

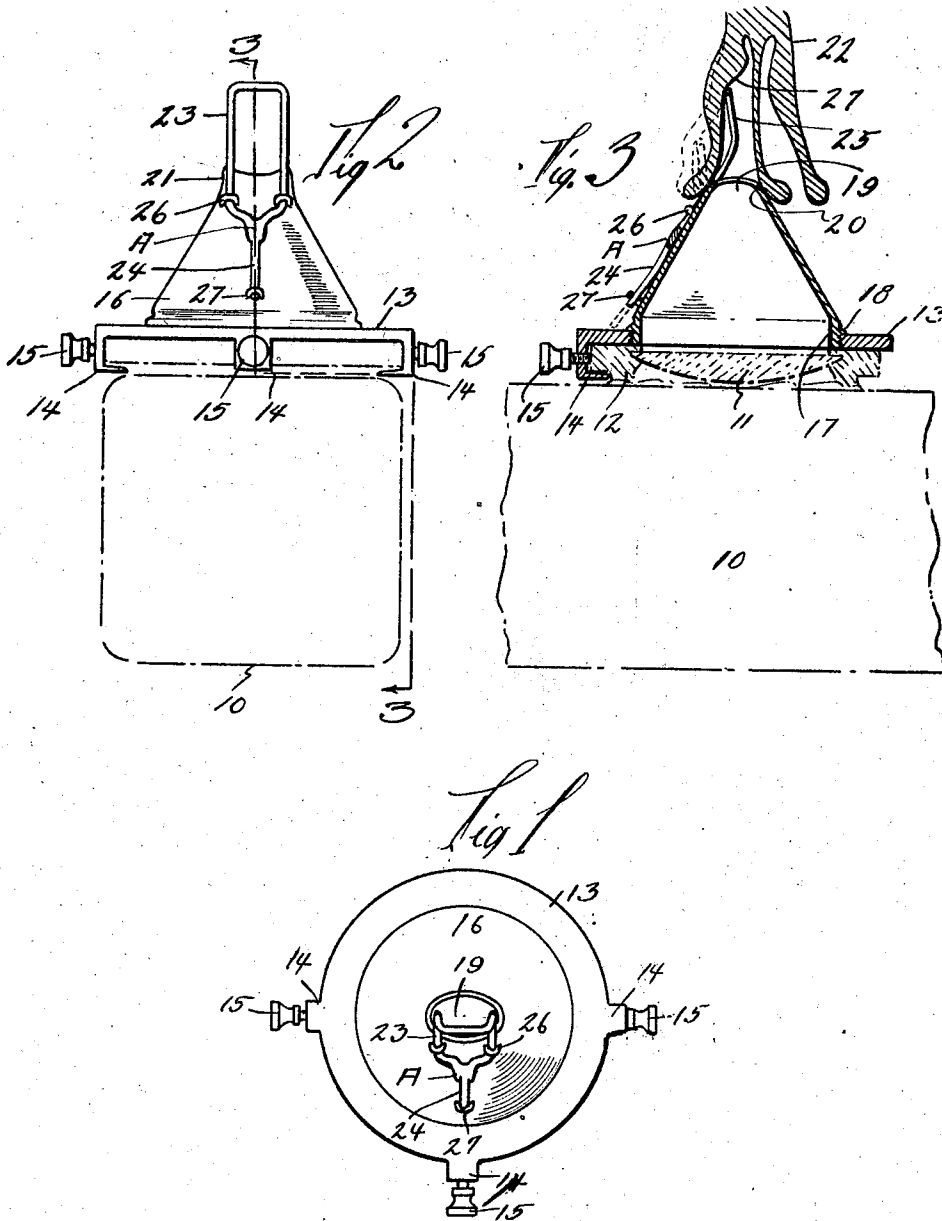
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KROMAYER LIGHT ATTACHMENT

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KROMAYER-LIGHT ATTACHMENT.

Application filed June 12, 1926. Serial No. 115,616.

My invention relates to a nosepiece, or a chimney, attachable to a mercury, quartz-lens lamp used in treating the inner membrane lining of the nose, and an object of my invention is to provide such a nosepiece which will allow all the rays passing through the lens of the lamp to reach the subject.

A further object of my invention is to provide such a nosepiece having a speculum adapted to be manipulated to expose, consecutively, the entire length of the side wall of the nose to the rays emitting from the lamp.

A further object is to provide such a speculum, the action of which is obtained by slidably or hingedly mounting the speculum on the cone-shaped side of the lamp chimney.

Another object is to provide such a spreader having a portion adapted to be frictionally engaged against an element secured to the chimney by means of pressure exerted against the spreader by the side wall of the nose.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Fig. 1 is a plan view of the attachment.

Fig. 2 is a top view of a Kromayer lamp, shown in broken lines, with my attachment secured thereto, shown in full lines.

Fig. 3 is a sectional view, taken as indicated by the line 3—3 of Fig. 2.

I have used the reference character 10 to indicate generally the body of what is commonly known as the Kromayer lamp for producing actinic rays by means of a mercury arc, which rays are transmitted through a quartz window, 11, offering extremely low resistance to the passage of such rays.

The window, 11, is mounted in a flanged neck, 12, which ordinarily receives various types of attachments for the transmission of the rays. My attachment comprises a ring-shaped plate, 13, provided with three clamping hooks, 14. Thumb screws, 15, are threaded through the hooks, 14, and engage the neck, 12, to secure the attachment in place on the lamp.

A chimney, 16, has a threaded portion, 17, threaded into the ring, 13, and a shoulder,

18, which locks the chimney thereagainst. The chimney is generally cone-shaped, and at its upper end is provided with an opening, 19, two sides of the cone bordering said opening being flattened inwardly, as at 20 (see Fig. 3), thereby widening the opening in a perpendicular direction to an elliptical shape, as indicated in Fig. 1. This flattening of the upper end of the cone pushes out the side walls of the cone in a direction transverse to the flattened end portions, to a substantially parallel formation, as indicated at 21 in Fig. 2.

When the chimney is inserted in a nostril of the nose, 22, as shown in Fig. 3, the remote wall portions, 21, engage the forward and rear portions of the nasal opening, and the near wall portions, 20, the side portions of the nostril, as shown in Fig. 3.

It will be noted that rays from every portion of the lens, 11, will be allowed to pass into the nostril.

The outer wall of the nostril is ordinarily the one which needs treatment, and I therefore provide means for spreading this wall in such a way as to place the inner membrane thereof in a position more transverse to the rays than the normal inclination of the wall. This means comprises a speculum, indicated generally by the reference character A, and formed of a length of wire looped back upon itself to form the closed loop, 23, and the single arm, 24, extending away from the loop on the longitudinal axis thereof. The upper portion of the loop is bent laterally from the general plane of the loop, 23, and the arm, 24, as at 25 in Fig. 3. The two parallel arms of the loop are slidably mounted in bearings, 26, secured to the chimney, 16, and the arm, 24, is similarly mounted in a similar bearing, 27. The opening in the bearing, 27, is somewhat deeper than the diameter of the arm, 24, (see Fig. 3), and thus loosely receives the arm.

When the speculum is engaged by the side wall of the nose, as shown in Fig. 3, the pressure of the side wall inwardly against the loop, 23, tends to cause the arm, 24, to frictionally engage the bearing, 27, in such a manner as to prevent undesirable sliding movement of the loop. In doing so the lower extremity of the loop, 23, fulcrums against the side wall of the chimney, 16.

The speculum has a range of movement from the full line position shown in Fig. 3 to the dotted line position shown there-

in. When the speculum is moved to the full line position the upper end of the chimney may be readily inserted in the nose.

By placing the forefinger of the operator 5 between the arms of the loop, 23, and bearing down against the shoulder which connects the loop with the arm, 24, the speculum may be slid downwardly along the side of the chimney so as to expose the nostril side 10 wall in a position more transverse to the rays. Thus, the rays will bear with greatest intensity against the nostril wall.

The peculiar bend in the loop, 23, allows it to be more readily inserted in the nostril. 15

The lower limit of movement of the speculum is determined by the contact of the arm, 24, with the plate, 13.

A lens, 30, is secured in the chimney by means of a split ring, 31. The lens is of quartz, and serves to concentrate the rays 20 received through the window, 11, into a cone of light approximately the shape of the chimney, so that none of the rays will be intercepted by the wall thereof.

The lens, 30, is removable for cleaning purposes by removing the ring, 31.

Some changes may be made in the construction and arrangement of the parts of 30 my invention without departing from the real spirit and purpose of my invention and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope. 35

I claim as my invention:

1. In an attachment of the class described, a funnel-shaped chimney having a ray discharge opening at its smaller end, and a 40 speculum slidably mounted upon the side of said chimney and having a portion extending over said opening.

2. In an attachment of the class described, a funnel-shaped chimney, oval-shaped in 45 cross section and provided with an opening and a speculum slidably mounted on the side

of said chimney, said speculum having a loop, a portion of which extends over said opening in a plane intersecting the major diameter of said opening. 50

3. In an attachment of the class described, a funnel shaped chimney having a ray discharge opening at its outer end and a speculum mounted upon the side of said chimney for sliding movement in a direction at an 55 angle to the axis of said chimney, said speculum having a portion extending beyond the smaller end of the chimney for insertion in a nostril and adapted to move laterally relative to the axis of the chimney 60 when the speculum is moved relative to the chimney.

4. In an attachment of the class described, a funnel shaped chimney, having a ray discharge opening at its smaller end and a 65 speculum mounted upon the side of said chimney for sliding movement in a direction at an angle to the axis of the chimney, said speculum having a looped portion projecting beyond the smaller end of the chimney 70 for insertion in a nostril, said looped portion including side arms embracing the focal space beyond the opening of the chimney and a cross portion adapted to be moved by the sliding of the speculum from a position 75 within said focal space to a position removed from said focal space.

5. In an attachment of the class described, a funnel shaped chimney, said chimney having an opening at its smaller end and a 80 speculum slidably mounted on the side of said chimney and comprising an inclosed loop and extended arm secured to said loop, bearings receiving the side members of said loop and a bearing receiving said arm, the 85 speculum being so fulcrumed that pressure against the loop will cause the arm to frictionally engage its bearings.

Signed at Merrill, in the county of Plymouth and State of Iowa, this 4th day of 90 June, 1926.

FRED G. VERNON.