United States Patent

[11] 3,570,494

[72] Inventor George H. Gottschalk
8618 S. Sepulveda, Los Angeles, Calif. 90045

[21] Appl. No. 783,839
[22] Filed Dec. 16, 1968
[45] Patented Mar. 16, 1971

[54] NASAL TAMPON
11 Claims, 8 Drawing Figs.

[52] U.S. Cl. 128/325
[51] Int. Cl. A61b 17/12
[50] Field of Search ..... 128/328, 344, 129, 349 (B), 349 (BV), 342, 348, 303.11, 303.12; 128/325, 349

[56] References Cited

UNITED STATES PATENTS

2,493,326	1/1950	Trinder	128/325
2,847,997	8/1958	Tibone	128/325
3,045,677	7/1962	Wallace	128/349

Primary Examiner—Richard A. Gaudet
Assistant Examiner—J. B. Mitchell
Attorney—Max Geldin

ABSTRACT: A self-retaining nasal tampon particularly designed to control nasal hemorrhaging, comprising, according to a preferred embodiment, an elongated flexible tube open at one end and sealed at its opposite end, a plurality of, e.g., three, inflatable sleeves surrounding and sealingly attached to the tube, preferably one such sleeve adjacent the closed end of the tube, one adjacent the open end of the tube and a third inflatable sleeve disposed around the tube intermediate the ends thereof, and including means positioned within the tube to permit facile inflation of each of the inflatable sleeves independently of each other to form respective inflated bags or balloons, and to retain such bags in their inflated position, and also to permit selective deflation of such inflated bags when desired, for removal of the device from the nasal passage.

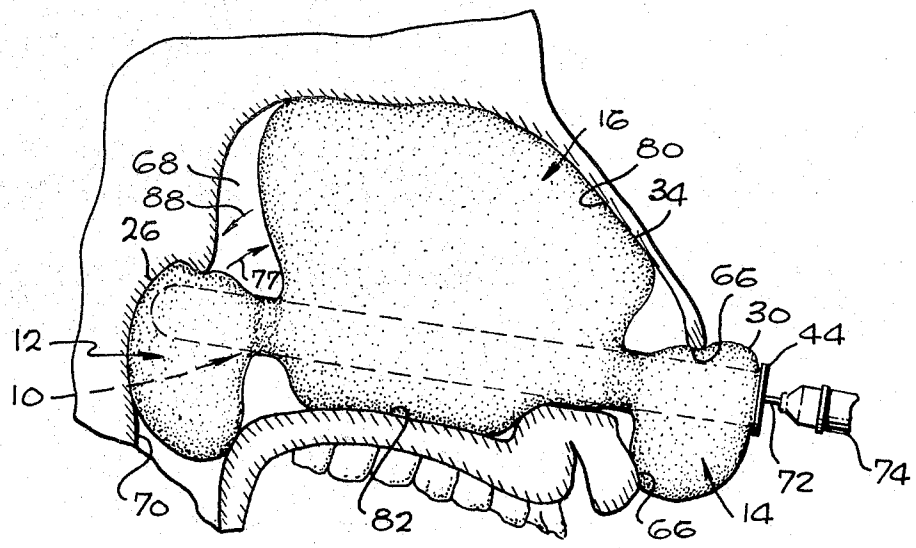


Fig. 1

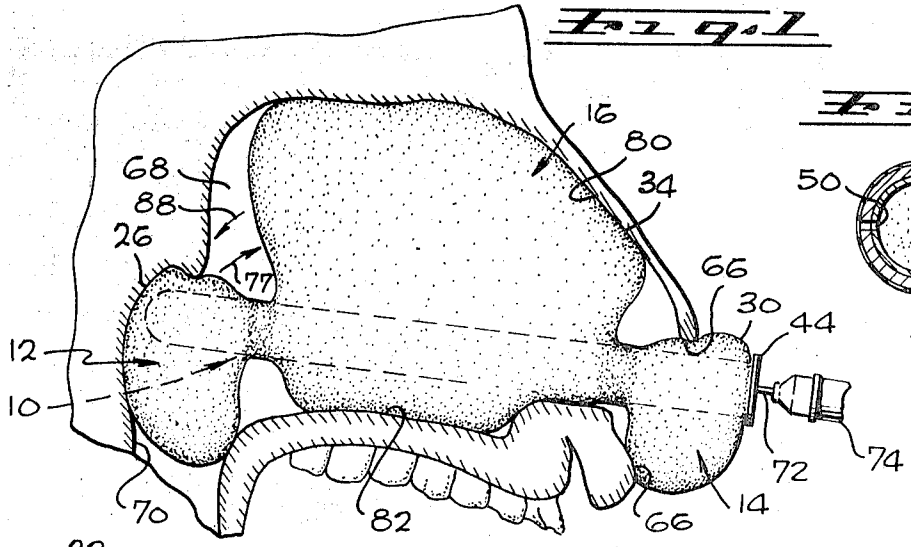


Fig. 3

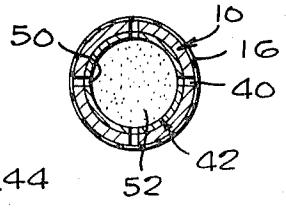


Fig. 2

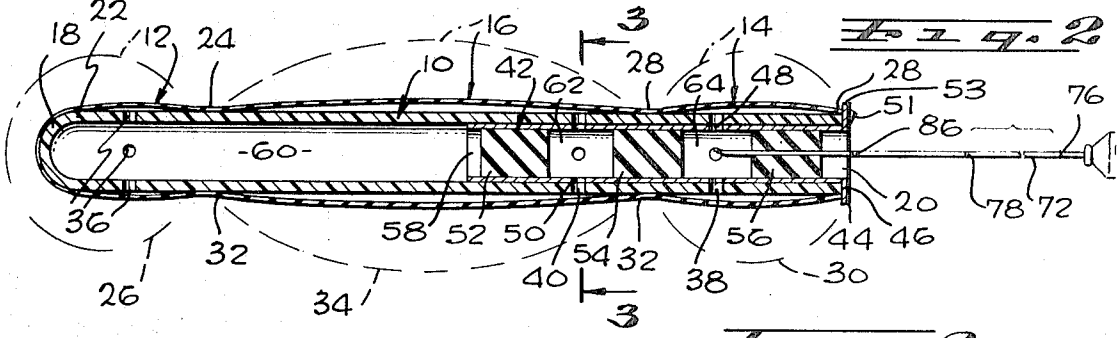


Fig. 6

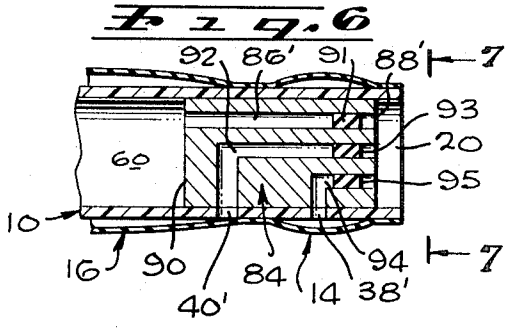


Fig. 4

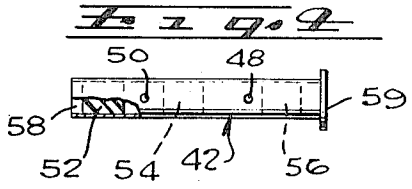


Fig. 7

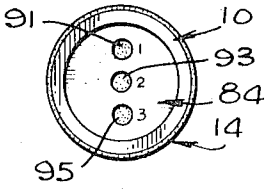


Fig. 8

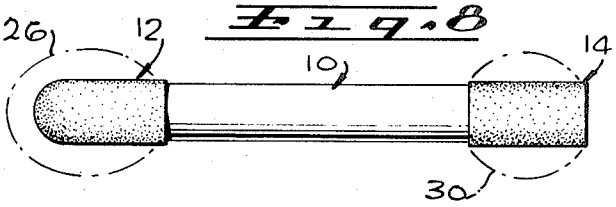
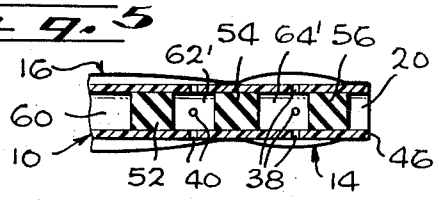


Fig. 5



INVENTOR.
GEORGE H. GOTTSCHALK
BY Max Gilden
ATTORNEY

NASAL TAMPON

This invention relates to a self-retaining nasal or nasopharyngal tampon, and is particularly concerned with a tampon of the above type which can be readily inserted into the nasal passage to control nasal hemorrhaging without the need of packing the nose with gauze, and which includes a plurality of inflatable members which can be readily inflated selectively when the device deflated inserted into the nasal passage, and preferably including a middle inflatable member forming a bag or balloon which substantially fills the nasal cavity and supplies the necessary pressure for hemostasis, with additional inflatable members provided at opposite ends of the tube so that when inflated they retain the device in fixed position until such inflated bags are eflated for removal of the device from the nasal passage.

Inflatable bag catheters employed in various body drainage procedures are well-known in the art, employing various techniques for inflation of such catheters for retention in their proper position in the body region in which they are placed.

However, a particular need has arisen for a nasal tampon for use in controlling nasal hemorrhaging and postadenoidectomy bleeding, without the need of packing the nose with gauze, which tampon can be readily inserted into the nasal passage and can be quickly and easily inflated to form one or more balloons which fill the nasal cavity and/or the nasopharynx to supply the necessary pressure for hemostasis, and including means to retain the tampon in the nasal passage and/or the nasopharynx for any desired period, and which can be readily deflated as desired for easy and painless removal from the nasal cavity.

These requirements are achieved according to the invention by the provision of a device comprising an elongated flexible, e.g., rubber tube, a plurality of inflatable sleeves sealingly surrounding such tube, preferably one such sleeve located adjacent the outer closed end of the tube and one adjacent the open inner end of the tube, and a middle sleeve around the intermediate portion of the tube between the ends thereof and which forms a large inflated bag or balloon, with passage means between the interior of the tube and each of the inflatable sleeves for selective inflation thereof.

As a particular feature of the invention, there is provided within the tube, means permitting the selective and independent inflation of the respective balloons, as by a syringe or other suitable means, and to permit sealing of various interior portions of the elongated tube, to retain the respective inflated bags or balloons in their inflated position following inflation thereof, but to permit deflation of such inflated bags or balloons at the desired time. Such means can include, for example, a series of soft rubber plugs positioned within the flexible tube or within an insert positioned in such flexible tube, such soft rubber plugs being capable of being punctured as by the needle of a syringe for inflating the respective inflatable members, and being resealable upon removal of the needle. Puncture of the respective soft rubber plugs by the syringe needle permits introduction of inflating fluid via passage means suitably located in the outer wall of the flexible tube, and into the respective inflatable sleeves to permit inflation thereof.

According to one embodiment, a series, e.g., three, of such flexible plugs are disposed within the flexible tube adjacent the inner end thereof, such plugs being spaced from each other, to provide a series of enclosed zones in the tube in communication with a plurality of passage means in the tube wall, to the respective inflatable members, and for filling such inflatable members the needle of a syringe is passed in series through and then withdrawn from these plugs. According to another embodiment, an insert is provided in the inner end of the tube containing a series, e.g., three, separate channels each containing a separate soft rubber plug and each communicating with a respective one of the inflatable members via the passage means thereto in the wall of the elongated tube. In this case, the needle of the syringe is passed into and withdrawn from each of the respective plugs for inflation of the respective inflatable members.

There is thus provided according to the invention, a self-retaining nasal tampon comprising an elongated flexible tube open at one end and closed at its opposite end, a plurality of independently inflatable members surrounding and sealingly attached to said tube, said members being spaced longitudinally along said tube and each said inflatable members being free to expand and form an inflated bag around said tube, passage means communicating the interior of said tube with each of said inflatable members to permit selective inflation of said respective members by fluid introduced into said tube and into said respective members via said passage means, and a plurality of sealing means positioned within said tube, said sealing means being respectively located to permit inflation of each of said inflatable members independently, and to prevent deflation of said inflatable members after inflation thereof.

The invention will be more clearly understood by reference to the description below of various embodiments of the invention, taken in connection with the accompanying drawing, wherein:

FIG. 1 illustrates application of the nasal tampon of the invention, showing the device inserted into the nasal passage and the inflatable members inflated into operative position to control hemorrhaging and to retain the device in position in the nasal passage;

FIG. 2 illustrates a preferred embodiment of the invention device;

FIG. 3 is a section taken on line 3–3 of FIG. 2;

FIG. 4 shows the metal sleeve containing the soft rubber plugs employed in the device of FIG. 2;

FIG. 5 shows a modified form of the embodiment of FIG. 2;

FIG. 6 is an enlarged longitudinal sectional detail of another modification of the device of FIG. 2;

FIG. 7 is an end view of FIG. 6, taken on line 7–7 of FIG. 6; and

FIG. 8 is an illustration of another modification of the invention device.

Referring first to FIG. 2 of the drawing, showing a preferred embodiment of the invention device, numeral 10 is an elongated flexible tube, preferably formed or rubber, but which can be formed on any suitably flexible plastic material, having three inflatable elastic members or sleeves 12, 14 and 16 surrounding and sealingly attached to the tube 10, such tube being closed at one end as indicated at 18, termed herein the outer end of the tube, and being open at its other end, as indicated at 20, and termed herein the inner end of such tube.

Thus, one of the inflatable members 12 is positioned around the outer end portion 22 of flexible tube 10 and extends around the closed end 18 of the tube, such inflatable member 12 being circumferentially sealed or adhered at its inner edge 24 to the outer wall of the flexible tube 10 by suitable means such as adhesives, heat sealing or vulcanization, the remainder of the inflatable member or sleeve 12 remaining unattached so that the member 12 upon inflation forms a bag or balloon surrounding the outer end portion of tube 10, as indicated by the dotted lines 26. The inflatable elastic member or sleeve 14 positioned adjacent the inner open end 20 of the flexible tube 10 is sealed circumferentially at its opposite edges 28, as by an adhesive, heat sealing or vulcanization to the outer wall of the tube 10, the remainder of the member 14 being unattached and forming a bag or balloon surrounding the inner portion of tube 10 when inflated, as indicated by the dotted lines 30.

The large middle elastic inflatable member or sleeve 16 disposed between members 12 and 14 is circumferentially sealed at its opposite circumferential edges 32 to the outer wall of the flexible tube 10 also by an adhesive, heat sealing or vulcanization, the remainder of member 16 being unattached so that such member upon inflation forms a large central bag or balloon surrounding the middle portion of tube 10, as indicated by the dotted lines 34. In the embodiment shown in FIG. 2, it will be noted that the outer edges 32 of the middle large inflatable member or sleeve 16 are disposed close to the adjacent peripheral edge 24 of inflatable member 12, and the adjacent peripheral edge 28 of inflatable member 14.

The flexible tube 10 has a series of four peripheral apertures 36 adjacent the closed end 18 of the tube 10; a second series of four peripheral apertures 38 in the tube wall adjacent the inner end 20 of tube 10; and a third series of four peripheral apertures 40 in an intermediate wall portion of the tube between the apertures 36 and 38, the apertures of each series being equally spaced 90° from each other and being disposed in a plane substantially normal to the axis of tube 10. The apertures 36 are positioned to provide communication between the interior of tube 10 and the interior of inflatable member 22; apertures 38 are located to provide communication between the interior of tube 10 and the interior of the inflatable member 14; and apertures 40 are positioned to provide communication between the interior of tube 10 and the interior of the middle large inflatable member 16.

Disposed within the open end 20 of tube 10 is a metal sleeve 42 (see also FIG. 4), the outer wall of which fits snugly against the inner surface of the wall of tube 10, the sleeve 42 being open at its opposite ends, and containing an end flange 44 which rests against the outer edge 46 of the tube 10, such flange serving to position the sleeve properly within the tube 10. The sleeve 42 is preferably firmly attached to the inner surface of the wall of tube 10, e.g., by a suitable adhesive, although not necessarily if the fit is sufficiently tight to prevent leadage between the outer wall of the sleeve and inner wall of tube 10. The sleeve 42 has a first series of four peripheral apertures 48, as in the case of the four peripheral apertures 38 in the wall of tube 10, and spaced 90° from each other as in the case of the peripheral apertures 38, and when the sleeve is properly positioned within the tube 10, the apertures 48 in the sleeve 42 register with the respective apertures 38 of the tube wall 10 to permit communication between the interior of sleeve 42 and the interior of the inflatable elastic member 14, as also illustrated in FIG. 3. Also, sleeve 42 has a second series of four peripheral apertures 50, the same as the number of apertures 40 in the wall of tube 10, and also spaced 90° from each other, so that when sleeve 42 is properly positioned within the tube 10 the apertures 50 in the sleeve register with the apertures 40 in the tube wall, to provide communication between the interior of sleeve 42 and the interior of the large elastic middle member 16. Each series of apertures 48 and 50 are is a plane positioned substantially normal to the axis of sleeve 42. The positioning of the sleeve 42 so that the respective apertures in the sleeve and in the tube wall are registered, can be achieved by rotating the sleeve so that a line 51 marked on sleeve flange 44, is in alignment with a line 53 marked on the adjacent portion of member 14.

Within the sleeve 42 there is provided three separate plugs 52, 54 and 56, such plugs being formed of soft rubber having characteristics such that they can be punctured, as by a hypodermic needle of a syringe, but upon removal of such needle, the plugs are resealable. Plug 52 is disposed adjacent the outer open end 58 of the sleeve 42, and to left of the apertures 50 therein, as viewed in FIG. 2; plug 54 is disposed in the central portion of sleeve 42 and spaced from plug 52, plug 54 being disposed between the peripheral apertures 48 and 50 of the sleeve 42; and plug 56 is disposed adjacent the inner open end 59 of sleeve 42 and spaced from plug 54, plug 56 being disposed to the right of apertures 48 in sleeve 42, as viewed in FIG. 2.

It is thus seen that plug 52 forms an enclosed space 60 between plug 52 and the closed end 18 of tube 10, and communicating via apertures 36 with the interior of inflatable member 12; spaced plugs 52 and 54 form an enclosed space 62 in sleeve 42, communicating via apertures 50 and 40 with the interior of the large middle inflatable member 16; and spaced plugs 54 and 56 form an enclosed space 64 communicating via apertures 48 and 38 with the interior of the inflatable member 14.

In operation, to control nasal hemorrhage, the nasal tampon of the invention illustrated in FIG. 2 is inserted with the closed end 18 of tube 10 first, through the nostril 66 and into the nasal passage 68 of a person, with the outer closed end 18 of the tube positioned adjacent the inner end of the nasal passage, i.e., adjacent the nasopharynx 70 leading to the throat, the middle portion of tube 10 surrounded by the large inflatable member 16 disposed entirely within nostril 68, and the inner end 20 of the tube disposed just outside nostril 66. The hypodermic needle 72 of a syringe 74 is pushed through plugs 56, 54 and 52 in succession until the end of the hypodermic needle is disposed just to the left of plug 52 as indicated in FIG. 2 and communicating with the enclosed space 60 in the outer portion of tube 10. The position of the end of the needle through plug 52 and extending into space 60 can be ascertained by means of a mark 76 at the base of needle 72, when such mark is disposed adjacent the sleeve flange 44. The water or other fluid, e.g., air, from the syringe is then injected into the enclosed or sealed portion 60 of tube 10 and via apertures 36 into the inflatable member 12 to inflate same to the proper extent as illustrated at 26 in FIGS. 1 and 2. In this inflated position as seen in FIG. 1, the bag 26 is disposed under pressure against the adjacent walls of the nasopharynx at the inner end of the nasal cavity, retaining the device in this position and restraining movement thereof outwardly, as indicated by arrow 77 in FIG. 1.

After inflation of bag 12, which is indicated to the operator or physician by an increased back pressure in the syringe 74, the needle 72 is withdrawn through the forward plug 52, closing the plug and resealing the enclosed space 60, thus preventing water from escaping from member 12 and maintaining member 12 in its inflated condition 26. When another intermediate marking 78 on the needle 72 is adjacent the sleeve flange 44, this indicates that the end of the needle 72 is now disposed in the enclosed space 62 between the plugs 52 and 54. Water from the syringe 74 is then injected into the enclosed space 62 and via the apertures 50 in sleeve 42 and apertures 40 in tube 10, into the large inflatable middle member 16, and the member 16 is then inflated until the surfaces thereof are in tight engaging contact with a substantial portion of the inner surfaces 80 and 82 of the nasal passage 68, the resulting inflated bag or balloon now being in the position indicated at 34 in FIGS. 1 and 2. This inflated position of member 16 is again signaled by a rise in back pressure in the syringe 74.

In position 34 of the large middle inflatable member 16, as illustrated in FIG. 1, the inflated bag 34 in under sufficient pressure against the walls 80 and 82 of the nasal passage to effectively function to prevent or control hemorrhage or bleeding form the major portion of the inner walls of the nasal cavity 68, and to effectively plug the nasal cavity until hemorrhaging is arrested. Upon withdrawal of the inner end of needle 72 from the central plug 54, the plug closes the needle formed opening therein so that space 62 becomes enclosed and sealed and no water escapes therefrom or from the balloon 16, and such bag or balloon remains inflated.

The needle 72 of the syringe is then positioned with its inner end in the space 64 between plugs 54 and 56, as shown in FIG. 2, such position being indicated by a third marking 86 on the needle 72, when disposed adjacent the sleeve flange 44, as seen in FIG. 2. Water from the syringe is then injected into space 64 and via the apertures 48 in sleeve 42 and apertures 38 in tube 10, into the inflatable member 14 to inflate same to the position indicated at 30 in FIGS. 1 and 2, with the resulting inflated bag pressed against the edges of the nostril 66, as illustrated in FIG. 1, with the outer portion of inflated bag 30 disposed outside the nostril and serving further to anchor the tampon, to prevent any movement of the device in an inner direction as indicated by arrow 88 in FIG. 1. The proper inflation of member 14 to its inflated anchoring position indicated at 30, is controlled by visual inspection, since this bag extends exteriorly of the nose, as seen in FIG. 1. When this occurs, the needle 72 is withdrawn from plug 56, and the plug closes the needle formed opening to seal the space 64 so that no water escapes from inflated bag 30 and such bag remains in its inflated condition.

The inflated balloons 26, 34 and 30 are retained in their fixed position within the nasal passage 68, as indicated in FIG. 1, until hemorrhaging is effectively controlled or ceases. The balloons can then be deflated by first passing the needle through plugs 56, 54 and 52 into space 60, and withdrawing the water from inflated balloon 26 to deflate same; the needle is then withdrawn from plug 52 into space 62 and the withdrawn from the large inflated middle balloon 34; followed by withdrawal of the needle 72 through plug 54 and into the space 64, and water is withdrawn from the inflated balloon 30, followed by removal of the needle from plug 56. Actually, after deflation of the inflated balloons 26 and 34, the device can be pulled from the nasal passage 68 through the nostril 66 without deflating the inflated balloon 30.

It is thus seen from the above description of the device of FIGS. 1 to 4, that the inflatable members 12, 14 and 16 can be selectively inflated individually and independently of the other inflatable members, rapidly and in any desired sequence. This provides a means for readily and quickly controlling nasal hemorrhage and bleeding, particularly in emergencies, and can be operated easily by any technician or physician, without being a specialist in nose and throat medicine.

In the event it is desired to employ the device of FIGS. 1 to 4 for control of postadenoidectomy bleeding which takes places in the nasopharynx 70, then only inflatable bags 12 and 14 are inflated, without inflating bag 16. Under these conditions the inflated bag 26 under pressure against the walls of the nasopharynx 70 controls postadenoidectomy bleeding.

The embodiment illustrated in FIG. 5 is the same as that illustrated in FIG. 2, except that in FIG. 5 the sleeve 42 is not employed. In FIG. 5 the plugs 52, 54 and 56 are positioned within the flexible tube 10 in substantially the same longitudinal location therein as shown in FIG. 2, forming an enclosed space 66' in the tube in communication with inflatable member 16 via tube wall passages 40, and an enclosed space 64' in the tube 10 between plugs 54 and 56 and in communication with the inflatable member 14 via the tube wall passages 38.

Although the embodiment of FIG. 2 involves the use of an additional member namely, the insert or sleeve 42, such sleeve is readily manufactured and the plugs 52, 54 and 56 can be easily positioned therein and the resulting assembly illustrated in FIG. 4 then readily inserted into the inner end of tube 10 and rotated to the proper registering position of the apertures 48 and 50, with the corresponding apertures 38 and 40 in the tube wall, as described above. The use of a metal sleeve auch as 42 has the additional important advantage that it prevents accidental puncture of the tube 10 by the hypodermic needle of the syringe.

Referring now to FIG. 6 there is shown another embodiment of the invention concept employing a plug insert, e.g., formed of a molded plastic, indicated generally at 84, instead of the sleeve 42 and plug arrangement 52, 54 and 56 therein as illustrated in FIG. 2. In FIG. 6, the plug 84 is inserted into the open end 20 of tube 10, and such plug has a first passage 86' entirely through the plug from its outer face 88' to the opposite inner face 90 thereof. The plug also has a second channel 92 spaced radially from channel 86', channel 92 being L-shaped and communicating from outside the outer face 88' of the plug with one or more apertures 40', communicating with the interior of the large inflatable member 16. Plug 84 also has a third smaller L-shaped channel 94 communicating from the exterior of the plug adjacent the outer face 88', with one or more passages 38' in the wall of tube 10, thus communicating with the interior of the inflatable member 14. A soft rubber plug 91 is positioned in channel 86', a second soft rubber plug 93 is positioned in channel 92; and a third soft rubber plug 95 is positioned in channel 94, each of said plugs being located closely adjacent the outer face 88' of the plug insert 84.

In operation, for inflating the outer inflatable member 12 to the position illustrated at 26 in FIGS. 1 and 2, the hypodermic needle 72 of the syringe 74, illustrated in FIGS. 1 and 2, is pushed through plug 91 in channel 86', and water from the syringe injected into member 12 to inflate same as described above, following which the needle is withdrawn from plug 91 to seal space 60 and retain balloon 26 in its inflated condition. The hypodermic needle is then pushed through plug 93 in channel 92 and water injected into the inflatable member 16 to inflate same to the position indicated at 34 in FIGS. 1 and 2, followed by withdrawal of the hypodermic needle to seal channel 92 and maintain the water in balloon 34 to retain same in its inflated condition. Finally, the hypodermic needle is pushed through the third plug 95 in channel 94, to inject water into the inflatable member 14 to inflate same to the condition indicated at 30 in FIGS. 1 and 2, following which the needle is withdrawn from plug 95 to close or seal the channel 94 to retain the water in balloon 30 and maintain it in its inflated condition. Hence, in the modification of FIG. 6, the hypodermic needle of the syringe is pushed into and completely withdrawn from plugs 91, 93 and 95 and their respective channels, identified by indicia 1, 2, and 3, respectively, on the outer face 88' of the plug 84, as seen in FIG. 7. Here again, as in the embodiment of FIGS. 1 to 4, in FIG. 6 the inflatable members 12, 14 and 16 positioned around tube 10 can be inflated in any desired sequence. For deflating the balloons in the embodiment of FIG. 6, the hypodermic needle of the syringe is pushed through the respective plugs 91, 93 and 95 and the water removed from the respective inflated balloons 26, 34 and 30 in the same manner as described above with respect to FIGS. 1 and 2.

It will be understood that the concept of the present invention can be employed using a plurality of inflatable members on the flexible tube 10, e.g., two, three or more, of such inflatable members. Thus, in the embodiment illustrated generally in FIG. 8, only the two inflatable members 12 and 14 at the outer and inner ends of tube 10 are employed. This can be accomplished by modification of the embodiment of FIG. 2 to remove plug 52 and not providing apertures 40 and 50 in tube 10 and sleeve 42, respectively. Such device can then be used as a nasopharyngal tampon to control postadenoidectony bleeding by inflating members 12 and 14 to their inflated condition indicated at 26 and 30 in FIG. 8, for this purpose.

In still 2. embodiment provide shown) employing four inflatable members or bags, in addition to the inflatable members 12 and 14 around the outer and inner ends of tube 10, there can be employed a pair of intermediate inflatable members in place of the one large inflatable member 16 of FIG. 0. This can be accomplished, e.g., by modification of the embodiment of FIG. 2. to lengthen sleeve 42 and to PROVIDE an additional soft rubber plug in sleeve 42, spaced from and to the left of plug 52 in FIG. 2, with an additional set of registering apertures in the wall 10 of the tube and the sleeve 42, between said additional plug and plug 52, so as to permit independent inflation of the above-noted pair of intermediate inflatable members.

Water, rather than a gaseous fluid such as air, preferably is used to inflate the inflatable members, e.g., 12, 14 and 16, since an exact amount of water can be easily measured and the volume displacement of the respective inflated bags predetermined. Also, water does not permeate rubber walls as do many gases and the inflation of the bags remains relatively permanent until the water is drained from the inflated balloons.

The term "nasal tampon" as employed in the specification and claims is intended to include use of the device also as a nasopharyngal tampon, as described above.

While I have described particular embodiments of my invention for the purpose of illustration, it should be understood that various other modifications and adaptations thereof may be made within the spirit of the invention, and hence the invention is not to be taken as limited except by the scope of the appended claims.

I claim:

1. A self-retaining nasal tampon comprising an elongated flexible monoaxial tube open at one end and closed at its opposite end, said tube containing a single axial passage, a plurality of independently inflatable members surrounding and

sealingly attached to said tube, said members being spaced longitudinally along said tube and each said inflatable member being free to expand and form an inflated bag around said tube, passage means communicating the interior of said tube with each of said inflatable members to permit selective inflation of said respective members by fluid introduced into said tube and said respective members via said passage means, and a plurality of sealing means all positioned within said single axial passage of said tube, said sealing means (being respectively located) each having an inner face in communication with one of said passage means and an exterior face located and arranged to permit communication between each of said inner faces and a source of fluid under pressure, to permit inflation of each of said inflatable members independently, and to prevent deflation of said inflatable members after inflation thereof.

2. A self-retaining nasal tampon as defined in claim 1, a first one of said inflatable members being disposed adjacent and around said closed outer end of said flexible tube, and a second one of said inflatable members being disposed adjacent and around said inner open end of said tube.

3. A self-retaining nasal tampon as defined in claim 2, and including a third one of said inflatable members disposed around said flexible tube intermediate the ends thereof, and including three separate passage means each communicating with a separate one of said three inflatable members.

4. A self-retaining nasal tampon as defined in claim 2, including an insert disposed in said tube adjacent the open end thereof and closing said open end of said tube, a plurality of channels in said insert, one of said channels communicating with said outer end of said tube and with said first inflatable member, and another of said channels communicating with said second inflatable member, said sealing means comprising a soft rubber plug, said plug being capable of being punctured and being resealable, one of said plugs positioned in said one of said channels and another of said plugs positioned in another of said channels.

5. A self-retaining nasal tampon as defined in claim 3, including plug insert disposed in said tube adjacent the open end thereof and sealing said open end of said tube, three separate channels in said insert, a first one of said channels communicating with said outer end of said tube and with said first inflatable member via a first one of said passage means in said tube, a second one of said channels communicating with said second inflatable member via a second one of said passage means in said tube, and a third one of said channels communicating with said third inflatable member via a third one of said passage means in said tube, said sealing means comprising a soft rubber plug, said plug being capable of being punctured and being resealable, one of said plugs positioned in said first channel, a second plug positioned in said second channel and a third plug positioned in said third channel, said first, second and third plugs each sealing communication from the atmosphere outside said tube, with said first, second and third inflatable members, respectively.

6. A self-retaining nasal tampon as defined in claim 1, said plurality of sealing means being spaced axially from each other along said axial passage of said tube, said sealing means each being capable of being selectively punctured by a needle without removal of said needle from said tube.

7. A self-retaining nasal tampon comprising an elongated flexible tube open at one end and closed at its opposite end, a plurality of independently inflatable members surrounding and sealingly attached to said tube, said members being spaced longitudinally along said tube and each said inflatable member being free to expand and from an inflated bag around said tube, a first one of said inflatable members being disposed adjacent and around said closed outer end of said flexible tube, and a second one of said inflatable members being disposed adjacent and around said inner open end of said tube, passage means communicating the interior of said tube with each of said inflatable members to permit selective inflation of said respective members by fluid introduced into said tube and said respective members via said passage means, and a plurality of sealing means positioned within said tube, said sealing means being respectively located to permit inflation of each of said inflatable members independently, and to prevent deflation of said inflatable members after inflation thereof, said sealing means each comprising a soft rubber plug, said plug being capable of being punctured and being resealable, a first one of said plugs positioned in said tube to seal the outer portion of said tube between said closed end of said tube and said plug, said sealed outer end of said tube communicating with said first inflatable member via a first one of said passage means, a second one of said plugs positioned in said tube and spaced from said first plug, said second plug disposed between said first plug and said open end of said tube and forming another sealed space in said tube between said first and second plugs, said last-mentioned sealed space communicating with said second inflatable member via a second one of said passage means.

8. A self-retaining nasal tampon as defined in claim 7, including a sleeve positioned in the inner end portion of said tube adjacent said open end thereof, said first and second plugs positioned in said sleeve, said sleeve including a third passage means, said third passage means registering with said second passage means in said tube.

9. A self-retaining nasal tampon as defined in claim 7, including a third one of said inflatable members disposed around said flexible tube intermediate the ends thereof, three separate passage means each communicating the interior of said tube with a separate one of said three inflatable members, three said sealing means, each comprising a soft rubber plug, said plug being capable of being punctured and being resealable, a first one of said plugs positioned in said tube to seal the outer portion of said tube between said closed end of said tube and said first plug, said sealed outer end of said tube communicating with said first inflatable member via a first one of said passage means, a second one of said plugs positioned in said tube and spaced from said first plug, said second plug disposed adjacent said open end of said tube, and a third one of said plugs positioned in said tube intermediate said first and second plugs and forming a second sealed space between said second and third plugs and a third sealed space between said first and third plugs, said second sealed space communicating with said second inflatable member via a second one of said passage means, and said third sealed space communicating with said third inflatable member via a third one of said passage means.

10. A self-retaining nasal tampon as defined in claim 9, each of said three passage means comprising a plurality of peripheral apertures in said tube disposed in a plane positioned substantially normal to the axis of said tube.

23

11. A self-retaining nasal tampon as defined in claim 10, including a sleeve positioned in the inner end portion of said tube adjacent said open end thereof, said three plugs positioned in said sleeve, said sleeve including a fourth passage means registering with said second passage means in said tube, and a fifth passage means registering with said third passage means in said tube, each of said passage means in said sleeve comprising a plurality of peripheral apertures in said sleeve disposed in a plane positioned substantially normal to the axis of said sleeve.