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INSTRUMENT FOR TREATING PROSTATE GLANDS

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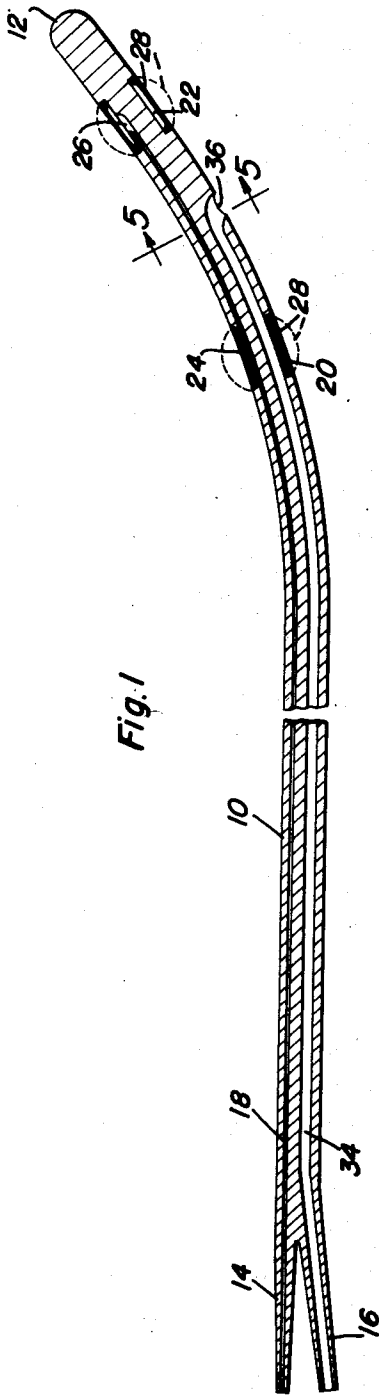


Fig. 1

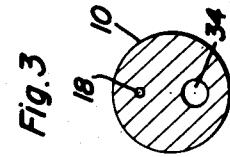


Fig. 3

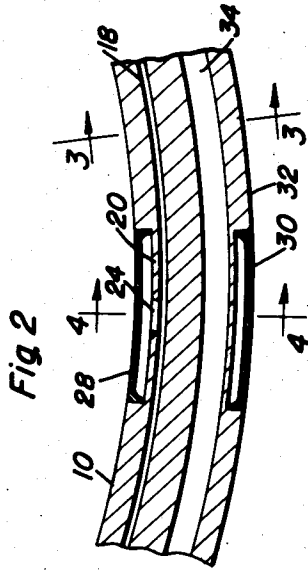


Fig. 2

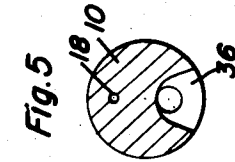


Fig. 5

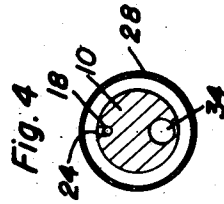


Fig. 4

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INSTRUMENT FOR TREATING PROSTATE GLANDS

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4 Claims. (Cl. 128—349)

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This invention relates to an improved instrument for supplying medicinal substances to and the draining of fluid from the prostate gland and the area surrounding said gland.

The primary object of this invention is to provide a means for supplying medicinal substances under pressure to and retaining the same in contact with the prostate gland and area surrounding the same. The device is designed for instilling medicinal substances into ducts and through the ducts of the prostate gland for any desired period of time, while preventing the medicinal substances from passing into the bladder. The device will also dilate the urethral wall so that there will be a dilation of the ducts leading off into the prostate gland and the seminal vesicles, thus facilitating the passage of the medicinal liquid into these areas and the passage of pus or like matter from these areas. The device can also be used to provide gentle pressure on the prostate gland from the interior of the urethra to assist in the removal of fluids or like matter from the prostate gland and to be used in connection with prostatic massage for that purpose.

Another important object of this invention is to provide a device of the character described which includes inflatable means which can seal off a particular area of the urethra so that medicinal substances can be delivered under pressure to the sealed off area or a vacuum may be applied to the device for the removal of fluid only from the sealed off area.

A further object of this invention is to provide a device of the character described which is simple in construction, easy to use and very efficient for its intended purposes.

These, together with various ancillary objects and features of the invention which will later become apparent as the following description proceeds, are attained by the device, a preferred embodiment of which has been illustrated by way of example only in the accompanying drawings, wherein:

Figure 1 is a longitudinal sectional view through the device;

Figure 2 is an enlarged fragmentary longitudinal sectional view of that portion of the device having the inflatable means;

Figure 3 is a sectional view taken substantially on the plane of section line 3—3 of Figure 2;

Figure 4 is a sectional view taken substantially on the plane of section line 4—4 of Figure 2; and

Figure 5 is a sectional view taken substantially on the plane of section line 5—5 of Figure 1.

Specific reference is now made to the draw-

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ings. In the several views in the accompanying drawings and in the following specification reference characters indicate corresponding elements throughout.

The present device comprises an elongated cannula 10 of the usual flexible material, the distal end being rounded as at 12 whereas the opposite end is forked or bifurcated to provide two furcations 14 and 16. Extending lengthwise through the cannula and through the furcation 14 is a conduit or passage 18 of relatively small diameter adapted to convey air or other gases under pressure, the conduit terminating adjacent the distal end of the cannula.

In the vicinity of the distal end of the cannula, the same is provided with a pair of longitudinally spaced annular grooves 20 and 22 which communicate with the conduit 18 by means of ports 24 and 26. An elastic band 28, fabricated of suitable rubber or plastic, and which is substantially channel in cross section, as shown in the drawings, is cemented or otherwise fixedly secured within each groove in such a manner that normally, or in the dilated state, the outer surface 30 thereof is flush with the outer surface 32 of the cannula.

The cannula is further provided with a second conduit 34 which is substantially wider than the conduit 18, the second conduit extending through the furcation 16 and terminating in a delivery aperture 36 located between the two grooves 24 and 26 as shown clearly in Figure 1.

In use, the cannula is entered longitudinally of the penis in the urethra until the grooves 24 and 26 reach the region to be treated. The furcation 14 is then attached by a suitable adapter to a source of air or gas under pressure whereupon the bands or sleeves 28 are inflated to assume the positions shown in dotted lines in Figure 1. This seals off a desired area between the grooves and the furcation 16 may then be attached to a source of medicinal fluid for delivery of the same through the conduit 34 to the delivery opening 36 between the grooves. The medicinal fluid may be retained in the sealed-off region or area for any desired length of time. Or, a vacuum may be applied to the furcation 16 to remove fluids such as pus from the sealed-off area. By making the bands or sleeves 28 flush with the outer surface of the cannula when deflated and by providing a rounded distal end, the cannula can be smoothly and painlessly inserted into the penis and urethra.

From the foregoing, the construction and operation of the device will be readily understood and

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further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. An instrument for treating the prostate gland, seminal vesicles and the male posterior urethra comprising an elongated cannula having a rounded somewhat blunt distal closed end adapted for unhampered insertion in the patient's urethra and a bifurcated trailing end, a first conduit extending longitudinally through said cannula and one of the furcations and terminating at one end adjacent to said distal end, said conduit being adapted to receive and conduct gas under pressure, longitudinally spaced resiliently inflatable sleeves carried by said cannula and communicating with said conduit, said sleeves being expandable under gas pressure to enlarge the effective diameter of said cannula at two longitudinally spaced positions, and a second medicinal fluid-conveying conduit extending longi-

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tudinally through said cannula and the other furcation, said second conduit terminating at one end in a discharge opening located midway between said spaced inflatable sleeves.

2. The combination of claim 1 wherein said inflatable sleeves are characterized by a pair of longitudinally spaced annular grooves adjacent the distal end of said cannula, a port communicating each of said grooves with said first conduit, and an elastic endless band secured in each of said grooves.

3. The combination of claim 2 wherein said bands lie flush with the outer surface of said cannula when deflated.

4. The combination of claim 3 wherein the diameter of said first conduit is substantially smaller than that of said second conduit.

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