

A. A. BARRATT.
 NOSTRIL DISTENDING APPARATUS.
 APPLICATION FILED JAN. 14, 1911.

1,034,566.

Patented Aug. 6, 1912.

FIG: 1.

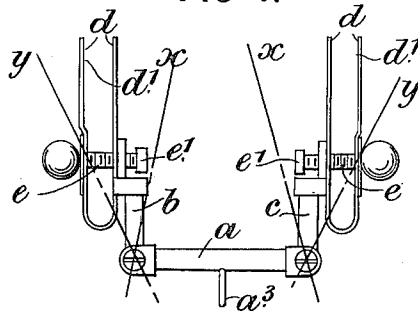


FIG: 2.

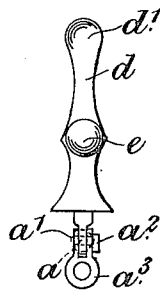
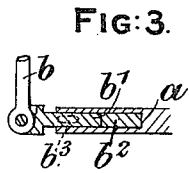


FIG: 4

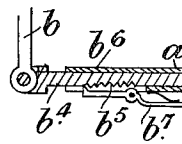
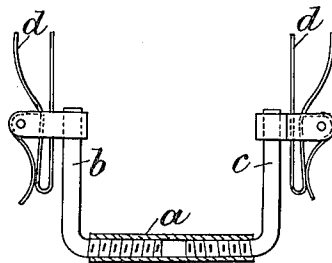


FIG: 5.



Witnesses:

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H. D. Penney

Inventor:

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 By his Attorney, *F. H. Richards*.

UNITED STATES PATENT OFFICE.

ALFRED ALLEN BARRATT, OF CLAYGATE, ENGLAND.

NOSTRIL-DISTENDING APPARATUS.

1,034,566.

Specification of Letters Patent.

Patented Aug. 6, 1912.

Application filed January 14, 1911. Serial No. 602,549.

To all whom it may concern:

Be it known that I, ALFRED ALLEN BARRATT, a subject of the King of Great Britain, residing in Claygate, in the county of Surrey, England, have invented certain new and useful Improvements in Nostril-Distending Apparatus, of which the following is a specification.

A new or improved device for dilating the anterior nostrils to improve respiration and to assist the elimination of nasal secretions.

This invention relates to improvements in devices designed to dilate the nostrils in order to promote inspiration through the nose and the elimination of nasal secretions.

The present invention has for its object to provide an improved device for the purposes specified in which provision is made for the ready variation in the distance between the limbs which may press against, but which in accordance with the present invention preferably grip the outer walls of the nostrils, so that the device may be readily adjusted to effect the desired increase in the apertures of the nose.

The invention further provides the improved construction and arrangement of parts whereby the nostril engaging members are capable of angular adjustment so as to avoid discomfort to the wearer and increase the efficiency of the device.

A device constructed in accordance with the present invention moreover tends to improve the shape of the nose by causing the apertures to assume an elliptical outline.

According to the present invention the device comprises a short body, which may be solid, but is preferably tubular having at each end a member adapted to be inserted in the nostril and press against the inside, or clip the outer walls thereof. The members are made in two parts which are hinged together and of which one part is adjustably secured to the aforesaid tubular or other body while the other is capable of being arranged to enter the nostrils or it is provided with a device adapted to clip the outer walls. The clip aforesaid is fitted so as to be capable of rotation at will and to engage the nose in any position most convenient to the user of the device. Of the main members just referred to, one is preferably secured in position by means of a screw thread which engages a thread in or on the end of the tubular body. By this means upon rotating

the member its position relatively to the end of the tubular body may be varied and consequently its distance from the other nostril engaging member is also varied. The second member is similar in its general form to that just described but in place of the screw thread it may have a plain portion which in some instances enters the tubular body leaving a space in this between the two members. The aforesaid space is fitted with short lengths of rubber or other suitable material of sufficient resiliency to retain the nostrils in the dilated state under normal conditions, but which would yield to pressure upon the outside of the nasal walls. A stop is provided to regulate the amount of aforesaid resiliency.

Instead of clips as aforesaid, knobs, plates or any other means may be provided upon the nostril engaging members so that they do not cause discomfort to the wearer.

Where a solid body is employed the nostril engaging members may be provided with sockets or sleeves which engage the ends of the aforesaid body. Where the support for the clip or other nostril engaging member is attached to a hinged support, provision is made whereby the inward movement of the hinged portion is limited so that in the event of external pressure being applied to the nostril the said hinged portion will not move inward far enough to injure the septum of the nose. By employing a construction such as herein described, the parts, when the device is not in use, can be brought into alinement and may be placed in a case of much smaller dimensions than would otherwise be permissible.

In order that the invention may be the better understood, drawings are appended showing various forms of devices embodying the present invention and in which:—

Figure 1 is a side elevation to an enlarged scale of one form of the invention in which the parts may be brought into alinement. Fig. 2 is an end view. Fig. 3 is a sectional view showing an alternative form of the device. Fig. 4 is a similar view showing a further alternative. Fig. 5 is a side elevation showing a modified form of the device in which the end members are rigid, and cannot be brought into alinement with the body of the device.

Referring to the accompanying drawings α indicates a tubular body which at each end has connected to it by means of the hinge or

joint a^1 the members b and c . The hinge is preferably constructed as shown, the pivot being formed by the screw a^2 so that the friction at this point may be so adjusted that the parts after adjustment are retained and will not yield under such moderate pressure as is imposed on them by the nostrils. At the same time the joint is not sufficiently tight to prevent it yielding in the event of undue pressure being placed upon the nose engaging member, such as would cause great discomfort or even injury to the user. Each of the members b , c are provided with clips d formed of thin sheet metal, or any other suitable material, and which clips may be adjusted by means of the screw e to suit the thickness of the outer wall of the nostril which they are required to engage. One or both members of the clip may be slightly dished or otherwise shaped as shown at d^1 to agree with the surface with which it is in contact. The adjusting screw e which passes freely through the outer member of the clamp and engages a screw thread upon the other member, is preferably provided with a suitable head e^1 so that the removal of the screw is prevented. The connection between the clips and the members b and c may be of such a nature as to permit the said clips to be rotated so that the surfaces thereof may lie in planes parallel to the surfaces of the nose and thus avoid discomfort to the wearer. By means of the hinges a^1 it is possible to alter the angle of the members b and c relatively to the line of the body a so that the clips may either be brought closer together as shown by the dotted line x or separated as shown by the dotted line y . This arrangement not only permits of a very nice adjustment of the clips to suit the nose when it is first applied thereto but enables a gradual separation of the said clips to be effected so that as the walls of the nostrils respond to the outward pull or pressure, adjustment may be made from time to time until the desired amount of permanent distention has been obtained. The degree of pressure throughout is thus substantially equal and capable of ready regulation so that the wearer during the initial stages of the treatment has not to undergo discomfort such as would arise should no provision be made for regulating the separation of the clips and fixing the said clips in position after adjustment. By means of the hinged connection of the parts b and c with the body a , it is moreover possible to bring the parts a , b and c into alinement when the device as a whole may be conveniently carried either in the pocket or placed in a case of much smaller dimensions than would otherwise be possible. In order to prevent the loss when in use, a ring such as a^3 may be provided upon the body a so that the cord, chain, or

the like may be attached thereto at one end, the opposite end being secured to the wearer's clothing.

Instead of constructing the device in the manner just described, I may in some instances employ the arrangement shown in section in Fig. 3, in which case the members b and c , of which however only one is shown in this figure, may be connected to a pin or stem b^1 entering the body a in which they are free to slide. Between the ends of the said pins b^1 , or at the ends of the said pins where their length is only comparatively short, I interpose a resilient body, in the present instance a short length or pad of india-rubber b^2 . The rubber or other body is designed, while keeping the pins at their outermost positions, to permit them to yield slightly should pressure be applied to the exterior of the nostril. The arrangement just described may be employed in conjunction with hinged members b and c , but it will be readily understood that this arrangement may also be employed in cases where the hinge is not employed. A pin b^3 upon the pins engages a slot as indicated by the dotted lines in Fig. 3, and retains the pins in their outermost position.

While as aforesaid I may rely for the regulation of the distance between the clips upon the angular adjustment of the members b and c , I may in some instances employ an independent means of adjustment which may be employed either in conjunction with the hinged connection between the members b and c and body a , or in such cases as the said hinges are dispensed with. Such an arrangement as that just described is illustrated in Fig. 4 in which case one or both of the members b , c are attached either by a hinge or directly to a pin such as b^4 . The pin upon one side is provided with a series of ratchet teeth b^5 with which engages a detent b^6 upon a spring pressed lever b^7 secured upon the exterior of the body a . The body a under these circumstances may be of rectangular or other suitable cross sectional outline, the pin itself being of corresponding outline. By this means the rotation of the pin in the body a is prevented. Obviously any other means may be employed to secure the nonrotation of the pin.

Although as aforesaid I may provide for the adjustment of the distance between the clips by means upon the members b and c , I may in some instances form the said members as shown in Fig. 5 in which case the aforesaid adjustment is effected by the movement of the said members b and c longitudinally of the body a . Under these circumstances I provide the members b and c with pins, preferably formed by bending the lower ends as shown, and upon said pins I provide screw threads of opposite direction. The threads engage corresponding threads

formed in the body *a* and the equal and opposite movement of the members *b* and *c* may then be obtained by rotating the said body *a*. Instead of this arrangement I may employ a screw thread upon one member *b*, the other member *c* being rigidly or otherwise secured to the opposite end of the body *a*. I may also employ a fixed member in the case of the arrangement shown in Figs. 4 and 5 instead of a hinged member. Obviously when the fixed member is employed, it may be attached directly to the end of the body *a*.

Obviously instead of clips I may employ other devices or bodies which in some instances may merely press upon the interior surfaces of the walls of the nostrils in order to distend them.

Claims:

1. In a nostril distending apparatus, a pair of movable nostril-wall gripping members, a body portion therefor, said gripping

members being mounted upon said body portion and shiftable relatively to and from one another, means for locking the said gripping means in any shifted position, and means on said gripping members for opening and closing the nose gripping portion thereof.

2. A nostril dilator comprised of adjustable nose-wall clips movably mounted upon a separating support, means between said support and said clip members for moving the same to and from one another relatively, and to hold the same in the shifted positions, and means on said clips for causing the same to grip or release the nostril walls.

In witness whereof I have hereunto set my hand in the presence of the two undersigned witnesses.

ALFRED ALLEN BARRATT.

Witnesses:

JOHN H. JACK,
ARTHUR F. WRIGHT.