

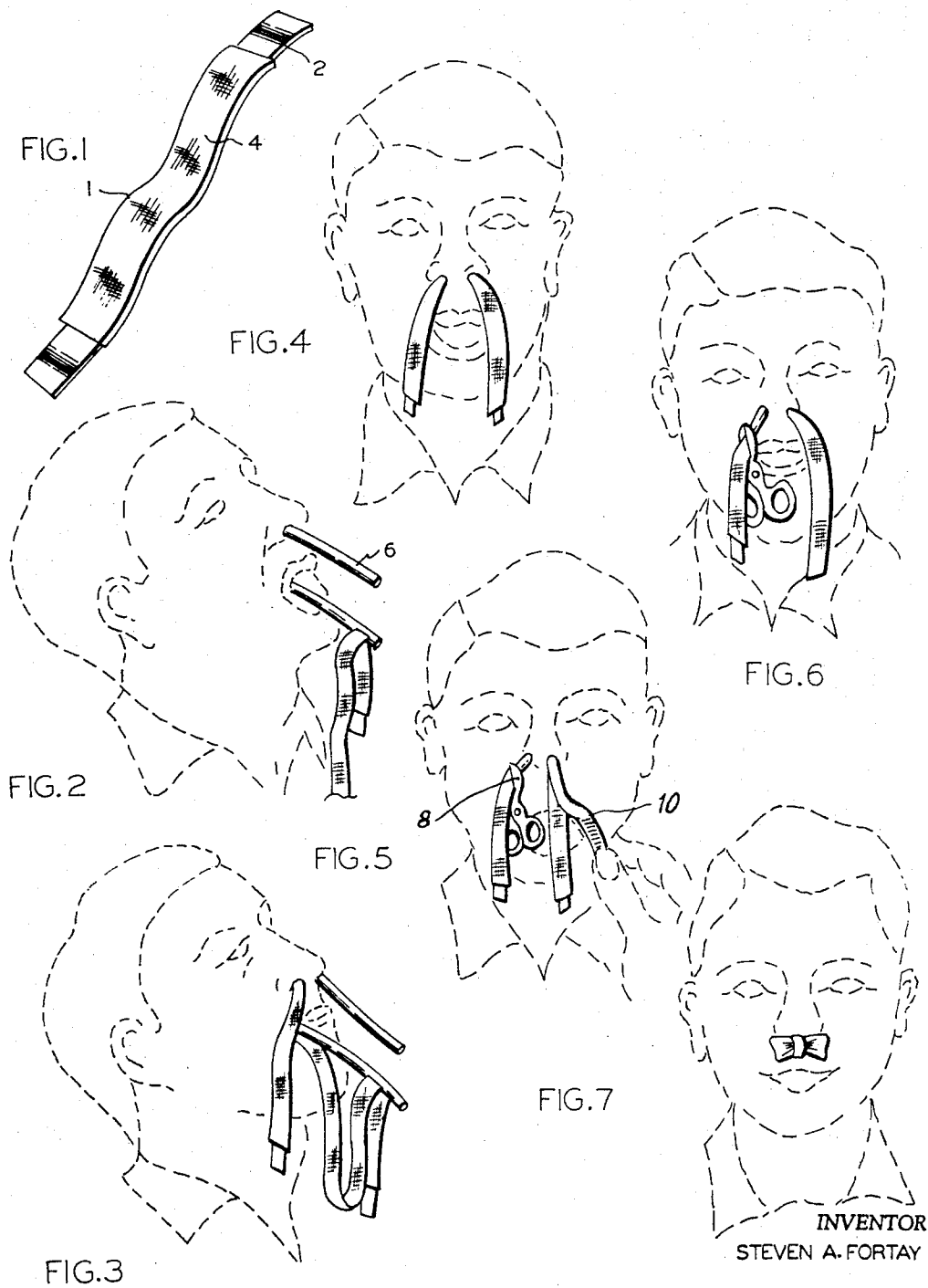
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S. O. FORTAY

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PROCESS AND ARTICLE FOR THE TREATMENT OF SEVERE EPISTAXIS

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BY

Hermon & Shalloway
ATTORNEYS

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PROCESS AND ARTICLE FOR THE TREATMENT
OF SEVERE EPISTAXIS

Steven O. Fortay, Woodbridge, N.J.; Martha K. Fortay,
executrix of the estate of said Steven O. Fortay, de-
ceased; assignor to Martha K. Fortay (widow of Steven
O. Fortay), Woodbridge Township, N.J.

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The present invention relates to a novel article and
process for the treatment of severe nosebleed, i.e., severe
epistaxis, and, more particularly, to a method and article
for treating such severe epistaxis which employs a thin
tape of rubberized material surrounded by a sleeve of
gauze.

More than a century ago, a method of treating severe
nosebleed by posterior packing was introduced. This
method of packing the posterior chamber of the nasal
passage has many shortcomings, however. First of all, it
is a quite involved and delicate process to manipulate the
medical packing material into the posterior chamber of
the nasal passages in order to adequately pack this pos-
terior region to supply adequate pressure so as to relieve
and eliminate the problem of a severe nosebleed. Further-
more, the packing of the posterior chamber of the nasal
passage is fraught with the disadvantage that the packing
material easily slips from its intended area, blocking the
larynx and throat opening of the patient.

In addition, post-nasal packs are often applied im-
properly. When so applied, they may cause edema and
pain, or their effects may be even more serious, such as
osteomyelitis of the base of the sphenoid, ear infection,
and so much edema that tracheostomy is necessary. Other
complications include hemotympanum, with or without
otitis media, and lacerations of the soft palate and floor
of the nose.

Although there have been various attempts made and
ideas suggested for a method to employ as a quick and
practical alternative to conventional posterior packing,
none of these have been satisfactorily adapted for the
treatment of severe epistaxis. Such concepts involve both
physical and chemical approaches to this problem. Such
alternative procedures usually involve the employment of
complicated equipment and/or processes in which a great
deal of assistance is necessary to treat the severe nose-
bleed. Note U.S. Patent 2,647,515. Thus, until the present
invention, there has not been provided a simple and prac-
tical alternative to the treatment of severe nosebleed by
posterior packing. By the present invention, however, it
has now been found possible to treat a severe epistaxis
in a simple and practical manner without the use of com-
plicated devices and without the necessity for assistants.
It has now been found possible to treat severe nosebleed
by the use of a thin tape of rubberized material having
a sleeve of gauze-like material surrounding such tape,
which tape and surrounding sleeve form a firm wall across
the posterior chamber of the nasal passage.

This is accomplished by drawing such tape and sur-
rounding armored sleeve through the nasal passages by
the use of a conventional nasal catheter.

It is, therefore, a principal object of the present in-
vention to provide an article for the treatment of severe
nosebleed which is free from the inherent deficiencies of
previously-employed materials and techniques.

A further object of the present invention is to provide
a process for the treatment of severe epistaxis which is
easily and practically performed, and which eliminates
the inherent deficiencies and disadvantages of prior known
processes, especially conventional posterior packing.

A still further object of the present invention is to pro-
vide an article which comprises a thin, flexible tape of

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rubberized material surrounded by a sleeve of gauze-
like material, which article can be employed to easily
and practically treat severe epistaxis by the process of the
present invention.

A yet further object of the present invention is to pro-
vide such a process for the treatment of severe epistaxis
wherein a thin, flexible, rubberized tape surrounded by a
sleeve of gauze-like material is drawn through the nasal
passages to form a firm wall across the posterior chamber
and to provide packing of the nasal passages.

Still further objects and advantages of the process and
article of the present invention will become more apparent
from the following more detailed description of the
present invention and the accompanying drawing, where-
in:

FIGURE 1 is a view in elevation showing the tape of
the present invention.

FIGURES 2 to 7 are frontal views pictorially show-
ing various stages of the process of the present inven-
tion.

In the various figures, like numerals represent like
elements.

As can be seen from FIGURE 1, the armored tape of
the present invention, which is employed in the treat-
ment of severe epistaxis, comprises, in combination, two
parts. The inner portion or tape 2 comprises a thin,
flexible, rubberized material. This can be either a natural
or a synthetic rubber, or a flexible plastic material (i.e.,
polyethylene, etc.), or a fabric matrix which is impreg-
nated with a natural or synthetic rubber or plastic. The
only essential characteristic of such material is that it be
sufficiently flexible so as to be able to conform itself to
the contour of the nasal passage and have sufficient
density so as to form a firm wall across the posterior
chamber of the nasal passages so as to prevent the flow
of blood.

Ordinarily, the rubberized tape 2 is in the order of
one-half inch to one inch in width, although narrower
or wider strips can be advantageously employed where
desired, or necessary for particular patients, or appropriate
medical situations.

Surrounding the tape 2 of the article of the present in-
vention, is a sleeve 4 of gauze-like material. Such gauze-
like material of the sleeve 4 surrounding the tape 2 can
be any conventionally-employed gauze-like material used
for medical purposes. Exemplary are the cotton and gauze
materials. This gauze-like material should be soft and
non-irritating to the walls of the nasal passages.

In addition to allowing the tape 2 to form a more firm
wall across the posterior chamber of the nasal passages,
the sleeve 4 of gauze-like material additionally can act
as a carrier for a hemostatic medicament, etc. Therefore,
the gauze-like sleeve 4 may be impregnated or coated
with a suitable antibiotic ointment, hemostatic medica-
ment, astringent, etc. Exemplary materials include com-
mercial preparations of penicillin, streptomycin, aureo-
mycin, terramycin, thrombin, fibrinogen, epinephrine,
etc.

FIGURE 2 shows the insertion of the tape and sleeve
of the present invention in the nasal passages. Thus, a
conventional nasal catheter 6 is utilized to draw the rub-
berized tape-gauze-like sleeve assemblage through the
mouth and down through the nostrils of the patient, the
catheter having been inserted through the nostrils of the
patient.

The treatment is started by first cleaning the nose of
the patient and applying an anesthetic, if necessary. A
rubber or plastic catheter 6 with a slit near its tip is passed
through the nasal chamber and grasped as it appears in
the pharynx. The rubberized tape and surrounding sleeve
is now inserted and passed through the slit in the catheter.

This point in the process of the present invention is shown in FIGURE 2.

The catheter is then pulled back through the nasal passage leaving the tape and surrounding sleeve in place extending about eight inches from the nostril. The rubber or plastic catheter 6 is then inserted through the second nostril in a similar manner. The other end of the tape and surrounding sleeve is thereafter inserted into the catheter as shown in FIGURE 3, and the catheter is again pulled back through the nasal passage with the attached tape and surrounding sleeve. The tape and surrounding sleeve, when removed from the catheter, now has an end extending from each nostril of the patient. This position is represented in FIGURE 4. At this point, the tape and surrounding sleeve form a firm wall across the posterior chamber of the nasal passages.

Advantageously, the two ends of the tape and surrounding sleeve which extend from the nostrils of the patient are now anchored with forceps 8, as illustrated in FIGURES 5 and 6. The packing of the nostrils of the patient may then proceed by pushing back the gauze from the tape little by little i.e., in increments, as shown in FIGURE 6 by use of a conventional packing instrument 10.

Optionally, after packing of the nasal passages by use of the sleeve of gauze-like material, additional packing material may be utilized. Such additional packing can comprise any suitable medical packing material conventionally used for packing of wounds. In most instances, however, the gauze-like sleeve acts as sufficient packing material.

It is of note that because of the firm wall formed across the posterior chamber of the nasal passages by the tape and surrounding sleeve of the present invention, there is no fear of the packing material being inserted too far into the nasal cavity to cause blockage of the throat area.

Also, ease of removal of additional packing material is a distinct advantage of the process of the present invention since the tape and gauze-like sleeve acts as a barrier to the insertion of additional packing material to such a point at which its removal can no longer be accomplished with ease. When both chambers are packaged, a gauze pad may be advantageously inserted in place in front of the nasal septum to act as a base for the subsequent tying of the ends of the tape and surrounding sleeve.

The ends of the tape and surrounding sleeve are tied across the pad in front of the nasal septum. At this point, the treatment is completed. This last step, or position, is shown in FIGURE 7.

As stated previously, the employment of the sleeve of gauze material surrounding the rubberized tape, serves a dual function—that of allowing the production of a more firm wall across the posterior chamber of the nasal passages, and that of simultaneously supplying antibiotic, hemostatic medicament, or astringent, to the treatment area.

It has been unexpectedly found that the use of a gauze sleeve in conjunction with the rubberized tape produces results far superior to those that could be achieved by the use of a rubberized tape alone. In this connection, it has been found that the use of a rubberized tape alone in many instances does not satisfactorily form a firm wall across the posterior chamber of the nasal passages in that such material tends to slip and move from its intended point. In addition, employment of the gauze-like sleeve eliminates any possibility of irritation to the nasal passages which can be encountered by the use of a rubberized tape by itself.

While the present invention has been primarily described with respect to the treatment of severe epistaxis, that is, a severe nosebleed, it should be understood that this invention can be advantageously employed whenever nasal packing is required. Thus, the process and article of the present invention, with their accompanying advantages, can be utilized in packing of the nasal passages in case of nasal fractures, etc.

While a preferred embodiment of the present invention has been illustrated, it is to be understood that the present invention is in no way to be deemed as limited thereto, but should be construed as broadly as all equivalents thereof.

I claim:

1. An article for the treatment of severe epistaxis which comprises a flexible thin tape of rubberized material surrounded by a sleeve of gauze-like material.

2. The article of claim 1 wherein said sleeve of gauze-like material is coated or impregnated with antibiotic ointment or a hemostatic medicament.

3. The article of claim 1 wherein said rubberized material is selected from natural and synthetic rubbers, plastics, and cloth matrices impregnated with such materials.

4. A method of treating severe epistaxis which comprises (1) inserting a flexible thin tape of rubberized material surrounded by a sleeve of gauze-like material through the nasal passages by means of a nasal catheter, said tape and sleeve, after insertion, having an end thereof extending from each nostril, said tape and surrounding sleeve forming a firm wall across the posterior chamber of the nasal passages, (2) packing the nostrils by feeding in gauze in increments, and (3) closing off the nostrils by means of the ends of said tape and surrounding sleeve extending therefrom.

5. The method of claim 4 wherein a pad of gauze-like material is placed in front of the nasal septum as a base prior to sealing off the nostrils by the ends of the tape and surrounding sleeve extending therefrom.

6. The method of claim 4 wherein the sleeve of gauze-like material is coated or impregnated with an antibiotic ointment or hemostatic medicament.

7. The method of claim 4 wherein the rubberized material is selected from natural and synthetic rubber, plastics, and cloth matrices impregnated with such materials.

8. The method of claim 4 wherein the ends of the tape and surrounding sleeve are held with forceps to create an anchor after insertion of the tape and sleeve and prior to packing to facilitate packing of the nasal passages and to create a firm wall across the posterior chamber of the nasal passages.

9. The method of claim 8 wherein the sleeve of gauze-like material is coated or impregnated with an antibiotic ointment or hemostatic medicament.

10. The method of claim 8 wherein the rubberized material is selected from natural and synthetic rubber, plastics, and cloth matrices impregnated with such materials.

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CHARLES F. ROSENBAUM, *Primary Examiner.*