

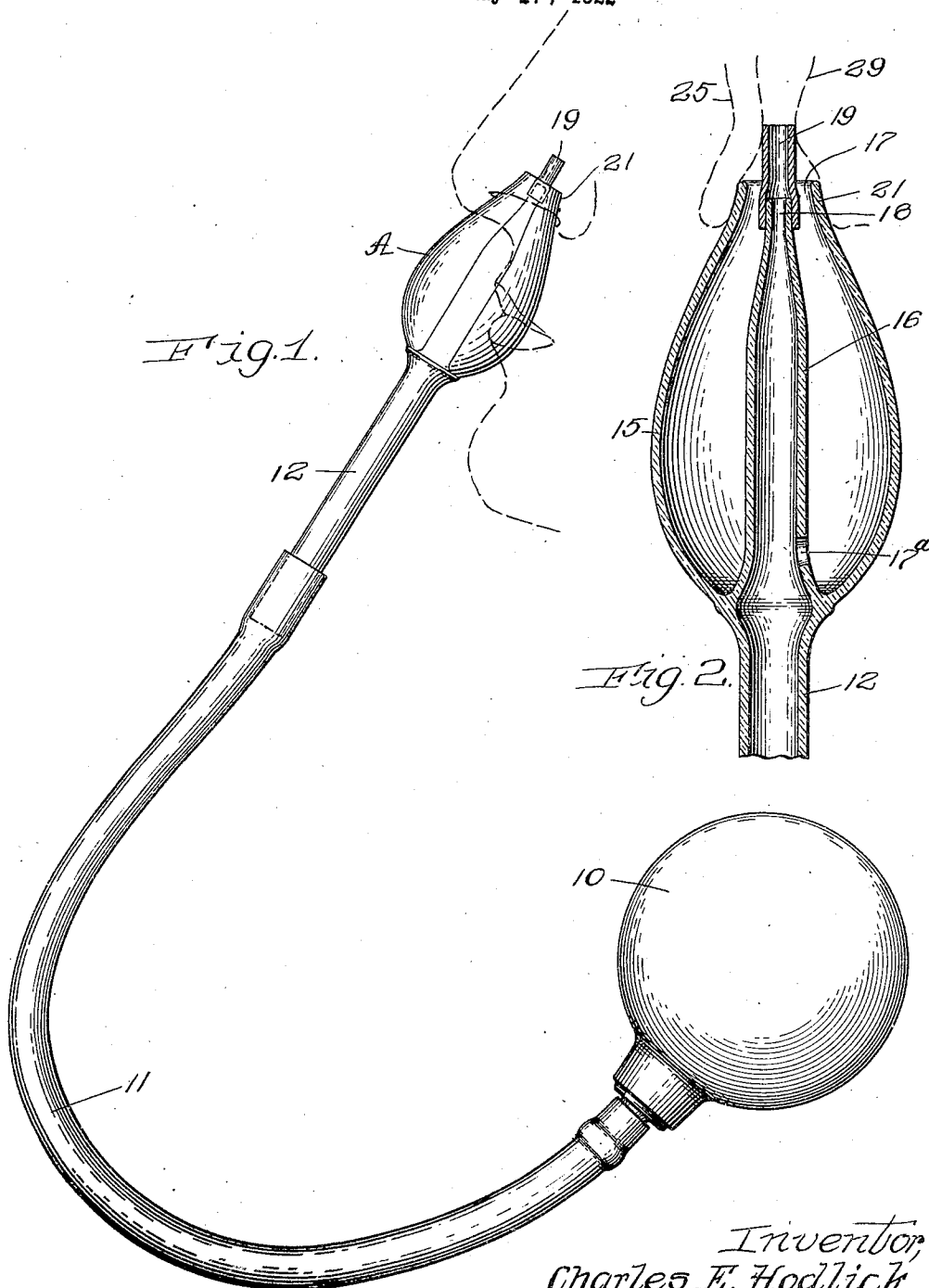
Jan. 15, 1924.

1,481,008

C. E. HODLICK

NASAL SUCTION APPARATUS

Filed May 17, 1922



Inventor,
Charles E. Hodlick,
By *Cynthia, for Charles E. Hodlick*
Attorney

Patented Jan. 15, 1924.

1,481,008

UNITED STATES PATENT OFFICE.

CHARLES E. HODLICK, OF CHICAGO, ILLINOIS, ASSIGNOR TO SHARP & SMITH, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

NASAL SUCTION APPARATUS.

Application filed May 17, 1922. Serial No. 561,657.

To all whom it may concern:

Be it known that I, CHARLES E. HODLICK, a citizen of the United States, residing at Chicago in the county of Cook and State of Illinois, have invented a new and useful Improvement in Nasal Suction Apparatus, of which the following is a specification.

This invention relates to improvements in nasal suction apparatus, especially adapted for use in creating a partial vacuum in the nasal passages and passages and cavities communicating therewith, and for cleansing such passages and cavities of mucous discharges and other substances. The features of my invention relate especially to the form of nozzle or tip applied to the nostril. The nozzles or tips heretofore used in such apparatus have been found, in many cases, objectionable, impractical or inoperative, due to the collapsing of the nasal passage just above the end of the tip upon applying suction. The outer side wall of the nostril is composed of relatively thin, flexible and elastic tissue. If an ordinary nozzle is applied to the end of the nostril and suction applied, this outer side wall of the nostril is very likely to collapse inwardly, thus closing the nostril above the end of the tip and preventing the withdrawal of the nasal discharges. In my improved nasal suction apparatus I have provided means for overcoming this collapsing of the nostril. The exact construction and operation, and other features and advantages of my apparatus will be more fully described in the following specification.

In that form of device embodying the features of my invention, shown in the accompanying drawings, Figure 1 is a view in side elevation of my improved apparatus, showing the same in position for use, and Fig. 2 is a vertical sectional view of the tip thereof.

As shown in the drawings, the apparatus comprises a rubber bulb 10 of any ordinary type, adapted to be squeezed and then allowed to expand to produce a suction. It is obvious, however, that, without detracting from the spirit of my invention, any other means such as, for example, a pump or siphon, may be used for producing a vacuum. The bulb 10 is connected by means of a rubber tube 11 to the glass stem 12 of a glass tip or nozzle, indicated in general by A.

The tip or nozzle A comprises an outer egg-shaped bulb 15, having axially arranged within it a tube 16. The lower end of the tube 16 communicates with the stem 12 and is provided with a port 17 at one side, so that a vacuum produced in the stem 12 will be communicated to the tip 16 and the outer shell or bulb 15. The upper end of the bulb 15, indicated by 21, is tapered down to form a substantially circular open mouth 17 of a suitable size to be inserted in the nostril. The tube 16 extends upwardly to a point slightly below the upper end of the bulb 15. The upper end of this tube 16, as indicated by 18, is tapered down, so that its external diameter is a little less than one-half the internal diameter of the mouth 17. Mounted on the upper end of this tip 18 is a short section of small rubber-tubing 19, extending from one-quarter to one-half inch beyond the mouth 17. The length of this projecting end of the rubber-tubing 19 may be varied as desired by slipping the tube further on or off of the end of the tube 18.

In the use of the device, the end 21 of the bulb 15 is inserted in the nostril as shown in the drawings, in which 25 indicates the relatively thin, elastic and flexible side wall of the nostril. The rubber-tubing 19 is adjusted to such a length that it will extend up into the nostril and prevent the side wall 25 from collapsing inwardly against the septum 29 (see Fig. 2). The other nostril is held closed and a vacuum is produced by means of the bulb 10. The vacuum thus produced acts to create a partial vacuum in the nasal passages and passages and cavities communicating therewith, to draw the blood and other juices to the surface of the surrounding membranes, and to withdraw discharges from the nostril into the apparatus. Closing of the nostril is prevented by means of the rubber-tubing 19, as explained above. If, however, discharges too bulky to pass through the small opening in the tubes 18 and 19 reach the apparatus, the wall of the nostril 25 will move outwardly, thus opening the nostril passage sufficiently to allow such discharges to pass around the outside of the tube 19 and enter the larger mouth 17. It will be noted that suction is produced both at the mouth 17 and within the small tube 19; so that discharges may be drawn either through the

tube 19 or through the larger mouth 17, depending upon the position of the nostril wall 25.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claims, in which it is my intention to claim all novelty inherent in my invention as broadly as possible in view of the prior art.

What I claim as new and desire to secure by Letters Patent, is:

1. In a device of the character described, means for producing a suction, a tip having a mouth adapted to be applied to the nostril, and a part arranged within the mouth of said tip to project upwardly inside of the nostril beyond the end of said tip, upon the application of said tip to the nostril.

2. In a device of the character described, means for producing a suction, a tip having a mouth adapted to be applied to the nostril, and a tube arranged within the mouth of said tip to project upwardly inside of the nostril beyond the end of said tip, upon the application of said tip to the nostril.

3. In a device of the character described, means for producing a suction, a tip having a mouth to be applied to the nostril, and a flexible tube arranged within the mouth of said tip adapted to project upwardly inside of the nostril beyond the end of said tip, upon the application of said tip to the nostril.

4. In a device of the character described, means for producing a suction, a tip having a mouth to be applied to the nostril, and an adjustable part arranged within the mouth of said tip adapted to project upwardly inside of the nostril beyond the end of said tip, upon the application of said tip to the nostril.

5. In a device of the character described, means for producing a suction, a tip having a mouth to be applied to the nostril, and an adjustable tube arranged within the mouth of said tip adapted to project upwardly inside of the nostril beyond the end of said tip, upon the application of said tip to the nostril.

6. In a device of the character described, means for producing a suction, a tip having a mouth to be applied to the nostril, and an adjustable flexible tube arranged within the mouth of said tip adapted to project upwardly inside of the nostril beyond the end of said tip, upon the application of said tip to the nostril.

7. In a device of the character described, a tip having a mouth to be applied to the nostril, a tube arranged within the mouth of the tip adapted to project upwardly inside of the nostril upon the application of said tip to the nostril, and means for producing a suction through said tube and tip.

8. In a device of the character described, a tip having a mouth to be applied to the nostril, a tube arranged within the tip with its end projecting beyond the mouth thereof, a port through the tube, and means for producing a suction in the tube.

Witness my hand and seal this 15 day of May, 1922.

CHARLES E. HODLICK. [L. s.]