounted on the tubular parts, means for holding the pads in place, and a gauze diaphragm applied to each part for the purpose set forth.

5. The combination of two cylinders, a plate

65 surrounding each cylinder, a pad engaging the plate, another plate surrounding the cylinder on the opposite side of the pad, and a screw-cap applied to the cylinder and made to engage the adjacent plate, the cap being provided with a wire-gauze diaphragm.

6. The combination of two exteriorly-threaded cylinders, a bridge connecting said cylinders, a concavo-convex plate applied to

75 each cylinder and made fast thereto, its outer edges being serrated or toothed, an absorbent pad applied to the plate around each cylinder, a similar loose plate applied to each cylinder and engaging the pad opposite the first-named plate, and an interiorly-threaded cap

80 screwed upon each cylinder to engagement with the loose plate, said cap being provided with a wire-gauze diaphragm.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS CARENCE.

Witnesses:

J. W. CADWELL,  
ALPHA ABEL.