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NASAL OXYGEN FEEDER AND METHOD

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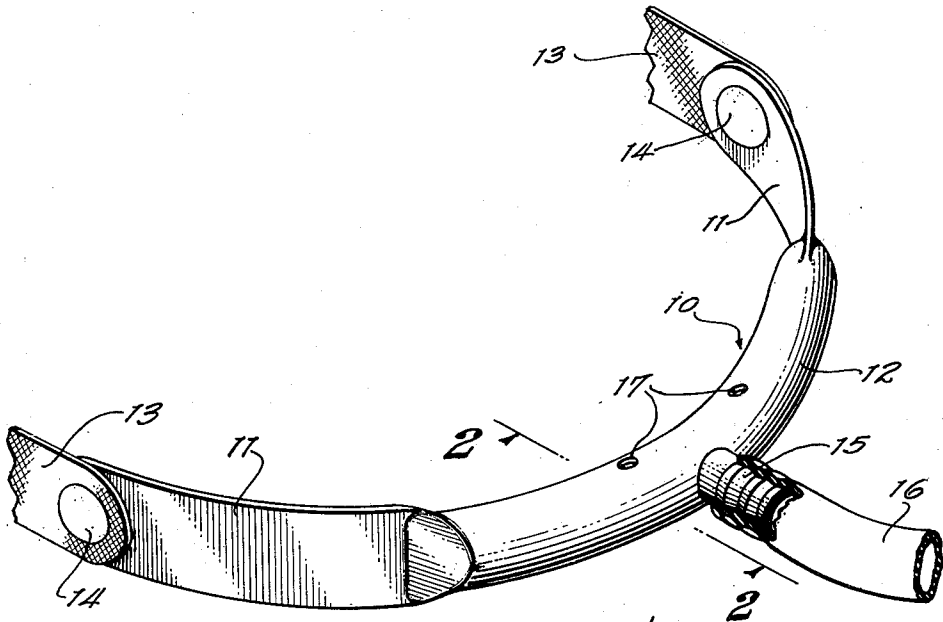


Fig. 1

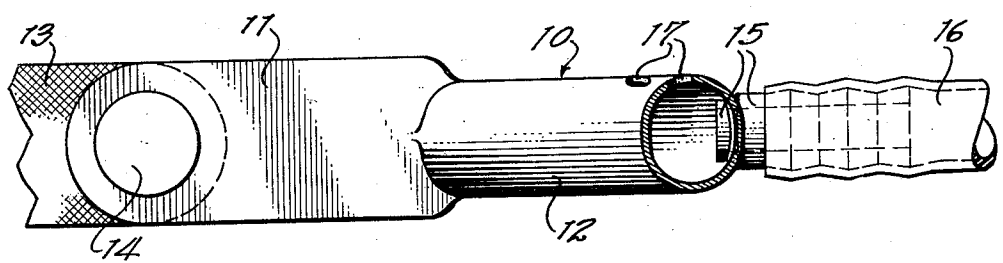


Fig. 2

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NASAL OXYGEN FEEDER AND METHOD

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2 Claims. (Cl. 128—148)

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The present invention relates generally to devices of the type utilized for nasally feeding a gas to a patient, and is more particularly concerned with improved means and method whereby a gas such as oxygen may be administered directly at the nostrils of the patient.

It is a primary object of the invention to provide an improved device for feeding a gas, such as oxygen, nasally to a patient, which is so constructed that it may be secured and comfortably worn under the nose of the patient in a position to permit ejection of the gas directly into the nostrils, rather than to have the entire nose covered.

It is a further object of the invention to provide a simple device of the character described herein, which may be utilized to nasally feed a gas such as oxygen and is so constructed that the nose will not be obstructed during the feeding operation, and is free to be operated or otherwise worked upon.

Another object is to provide a simple, light weight device for nasally feeding a gas, such as oxygen, which is constructed of plastic having a low degree of inflammability and may be worn with comfort by the patient, which will stay in operative position during movements of the patient, and administers the gas in such a manner that an admixture with ambient air results, and which is so economical in construction that it may be discarded after use, if desired.

Still another object is to provide an improved method for nasally feeding a gas, such as oxygen, wherein moisture may be mixed therewith in a novel manner.

Further objects of the invention will be brought out in the following part of the specification, wherein detailed description is for the purpose of fully disclosing preferred embodiments of the invention without placing limitations on the scope of the invention defined in the appended claims.

Referring to the drawings which are for illustrative purposes only,

Fig. 1 is an isometric view of a device embodying the features of my invention, and by means of which my novel method may be practiced; and

Fig. 2 is an enlarged sectional view of the same, taken substantially on line 2—2 of Fig. 1.

As shown on the drawings, my improved nasal oxygen feeder comprises a nozzle as generally indicated by the numeral 10, which is fabricated from an elongate tube of plastic having a minimum degree of inflammability in the presence of a relatively high concentration of oxygen. This tube is flattened in its end margins to define in-

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tegral end strap portions 11 at the ends of the tube and an intermediate chamber portion 12 for receiving the gas which is to be administered.

The intermediate portion 12 is of sufficient length that it will project well beyond the nose in a lateral direction when applied to the upper lip of a patient just below the nose. Moreover, in order that this portion of the device shall not cause discomfort to the patient, the nozzle is curved or otherwise shaped to fit the upper lip surface and bring the chamber portion 12 immediately under the lower extremities of the nose immediately below the nares.

At the respective ends of the nozzle I provide strap members 13 which may be partially or entirely of an elastic material and are of sufficient length to pass to the rear of the patient's head where they may be tied, and by means of which the chamber portion of the nozzle may be held in centered operative position immediately below the nares of the patient's nose. The straps 13 are shown as being pivotally connected in each case to a strap portion 11 by a suitable pivot, as indicated at 14 so as to enable this portion of the device to naturally accommodate itself.

Intermediate the nozzle ends and at the forward central part of the chamber portion 12 there is affixed in the tube wall a projecting stem 15 by means of which the chamber 12 may be connected with a tube 16 leading to a source of gas supply.

In the upper portion of the chamber 12, there is provided a pair of spaced openings 17 which are symmetrically positioned on opposite sides of the stem entrance to the chamber. These openings are axially spaced apart a distance approximating that of the normal axial spacing of the nares of the average nose, and if necessary, may be arranged to have greater or less spacing in different nozzles.

The openings 17 act as gas outlets through which gas jets are ejected directly into the nostrils, when the nozzle is secured in operative position just below the nose and extending over the upper lip of the patient. Since there is no covering over the nose, ambient air is free to occupy the space below the nose, so that the gas jets will pass therethrough. These jets effect a Venturi action in which outside ambient air containing moisture is drawn into the jets to form an admixture with the gas.

The foregoing arrangement assures a sufficient amount of moisture in the gas and augments that which may be supplied by passing the gas through water according to the usual

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practice, before feeding it to the patient. Moreover, the possibility of irritating the nasal cavities by feeding oxygen with an insufficient amount of moisture is substantially eliminated. In the usual practice, where the gas is passed through water, it is conducted so fast that a sufficient amount of moisture may not always be mixed with the oxygen to prevent irritation.

In my improved device and method of administering or feeding the gas, the comingling of the gas in the jets as it is directed into the patient's nostrils with the moist ambient air, assures a proper amount of moisture at all times.

My improved nasal oxygen feeder is of particular advantage in the case of accidents to the nose, as there is nothing to obstruct the nose or cover it as in the usual form of feeding device which fits over the nose. The present invention permits the feeding of oxygen to the patient, if they are in shock, and at the same time, leaves the nose freely exposed for operation or other work thereon.

A further advantage of a device of this type which is constructed to be positioned under the nose, as in my invention, is that the vision of the patient is unobstructed, and the patient may move about freely without displacing the device or causing it to slip from one side to another. It is comfortable for the patient to wear and the patient may read and eat without difficulty.

By constructing the device of plastic, it may be given a minimum degree of inflammability and at the same time may be of very inexpensive construction so that it may be discarded after use, if desired.

From the foregoing description, it is thought that my improved method will be clearly apparent and that further description of the method will be unnecessary.

I claim as my invention:

1. An expendable device of the character described, comprising: an elongate tube having its end extremities flattened and forming a non-

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flattened portion therebetween, said tube being curved to shape the non-flattened portion to fit the lip portion of a user's face below the nose, and to shape the flattened ends to extend along and conform to the opposite sides of the face; means connected to the flattened ends for securing the tube in operative position; flush surface outlet openings in the upper side of the non-flattened portion for ejecting gas jets into each nostril through the ambient air; and a stem for detachably connecting a gas supply tube to the non-flattened portion.

2. An expendable device of the character described, comprising: an elongate tube of plastic material having its ends flattened to form a non-flattened portion therebetween, said tube being curved to shape the non-flattened portion to fit the lip portion of a user's face below the nose, and to shape the flattened ends to extend along and conform to the opposite sides of the face; securing bands connected to the flattened ends for securing the tube in operative position; flush surface outlet openings in the upper side of the non-flattened portion for ejecting gas jets into each nostril through the ambient air; and a hollow stem positioned between said outlet openings for detachably connecting a gas supply tube to the non-flattened portion.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,056,988	Greene	Mar. 25, 1913
1,125,542	Humphries	Jan. 19, 1915
2,051,730	McCandless	Aug. 18, 1936

FOREIGN PATENTS

Number	Country	Date
27,600	Great Britain	Dec. 16, 1903