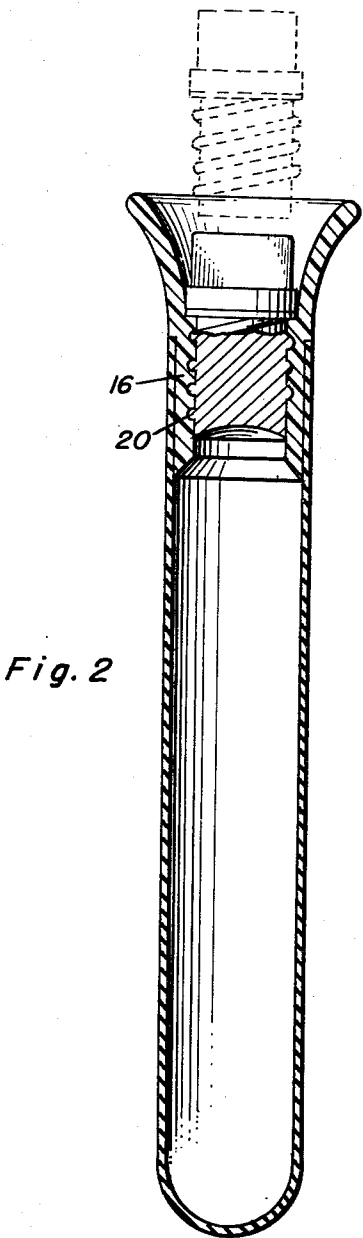
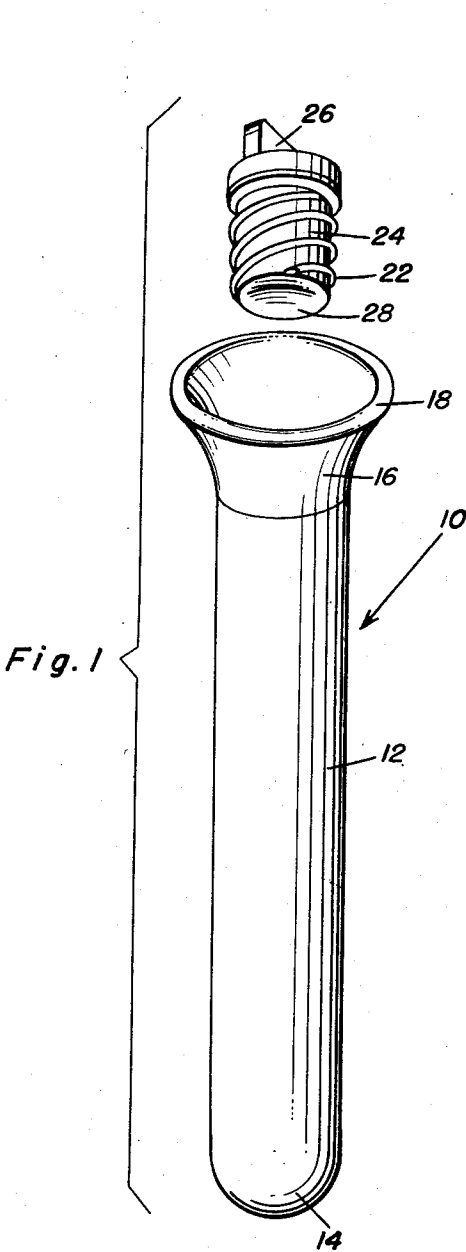


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F. W. KOFF  
SURGICAL APPLIANCE  
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Fred W. Koff  
INVENTOR.

BY *Chance A. Olson*  
*and Harvey E. Jackson*  
Attorneys

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## SURGICAL APPLIANCE

Fred W. Koff, Clifton, N. J.

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2 Claims. (Cl. 128—341)

This invention relates to a surgical appliance and more particularly to a flexible dilator.

The application of heat in the treatment of certain ailments is of known therapeutic value. When applying heat to the various body openings it is a common practice to use a dilator. However, some of the openings in the body in which dilators have been used have an inner lining or layer of muscular convolutions which resist dilation and cause discomfort to the patient when such surgical appliance is used. It is therefore the primary object of this invention to provide a dilator which is capable of being made rigid for insertion but after entering the body openings, pressure can be reduced within the confines of the dilator to permit the dilator to more readily conform to the shape of the body opening and to thus afford the patient an increased degree of comfort.

Still further objects of the invention reside in the provision of a surgical appliance that is strong and durable, simple in construction and manufacture, capable of being readily produced for distribution at a relatively low cost to the medical profession, and which surgical appliance can be constructed from readily available materials.

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

Figure 1 is an exploded perspective view showing the various component elements of the invention; and

Figure 2 is a vertical sectional view as taken along the plane of the longitudinal axis of the dilator.

With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, reference numeral 10 is used to generally designate the dilator comprising the present invention. The dilator 10 includes a flexible tubular cylindrical body 12 formed from latex or other suitable material which is provided with a closed end portion 14. The upper end of the tubular body 12 is attached to a hard rubber mouth portion 16 which is flared at its open end 18 and which is provided with internal threads 20 for threaded engagement with the threads 22 on a cap 24. The cap 24 is adapted to seat

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within the mouth portion 18 and is provided with a handle portion 26 for enabling the cap to be readily rotated. The bottom portion of the cap 24 is concave in shape as at 28.

As the body 12 is flexible, there is provided a filling of water or other suitable substantially incompressible fluid which when pressure is applied thereon by means of rotating the cap 24 downwardly after the body 12 has been completely filled causes the body 12 to become rigid. Because of the flexibility of the body 12 with the controlled rigidity thereof it can be made of greater length than previous rigid dilators and is thus better suited for dilation of the body openings since pressure can be decreased after insertion by letting some of the fluid contained therein escape or by simply rotating the cap 24 outwardly. When it is desired to treat certain diseases such as cancer and tumors with radioactive particles, the body 12 can be filled with water which has been made radioactive or any other suitable solution of radioactive particles.

Since from the foregoing, the construction and advantages of this surgical appliance are readily apparent, further description is believed to be unnecessary.

However, since numerous modifications will readily occur to those skilled in the art after a consideration of the foregoing specification and accompanying drawings, it is not intended to limit the invention to the precise embodiment shown and described, but all suitable modifications and equivalents may be readily resorted to that fall within the scope of the appended claims.

What is claimed as new is as follows:

1. A surgical appliance comprising a flexible tubular cylindrical body having a flexible closed end portion, said body having a substantially rigid other end portion, said rigid end portion being threaded, a substantially incompressible fluid filling in said body, and a cap threadedly secured to said rigid end portion expanding, pressurizing and rigidifying said flexible body to enable the insertion thereof.

2. A surgical appliance comprising a flexible tubular cylindrical body having a flexible closed end portion, said body having a substantially rigid other end portion, said rigid end portion being threaded, a substantially incompressible fluid filling in said body, and a cap threadedly secured to said rigid end portion expanding, pressurizing and rigidifying said flexible body to enable the insertion thereof, said cap having a concave bottom portion, the threads on said cap and said rigid end portion being adapted to seal said rigid end portion while providing advance for said cap to control the rigidity and pressure in said body.

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