Aug. 31, 1954

E. W. HOYT

2,687,719

EXPANDING DILATOR

Filed April 22, 1952

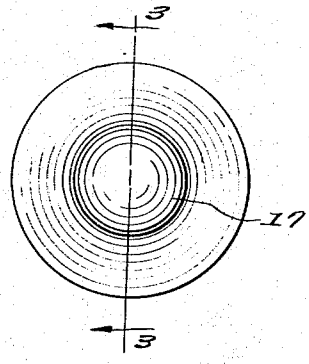
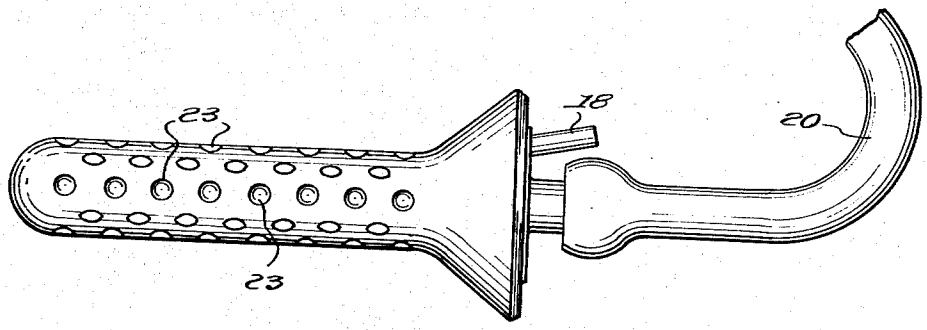


Fig. 2.

Fig. 1.



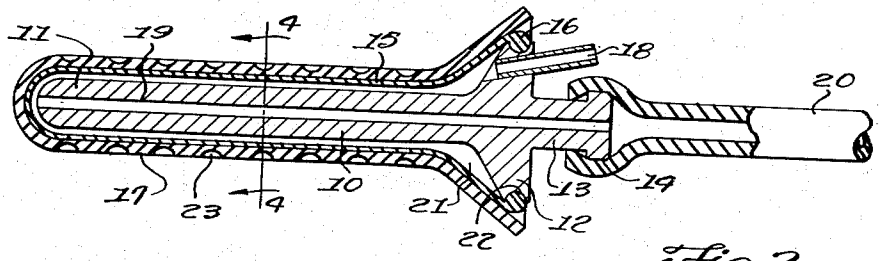
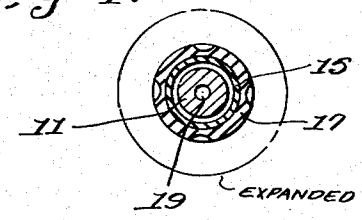


Fig. 3.

Fig. 4.



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Patented Aug. 31, 1954

2,687,719

UNITED STATES PATENT OFFICE

2,687,719

EXPANDING DILATOR

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Application April 22, 1952, Serial No. 283,590

3 Claims. (Cl. 128—38)

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This invention relates to prophylactic devices, and in particular a tubular core covered with an extensible jacket or cot with an outer sleeve having indentations or pock marks therein and in which the core is provided with a nipple for securing an end of a rubber hose or the like thereto and a drain tube to facilitate the return of air or water injected into the device by a bulb or other means on the rubber tube.

The purpose of this invention is to provide a dilator adapted to relax the muscles of the rectum to facilitate treatment of hemorrhoids, constipation, and the like.

Various types of syringes, colon irrigators, and the like have been used for treatment of the colon but for some disorders it is desirable to dilate the lower section or adjoining parts of the colon tube. With this thought in mind this invention contemplates a device having a soft rubber or plastic jacket stretched over a stiffening core whereby fluid such as air or water forced through the core intermittently or so as to provide pulsations causes the jacket around the core to expand and contract.

The object of this invention is, therefore, to provide means for forming a rectal dilator whereby after insertion in the rectum the device may be expanded and contracted to provide a pulsating or dilating action.

Another object of the invention is to provide means for providing a dilating action in the colon tube without injury to the tube.

A further object of the invention is to provide means for providing a dilating action in the colon tube without injury to the tube.

A further object of the invention is to provide a rectal or colon tube dilator which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a cylindrical core having a rounded outer end with an outwardly flared flange on the opposite end, a soft rubber cot or elastic tube positioned over the core and a tube of plastic or other suitable material having means for retaining a medicament positioned over the cot.

Other features and advantages will appear from the following description taken in connection with the drawing, wherein:

Figure 1 is a side elevational view illustrating the improved dilator.

Figure 2 is an end elevational view looking toward the rounded end of the dilator.

Figure 3 is a longitudinal section through the dilator taken on line 3—3 of Fig. 2.

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Figure 4 is a cross section through the body of the dilator taken on line 4—4 of Fig. 3.

Referring now to the drawing wherein like reference characters denote corresponding parts the improved rectal or colon dilator of this invention includes a cylindrical core 10 having a rounded outer end 11, an outwardly flared flange 12 spaced from the opposite end and a nipple 13 with a collar 14 on the end thereof extended from the flange, a rubber cot 15 having a bead 16 around the open end, a sleeve 17 of plastic or the like positioned over the cot and a drain tube 18 extended through the flange or base of the core 10.

The core 10 is provided with a continuous longitudinal opening 19 through which air, water, or other fluid, from a tube 20 which is positioned over the collar 14 on the nipple 13 is forced and the fluid passing through the core is injected into an area 21 around the core whereby as the pressure of the fluid increases the cot or sealing tube 15 and sleeve 17 are expanded providing a bulging section intermediate of the length of the dilator.

The flange or collar 12 forming the base of the core 10 is provided with an annular groove 22 in which the bead 16 of the cot 15 is positioned and the outer surface of the sleeve 17 is provided with indentations 23, such as pock marks, corrugations or ribs whereby the outer surface of the sleeve is adapted to retain a medicament for the purpose of carrying the medicament into the colon tube.

With the parts arranged in this manner the dilator is inserted through the rectum into the colon tube and with intermittent applications of fluid under pressure the sleeve 17 is dilated or expanded and contracted to provide a pulsating action which facilitates the treatment of hemorrhoids, constipation, and the like.

It will be understood that modifications may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

1. A colon dilator comprising a cylindrical core having a rounded outer end with an outwardly flared flange spaced from the opposite end and with a nipple having a collar on the end thereof extended from said flange, said core having an opening extended from the nipple through the intermediate part thereof, a drain tube extended through the flange of the core, a sealing tube of elastic material positioned around the core and

a disposable tube having an irregular surface positioned around the sealing tube.

2. In a rectal dilator, the combination which comprises a cylindrical core having an opening therethrough, said core having a rounded outer end, a collar with an outwardly sloping outer surface extended around the core and spaced from the end thereof opposite to the said rounded end and a nipple with a collar around the end extended from the collar around the core, said collar around the core having an annular recess in the peripheral edge thereof, an elastic tube having a bead around the edge positioned over the core with the bead in the annular recess of the collar and an extensible disposable sleeve having an irregular outer surface positioned over the rubber tube and having an outwardly flared section extended around the open end.

3. In a rectal dilator, the combination which comprises a cylindrical core having an opening therethrough, said core having a rounded outer end, a collar with an outwardly sloping outer surface extended around the core and spaced from the end thereof opposite to the said rounded

end and a nipple with a collar around the end extended from the collar around the core, said collar around the core having an annular recess in the peripheral edge thereof, an elastic tube having a bead around the edge positioned over the core with the bead in the annular recess of the collar and an extensible disposable sleeve having an irregular outer surface positioned over the elastic tube and having an outwardly flared section extended around the open end, and a tube providing a drain extended through the collar positioned on the core.

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