United States Patent

Manker

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[54] SUPPORTIVE DEVICE FOR STOMACH OR GASTRIC TUBE

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[52] **U.S. Cl.** **128/348,** 128/DIG. 26, 128/206

[51] **Int. Cl.** **A61m 25/00**

[58] **Field of Search**.....128/348, 350, 198, 206, 208, 128/DIG. 26

[56] **References Cited**

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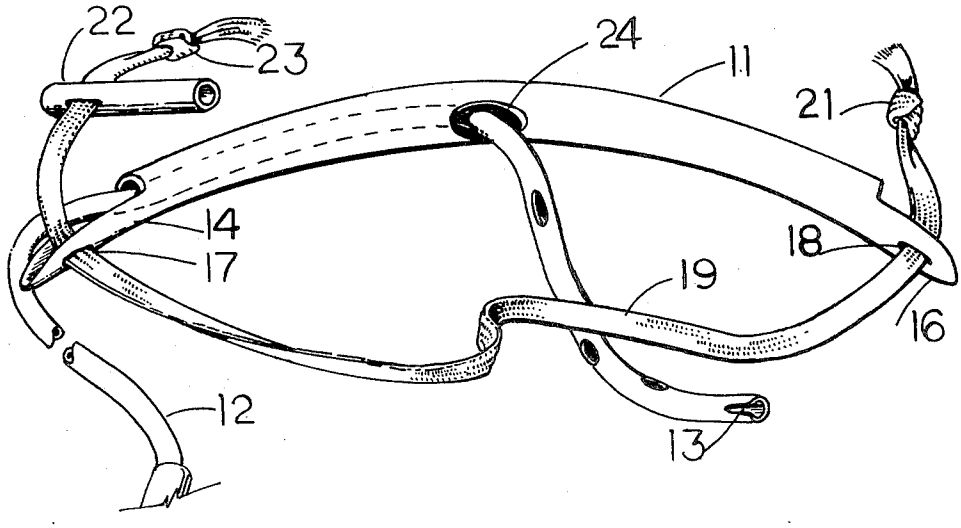
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Attorney—James A. Eyster

[57] **ABSTRACT**

The supportive device consists of a plastic tube of larger size than the stomach or gastric tube which it is to support, and an elastic band to surround the head of a patient and hold the plastic tube across his face, under the nose. The stomach or gastric tube is threaded into one end of the plastic tube, out an aperture near the nose, into a nostril and down into the stomach. The stomach or gastric tube is prevented from retracting by a wedge pressed into the entrance of the plastic tube, tightly wedging the stomach or gastric tube in place. The wedge is in turn held in place by the elastic band. Thus, the stomach or gastric tube cannot work loose or be easily pulled out by the patient.

6 Claims, 3 Drawing Figures



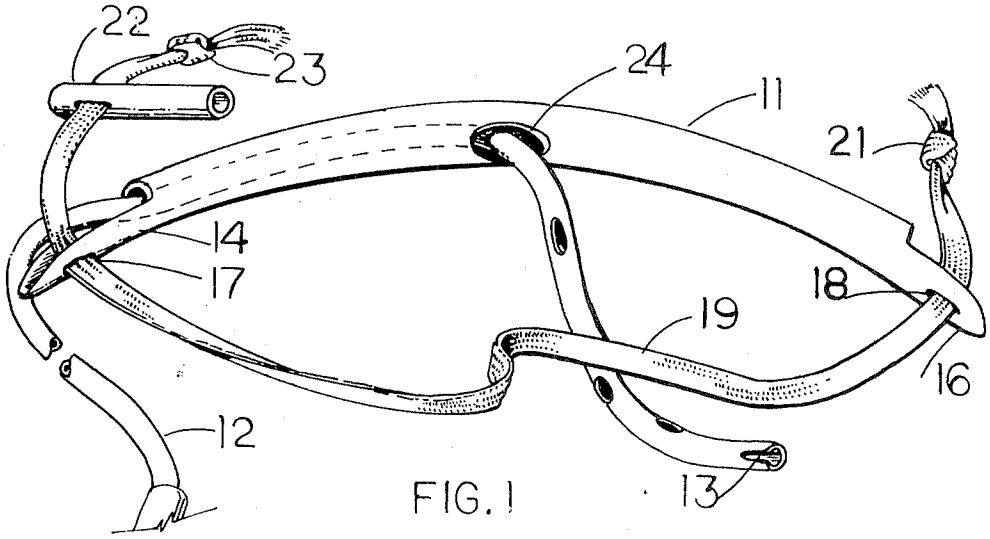


FIG. 1

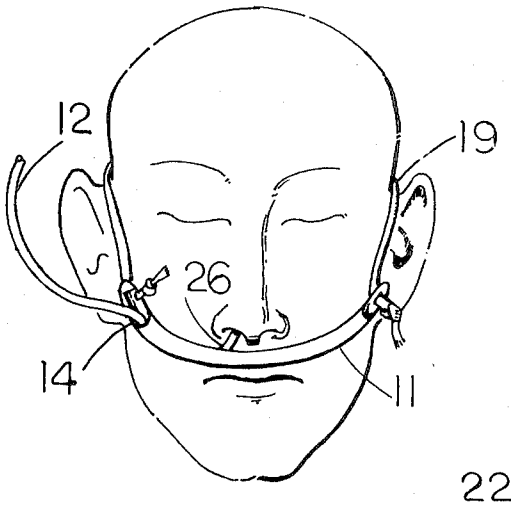


FIG. 2

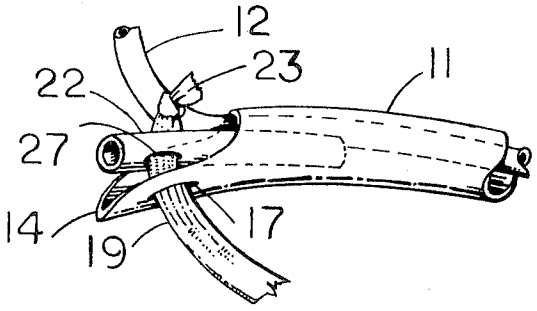


FIG. 3

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SUPPORTIVE DEVICE FOR STOMACH OR GASTRIC TUBE

BACKGROUND OF THE INVENTION

This invention relates to the care of patients in a hospital or nursing home, and particularly to the use of a tube passed through a nostril into the stomach for the purpose of feeding the patient or of pumping fluids from his stomach.

In feeding a patient by stomach tube, common practice is to pass a clear plastic tube, about three-sixteenth inch in outside diameter, through a nostril and into the stomach. The tube is then fastened to the patient's face near the nostril by adhesive tape, and the outer end of the tube is connected to a bottle containing the sustagen which is to be fed into the patient's stomach.

A gastric tube used to remove fluids from a patient's stomach is similar to the stomach tube, but usually larger in diameter. The gastric tube is inserted and secured in the same manner as the stomach tube.

In using either the stomach or gastric tube as described, peristaltic motions or movements of the patient's body in bed may cause the tube to be pulled partly out of the stomach. In the case of a conscious or semiconscious patient, he may succeed in partly or wholly removing the tube with his hand. Thus in common practice it is always necessary for a nurse to watch the patient closely to see that the tube is not dislodged.

SUMMARY OF THE INVENTION

The present invention eliminates the need for strapping the tube to the patient's face with adhesive tape, secures the tube so near to the patient's nostril as to eliminate the possibility of formation of a loop of tubing at that point, and holds the tubing so firmly that it cannot be retracted or pulled out of the stomach by voluntary or involuntary movements of the patient.

The invention comprises a plastic supportive tube, larger than the tube to be inserted into the stomach, and an elastic tape. The supportive tube, about 8 inches long, is laid across the patient's face, under his nose, and held in place by the elastic tape, which is fastened to one end of the supportive tube, passed around the patient's head and fastened to the other end of the supportive tube. The smaller tube to be passed into the stomach is passed into one end of the supportive tube and out of an orifice therein close to one nostril of the patient. The smaller tube is then passed through a nostril and into the patient's stomach. The smaller tube is wedged where it enters the supportive tube and the wedge is, in turn, held in place by the end of the elastic tape.

The stomach end of the smaller tube is split for a short distance to facilitate stomach washing.

BRIEF DESCRIPTION OF THE DRAWING

A further understanding of the invention may be secured from detailed description and the drawing, in which:

FIG. 1 is a general view of the supportive device.

FIG. 2 is a picture of the supportive device in place on a patient.

FIG. 3 is an enlarged view of the entering end of the supportive tube showing the wedge and means of securing it.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. 1, a supportive tube, 11, is made of plastic material, preferably of clear, flexible plastic such as polyvinyl. Another tube, 12, which may be a stomach tube or gastric tube, is smaller in diameter than the supportive tube, so that the smaller tube can easily be slid inside the larger tube. As examples of dimensions, the supportive tube could have an outside diameter of three-eighths inch and a length of about 8 inches; a stomach tube could have an outside diameter of three-sixteenths inch and be long enough to reach from the sustagen bottle, through the supportive tube and the patient's nostril to his stomach. Gastric tubes are somewhat larger than

stomach tubes but the diameter of the supportive tube 11 is made large enough to take either kind, gastric or stomach. Since gastric tubes do not otherwise differ substantially from stomach tubes, gastric tubes are not illustrated.

The construction of the stomach and gastric tubes is not novel except for one detail, which is a small split, 13, in the stomach end of the stomach and gastric tubes. The function of this split is, after feeding, when water is passed down the tube into the stomach, washing and clearing of the end of the tube from any sustagen is facilitated by the small split, which permits a small amount of flexing and distending of the tube walls at the exit end.

The supportive tube 11 is provided with a tab or ear, 14 and 16, at each end. Each tab is provided with a slot or elongated aperture, 17 and 18. An elastic tape, 19, is threaded through the slots. At slot 18 the tape is terminated in a knot, 21, or otherwise prevented from pulling out of the slot. At slot 17 the tape is passed through one end of a short length of plastic tubing, 22, termed a wedge, and then is knotted at 23 or otherwise prevented from pulling out of the tubing 22.

The plastic tubing 22 may, for example, have the diameter in this illustration of three-sixteenth inch and have a length of about 1 inch. It may, in fact, consist of the same kind of tubing as used in making the exampled stomach tube.

The supportive tube 11 is also provided, approximately but not exactly at a spot halfway between its ends, with an elongated aperture 24. This aperture is large enough to accommodate either a stomach tube or a gastric tube, so that, when the tube 12 is inserted in the nearer or entrance end of the supportive tube 11, at tab 14, the tube 12 can easily be pushed through the supportive tube 11 and out through the large slot 24, to assume the position illustrated in FIG. 1.

In using this invention, the supportive tube 11 is passed across the face of the patient under his nose, as shown in FIG. 2, with the elastic tape, 19, passed above the ears and around the head to hold the tube 11 firmly in place. The stomach or gastric tube, for example a stomach tube 12, is passed into a nostril of the patient, as shown at 26, and down into his stomach.

The aperture 24, FIG. 1, is designed to be slightly off-center so that, when the stomach tube is passed through aperture 24 into the nostril which is nearer to the aperture, there is minimum length of stomach tube between the aperture and the nostril. This is important to prevent the formation of a loop at this point, thus preventing the tube from working out of the stomach.

If it is desired to employ the other nostril for insertion of the stomach tube, the entire device can be reserved so that the aperture 24 becomes adjacent to the other nostril.

The supportive tube firmly holds the stomach tube at the selected nostril, thus taking the place and performing the function heretofore performed in common practice by a piece of tape. The short piece of tubing 22, FIG. 1, termed a wedge, is now inserted in the supportive tube end adjacent to tab 14, FIGS. 1 and 2, and pressed in so that the stomach tube 12 and the supportive tube 11 are firmly wedged or locked together by friction at this point. This prevents the peristaltic action of the bowels from working the stomach tube out of its position in the stomach.

This locking action of the wedge is more clearly shown in FIG. 3, in which the wedge 22 is shown in place. The elastic tape, 19, is threaded through the tab slot 17 and through a slot 27 in the wedge 22, then is knotted. Thus tension on the elastic tape 19 as it holds the supportive tube 11 in place also draws the wedge 22 close to the tab 14, so that the wedge is prevented from slipping out or being dislodged.

What is claimed is:

1. The combination comprising:

a stomach tube;

supportive means for said stomach tube comprising a supportive tube of pliable plastic material large enough in bore to enclose said stomach tube and at least long enough to stretch under a patient's nose and nearly from

ear to ear, and having an aperture near its middle large enough to accommodate the exit from the supportive tube of said stomach tube, said stomach tube passing into one end of said supportive tube and out of the middle aperture thereof, so that the stomach tube may then be threaded into a nostril of the patient and into his stomach;

an elastic elongated member secured at each end respectively to an end of said supportive means, and having a stretched length sufficient to go around the back of said patient's head, whereby the supportive means may be held in front of the patient's face by the elastic elongated member positioned behind the patient's head; and

means securing said stomach tube to the said supportive means whereby the stomach tube cannot easily be freed from said supportive means by a conscious or unconscious patient.

2. A combination in accordance with claim 1 in which said supportive tube is provided at each end with an aperture whereby an end of said elastic elongated member may be secured in one said aperture, passed around the patient's head and secured in the other aperture.

3. A combination in accordance with claim 1 in which said means securing the stomach tube to the supportive tube comprises a pliable elongated wedge having a width at one end suitable to enter one end of the supportive tube while the stomach tube is therein.

4. A combination in accordance with claim 3 in which said wedge is provided at one end with an aperture sufficiently large to accommodate said elastic elongated member, whereby, with the wedge in place in the supportive tube, when the elastic elongated member is passed through one of the apertures in the supportive tube, then is passed through the wedge aperture and then is knotted, the tension of the elastic elongated member prevents removal of the wedge by a patient, in turn preventing withdrawal of the stomach tube from the patient's stomach.

5. In the combination of a supportive device with a patient's stomach or gastric tube:

a supportive tube of pliable, transparent plastic material large enough in bore to enclose said stomach or gastric tube and long enough to stretch under a patient's nose and nearly from ear to ear, and having an aperture near its middle large enough to accommodate a stomach or gastric tube, and having an elongated tab at each end containing a slot, said stomach or gastric tube entering one end of said supportive tube and exiting from said middle aperture thereof, whereby when in place on a patient the exiting stomach or gastric tube may enter a nostril and pass to the stomach of the patient;

an elastic tape secured through said slots in the supportive tube tabs and having a stretched length sufficient to go around the back of said patient's head, whereby said supportive tube is held to the patient's face; and

a wedge consisting of a short length of plastic tubing of approximately the diameter of said stomach tube, said wedge containing a slot near one end, said wedge being positioned in one end of said supportive tube wedged in the bore thereof beside said stomach or gastric tube, the wedge having its slotted end outermost, the end of said elastic tape passing through both the slot in said supportive tube and the slot in said wedge, then knotted so that it cannot be withdrawn from the slots.

6. A combination in accordance with claim 5 including an opening or split in the stomach end of said stomach or gastric tube, whereby during irrigation particle dislodgment from the tube is facilitated.

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