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A. GRETH

2,106,707

SANITARY MEDICAL TREATMENT MEANS

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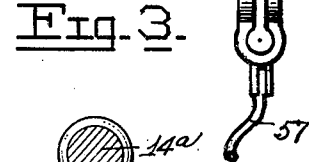
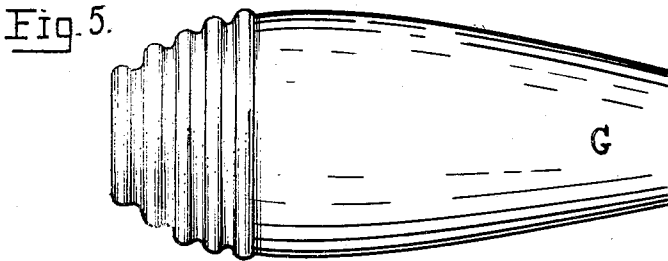
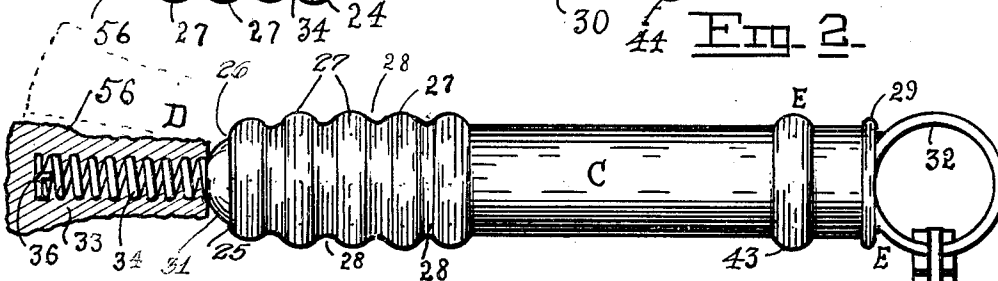
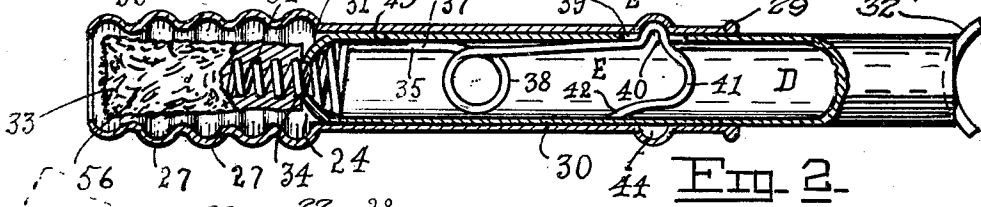
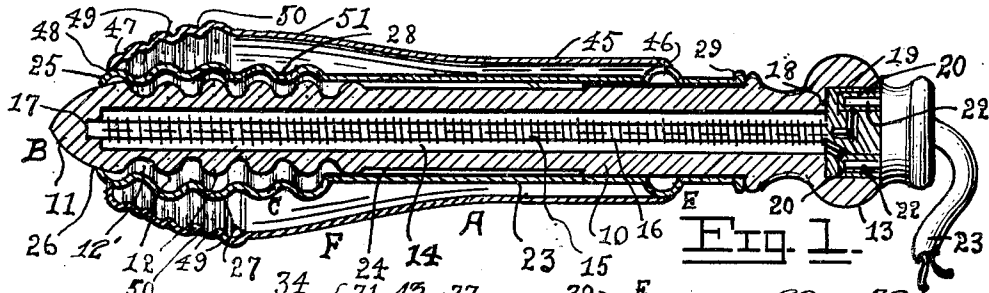


Fig. 8.

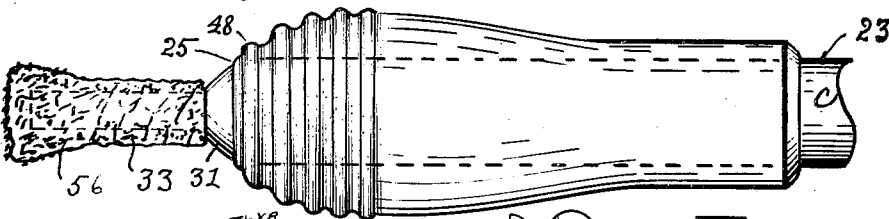


Fig. 6.

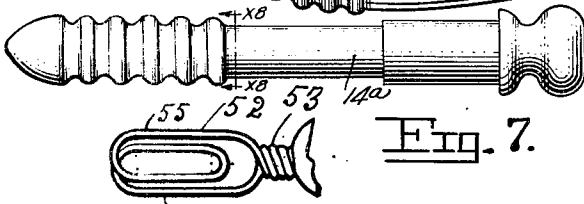


Fig. 7.

Fig. 4.

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UNITED STATES PATENT OFFICE

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SANITARY MEDICAL TREATMENT MEANS

August Greth, Los Angeles, Calif.

Application August 30, 1933, Serial No. 687,463

7 Claims. (Cl. 128—260)

This invention relates to sanitary medical treatment means or devices and it has for its object to provide a device for official treatment by the physician or by the user either in supplementing the physician's treatment or for the carrying on of the treatment by the person requiring treatment independently of the physician; the invention relates more particularly to means and devices for the treatment of the rectum, vagina, womb and similar parts and organs.

In accordance with the present invention, and in the preferred practice thereof, I provide a means or device in which the several parts combined in the unitary structure all cooperate harmoniously in affording almost immediate relief when properly employed, as will be hereinafter described, in certain classes of rectal, vaginal, womb and like ailments and diseases. The interacting and interdependent elements of such unitary structure or means, while each is adapted to admirably perform a special function, all together, used, in certain classes of treatments, in sequence, and in other classes of treatments in a totality of beneficially functioning elements, all mutually contribute toward such speedy relief; thus, one such element is used in the treatment of that part of the uterus projecting into the vagina and in the treatment of the vagina itself; and the same is also adapted for use in the treatment of diseases of the rectum,—such as hemorrhoids, ulcers, fistulas, fissures and the like; another element of the novel entity is used for the treatment of the parts just named, but the same is further adapted for the purpose of applying or conducting electricity to these affected parts while in situ in either of the above named cavities; and another element is adapted for the treatment of chronic uterine, ovarian and prostatic diseases, the treatment being preferably per rectum; and inasmuch as these elements all together are used simultaneously when the device or means is employed in the later stages of the treatment, the beneficial effects are greatly enhanced.

In one form of embodiment of the invention, I provide a core, adapted to be used initially, this core comprising an elongated cylindrical body or member having a blunt or ogive or olive-shaped entering point behind which the same is formed with medicament-carrying grooves formed between outstanding circumferential rounded massaging ribs adapted to, during the entry thereof into a cavity the walls of which are collapsed, mechanically empty the veins, the coagulated blood or venous circulation being driven on, and

adapted during the withdrawal operation, to induct fresh arterial blood; this core may be provided with a resistance coil or the like internally thereof whereby the same may be heated by connection with any suitable source of electrical energy supply. A second member may comprise a tubular sheath of cylindrical form and which is preferably formed of a thin metal and which has a bore extending therethrough from end to end thereof and into which the core may be snugly fitted and which bore may be closed thereby; this sheath has a finger-piece at its rearward end and is formed at its extreme forward tip with an inwardly and forwardly directed surface which merges into the olive-like point or formation at the forward end of the core; so closing the bore; a longitudinal series of outstanding rounded circumferential spaced massaging ribs are formed upon the sheath at the forward end thereof and adjacent to the surface mentioned, and the first and smallest of these ribs may be formed in part by such surface; the spaces between these massaging ribs are formed for the reception and the carrying in of medicaments, preferably in the form of a salve or ointment; this sheath, with the core therein, is entered into the cavity as one piece, the thin-walled sheath acting to further dilate the cavity walls which are massaged during its entry and withdrawal.

An applicator member, of considerable importance in the treatment may comprise a cylindrical body of elongated form snugly fitting the bore of the sheath in substitution for the core, the sheath and applicator member being likewise entered into the cavity as one piece; the applicator member carries a long flexible swab at its forward end and has a finger-piece at its rearward end in the form of a finger-ring and is long enough to project at both ends of its sheath; in order that medicaments, of any preferred form, may be carried deeply into the cavity by the swab, the same is held during entry in a retracted protected position within the sheath by suitable detent means acting releasably to hold the member in retracted position with the swab in the bore of the sheath during the entry of the same into the cavity by means of a forward and gyratory massaging movement imparted to the sheath by manipulating the member finger-ring, the parts at the mouth of the cavity being used as a fulcrum meanwhile; such detent means, acting to determine the position of the swab with respect to the sheath is further adapted to hold the parts in such position of longitudinal adjustment that the swab is firmly held in a position of projec-

tion forwardly upon the axis of the sheath far beyond the mouth of the sheath, and this sheath mouth is then closed entirely by the suitably formed forward end wall of the plunger-like applicator member, these parts merging into each other in a manner similar to that in which the olive point of the core merges into the end formation or surface of the sheath, as above described. Without such detent means, and the snugly fitted applicator member and sheath relation, such gyratory and other beneficial movements could not be imparted to the sheath by means of the rearwardly projecting finger-ring. After the swab has been moved to its forward position of detention, the affected parts, far inward of the cavity mouth or orifice, may be painted or coated with the medicament upon the swab, by a gyratory movement similar to the massaging movement above described; this painting can be continued if desirable, as the device is retracted, the walls of the vagina or rectum being thoroughly coated with the medicament as far outwardly from the starting point as desired; when the parts so treated have been coated, the sheath may be held by the finger-piece, and by means of its ring, the applicator member may be pulled outwardly to snap the same back into its retracted position with respect to its sheath and the swab being now housed or encased, and so held by the detent means, the member and its sheath may be withdrawn from the cavity without applying medicament to those portions of the cavity walls which lie adjacent to the mouth or orifice of the cavity.

Other and further elements of the device may comprise a supplemental dilating member or a plurality of the same, adapted to be applied in sequence and each in substitution for the preceding element over the forward end of the sheath; these elements of such series are preferably of the same general form but are of succeeding or progressively larger diameter, and each of the same is preferably formed with outstanding massaging rounded ribs between which the medicament-carrying grooves are provided. At its forward end, each such element is formed for mergence into features of the other members of the unitary structure of which it is an element.

The outstanding ribs upon all of the members or elements of the device upon which the same are provided perform a three-fold function, namely, they facilitate entry; they provide between adjacent ribs, a medicament-carrying or salve-holding groove; and they serve to massage the cavity walls with the advantages above outlined.

I am aware that attempts have been made heretofore to provide devices for the successful treatment of the vagina and rectum, and that certain of these attempts contemplated the provision of a sheath and a piston-rod structure with a hard and inflexible or unyielding swab device at the forward end of the rod; but any wobbling of the forward end of the rod, the hard and unyielding swab per se, and the sharp open sheath end, all conspire to frustrate the very object of this invention as above outlined; the wobbling or lost motion at the mouth of the sheath precludes the possibility of entering the device or the use thereof with the highly desirable or necessary gyratory movement practiced by me; furthermore, pinching, as between rod and sheath, and other mechanical injury to the delicate parts and tissues, possible with such devices, is not to be tolerated, and such injury is impossible with the

device of the present invention due to the snugly fitted plunger or applicator member and its end formation which closes the mouth of the sheath when the flexible swab, which is adapted to yield in action, is in projected position; thus all objectionable wobbling action is eliminated by the provision herein of such snug fit and end formation and the long cylindrical surface of the snugly fitted applicator member.

This application is in part a continuation of a copending companion application filed by me January 25, 1933, Serial No. 653,373 for Sanitary medical treatment devices, and in part discloses a departure from and improvement upon the basic subject matter of such application.

With the above and other objects in view, including the provision of means of the general character above outlined which will be relatively simple and inexpensive in construction and organization when the advantages of the same are considered, the invention consists in the novel and useful provision, formation, combination, association and relative arrangement of parts, members and features, all as hereinafter described, shown in the drawing, and finally pointed out in claims.

In the drawing:

Figure 1 is a central longitudinal sectional view of a means or device constructed and organized in accordance with the invention, parts being broken away and sectioned and parts being shown in full lines for clearness of illustration;

Figure 2 is a view similar to Figure 1, but showing the applicator member or swab device positioned within the sheath shown in Figure 1 in substitution for the core shown therein in such figure; the swab is shown in this figure in retracted position;

Figure 3 is a side elevation of the device as shown in Figure 2, the applicator swab being shown in this figure in its position of projection forwardly of the mouth of the sheath, such mouth being closed by the forward end wall of the applicator member and with the parts held in such position by the detent means of the invention;

Figure 4 is an enlarged fragmentary view showing a modified form of the flexible swab stem which projects forwardly from the end wall of the cylindrical tubular applicator member;

Figure 5 is a side elevation of a supplemental treatment member of larger size than the supplemental treatment member shown in Figure 1 and adapted for use in substitution therefor; Figure 6 is a fragmentary side elevation of the forward portion of the members shown in Figures 2 and 3, but with one of the supplemental treatment members in position in the unitary structure employed in carrying out certain treatments.

Figure 7 is a side elevation, on a reduced scale, of a central member similar to that shown in Figure 1, but of solid material and in which the electrical element is omitted; and

Figure 8 is a transverse sectional view taken on the line X8—X8, Figure 7, and looking in the direction of the appended arrows.

The parts in the several figures are designated by reference characters.

Referring with particularity to the drawing, in the embodiment of the invention therein shown, A designates generally, a treatment means or device adapted for the treatment of rectal, vaginal and like diseases, B designates the core thereof, C designates the sheath thereof, D designates the applicator member adapted to carry

and apply medicaments to affected parts lying far inward from the cavity mouth through which the treatment is carried on, E designates detent means for releasably holding the applicator member in either of its two positions of longitudinal adjustment in the bore of the sheath and with respect to such sheath, F designates a supplemental treatment member adapted to be applied over the sheath or a like part as the treatment progresses, and G designates a further supplemental member of larger diameter than the member F and adapted to be used in substitution therefor in the later stages of the treatment.

The core B is shown as an elongated cylindrical body 10 formed of any suitable material, such as bakelite, fibre or like material having suitable insulating qualities, or of metal if it is desired to provide special insulating material within the same, or of any other preferred material; this body is formed at its forward end with a blunt entering point, which may be of olive-like form, as at 11, to facilitate the entry of the device into a cavity in which the walls are normally collapsed; behind this point 11 or entering wedge, the body is formed with a longitudinal series of circumferential outstanding lateral treatment ribs or projections 12 adapted to massage the cavity linings or wall portions and to expel venous blood during the introduction thereof and to induct fresh arterial blood into the wall structure during the withdrawal thereof, and in the very first stages of the treatment; between these ribs 12, which are of rounded form, salve or medicament-carrying grooves 12' are provided, and these grooves, being filled with the treatment salve, ointment or like medicament, carry the same inwardly and give off the same to the cavity wall or lining and which greatly facilitate the entry of the device. At its rearward end this body 10 is formed with a lateral flange or finger-piece 13 by means of which it is given a gyratory and inward movement, or other motion, as the same is at first gently worked inwardly, and by means of which it may be worked with increased force.

A longitudinal central bore 14 extends inwardly from the rearward end of the body 11 to a point near the forward end thereof, and this bore 14 is adapted to have an electrical resistance element 15, shown as a helically wound resistance wire, removably housed therein; this wire 15 is shown as wound about a central rod 16 of insulating material, the rod 16 and wire 15 being arranged for withdrawal for purposes of repair or replacement; the rod is shown as socketed at 17 in the blunt point 11 and at 18 in the finger-piece 13; at the finger-piece 13 the rod has a lateral flange or head 19 in which a pair of connection sockets 20 are mounted; one end of the resistance wire terminates at each socket 20 and when electrical connection is to be made, a plug 21 having points 22 connected with a flexible cord or cable 23 is arranged with its points 22, one in each socket 20. The cord may lead from any suitable source of electrical energy supply and is connected with the core whenever it is desired to heat the same or the entire device or elements thereof. In certain embodiments of the invention, the core may be made solid and the heating device just described dispensed with as shown at 14a. But in carrying on treatments in many cases, the heating of the affected parts by means of the core, either directly applied to the parts, or by heat conducted to the affected parts from the heating core by the device members and elements surrounding such core, as

will be readily understood by reference to Figure 1.

The sheath C is shown as a body 23 formed of suitable material and which body preferably comprises an elongated cylindrical tubular device formed of relatively thin metal; this tubular body is open from end to end, the bore 24 thereof being of such diameter that the core B, as well as the applicator member D, will have a snug working fit therein in order that either of the same may be reciprocated in such bore 24 without any deviation from a guided longitudinal movement therein, so preventing all rattling or wobbling action as between the sheath and the central part of the device or means and by means of which the sheath may be given a gyratory motion. The body 23 is formed at its forward end with a nose 25 which merges into the surface of the blunt core point 11, as shown at 26 in Figure 1, or into the blunt and suitably formed end wall of the applicator member D, as shown at 26 in Figure 3. Behind this nose 25 the sheath body is formed with a longitudinal series of outstanding lateral rounded ribs 27 between which medicament-receiving grooves 28 are provided; this rib and groove arrangement is similar to the rib and groove arrangement described in connection with the core B, but of larger diameter, and may be employed after the initial treatment by the core, and in a similar manner. At its rearward end the sheath body has a lateral flange or finger-piece formed thereon as at 29.

The applicator member D is shown as comprising a cylindrical tubular body portion 30 preferably formed of a suitable metal and having a forward end closed by an end wall or guard formation 31 and having a finger-ring 32 at its rearward end; this finger-ring 32 is of larger diameter than the bore of the sheath C and provides an element of the detent means E in that it in one position of adjustment of sheath and member D firmly abuts against the corresponding end of the sheath C and positively prevents further progress of the member D inwardly with respect to its sheath after a flexible swab 33 at the forward end of the member D is projected the predetermined distance outwardly of the sheath C. The forward end formation at 31 is tapered forwardly and inwardly toward the axis to form a blunt point or closure and the same is centrally apertured at 34 to accommodate the extension therethrough of features of the flexible swab 33, and which features may be formed integrally with certain features of the detent means. The flexible swab may comprise a slender helix 34 formed of a portion of the length of a suitable metallic spring wire 35; this wire at the forward end of the helix is bent inwardly centrally or axially as at 36; the rearward portion of this wire 35 is housed in the hollow of the tubular body 30, extending inwardly and rearwardly from the helix along the body wall, as at 37, to a coil or convolution 38 formed by the wire, and further rearwardly to a slot 39 in the body wall where an outwardly pressed detent finger 40 is formed by a bend in the wire; a curved spring finger 41 is formed by the wire rearwardly and beneath the detent means finger 40 and this spring finger 41 has its terminus at 42 engaged with the wall portion opposite the slot 39. The wire may be soldered to the wall, as at 43, so fixing the flexible helix and spring detent in their working relation with the body 30.

The detent means E comprises in addition to the spring detent finger device just described and the abutting finger-ring and end formation of the sheath, an outstanding circumferential rib 43

formed upon the sheath C in a manner similar to the formation of the massaging ribs thereon, but which rib 43 is formed near the rearward end of the sheath and which provides an interior circular 5 detent groove 44 in which the detent finger 40 is caught when the member D is in retracted position; when the resistance of the spring finger 40 is overcome by inward pressure applied by the finger-ring, the member D is moved to its forward 10 position in the sheath C, this position being determined by the abutting finger-ring as the same strikes against the rearward end of the sheath, the spring finger or detent finger 40, due to friction against the inner wall surface of the sheath, 15 firmly holding the parts in this second position of adjustment until a firm pull upon the finger-ring snaps the parts back into their first position of adjustment. The supplemental member F is shown as formed to perform the triple function above 20 mentioned as applying to parts already described, and may comprise a generally pyriform body 45 formed of any suitable material, but preferably of a heat and electricity conducting material. This body 45 is shown as a hollow thin-walled structure fitted into place over the forward end of the sheath C and resting upon the sheath C at the rib 25 44, as at 46, the bore of the member F at the rib 44 snugly fitting the same; at its forward end the nose 47 of the member F merges into the nose 25 of the sheath C, as at 48; behind the nose 47 which may be the first and smallest of a longitudinal series of circumferential ribs 49 with which the member is provided, the rib and groove formation described in connection with the core and the 30 sheath is provided, the grooves being shown at 50. These ribs 49 are shown as increasingly larger diameter rearwardly to that portion of the body where its pyriform contour begins to decrease in diameter rearwardly, as at 51. The grooves being 40 filled with medicament, this formation provides for easy entrance of the successively larger ribs, so gently and gradually dilating the walls of the cavity and bringing to the inner wall surface the bottoms of fissures, crevices and the like.

45 After the treatment has been carried on by the parts above described in detail, the supplemental member G is substituted for the member F upon the sheath C; such member G is of a construction similar to the member F but of larger diameter, in order that the dilation may be further 50 carried out. Other and further members of progressively increasing size may be used in substitution for the member G.

The modified form of flexible swab element 55 shown in Figure 4 may comprise a wire 52 twisted as at 53 where it emerges at the aperture in the end of the member D and formed at its forward portion into a pair of loops, as at 54 and 55.

60 A pledget of cotton 56 or like material is introduced into place by placing its edge into the space between convolutions of the helix 34 and then by twisting is wrapped upon the helix preferably covering the entire helix; in a similar 65 manner cotton may be worked into the looped formation of the modified form of flexible swab element shown in Figure 4.

While swabbing is always an important last step in later stages of most treatments, electricity plays an important part in an intermediate 70 stage; galvanic or faradic or like currents may be employed by connecting one circuit wire 57 of a suitable circuit to the finger-ring of the member D and applying the electrode of the 75 other circuit wire to the body in any manner, as

by holding such electrode in the hand or otherwise applying the same to the body, as when such second electrode is in the form of a suitable plate.

The operation, method of use and advantages of the invention will be readily understood from 5 the foregoing disclosure, taken in connection with the following statement:

In starting a course of treatments, the first stage or the first few treatments may be initially carried out entirely by the use of the core, which 10 coated with medicaments, is gently and gradually worked into a cavity by a torsional and progressive movement; in the second stage, the core is first used upon each treatment and the device then enlarged by the addition of the sheath to 15 the core, both being worked into the cavity as one, in a manner identical to that in which the core was first employed; the next step in this second stage generally resorted to is the use of the applicator member with its swab medicated and 20 housed in the sheath and the finger-ring connected with a source of galvanic or faradic electric current, the device so being used as an electrode, and the swab projected to apply medicaments to affected parts after the electrical treat- 25 ment has been effected; in the third stage each treatment may consist in first employing the core, then using the sheath over the core for greater dilation, then using the smallest of the supplemental members for still greater dilation 30 and massage, then preferably by making electrical connection with the heating element apply heat to the parts, and lastly by using the swab member in the sheath in substitution for the core, either by withdrawal of the sheath for pur- 35 poses of effecting the substitution, or by effecting the substitution with the sheath and supplemental member in situ.

Each treatment, in both the second and third stages, should always end with the swabbing 40 process.

The helically wound metallic resistance element in the core, when energized by connecting the same with a proper source of electricity, produces the so-called infra-red rays; and it is to 45 be noted that inasmuch as the core is adapted for the application of heat so generated, and the members applied over the core are likewise so adapted, the benefits derived from generating heat in the helix of metallic wire may be conferred in the use of the device during any stage 50 of the treatment.

Having thus disclosed my invention, I claim and desire to secure by Letters Patent:

1. A treatment device of the character disclosed comprising a tubular cylindrical sheath 55 having a longitudinally extending series of paralleled circumferential grooves provided between rounded lateral massaging flanges at its forward end and adapted to contain a medicament and 60 carry the same into a normally collapsed cavity and having a blunt entering forward terminus, a cylindrical applicator member carrying a swab at its forward end and a manipulating finger piece at its rearward end and adapted for entrance into the rearward open mouth of said 65 sheath while said sheath is in situ in the cavity and acts as a protecting casing to prevent dislodgement of a medicament upon the swab as the same is moved through said tube from end to end thereof, for the treatment of affected 70 parts forwardly of said tube, and a detent means adapted to releasably hold said sheath and said applicator member in assemblage in a predetermined position of longitudinal adjustment and 75

with the swab in a protected position within the sheath.

2. A treatment device for the purpose set forth comprising a central treatment member, and a plurality of tubular treatment members of increasing diametrical measurement adapted to be successively applied to and over said central member and in a series the one over the other during the successive steps of a treatment; all of said members being formed for assemblage in interfitting relation to build a treatment device of gradually increased diameter; and each of said treatment members having a series of circumferential grooves provided between rounded lateral flanges at its forward end.

3. A treatment device for the purpose set forth comprising a central treatment member, and a plurality of tubular treatment members of increasing diametrical measurement adapted to be successively applied to and over said central member and in a series the one over the other during the successive steps of a treatment; all of said members being formed for assemblage in interfitting relation to build a treatment device of gradually increased diameter; each of said treatment members having a series of circumferential grooves provided between rounded lateral flanges at its forward end; and said central treatment member having an electrical heating element for heating the same and the members applied thereto.

4. A treatment device of the character disclosed comprising a tubular sheath having a laterally extending circumferential massaging flange at its forward end and adapted to be entered into a normally collapsed cavity and having a blunt entering forward terminus, an applicator member conforming to and adapted to be guided by the inner wall surfaces of said tubular sheath and carrying a swab at its forward end and having a manipulating finger piece at its rearward end and adapted for entrance into the rearward open mouth of said sheath while said sheath is in situ in the cavity and acts as a protecting casing to prevent dislodgement of a medicament upon the swab as the same is moved through said tubular sheath from end to end thereof for the treatment of affected parts forwardly of said sheath, and a detent means adapted to releasably hold said sheath and said applicator member in assemblage in a predetermined position of longitudinal adjustment and with the swab in a protected position within said sheath.

5. A treatment device of the character disclosed and for the purpose set forth comprising a central treatment member adapted for initial independent treatment of the walls of a normally collapsed cavity and formed at its forward terminus with a blunt entering point adapted to facilitate the entrance of said member into a normally collapsed cavity; and a tubular member having an open bore from end to end and adapted to be applied to and over said central member; said tubular member having a blunt terminal formation at its forward end, said terminal formation facilitating the entrance of the tubular member into such collapsed cavity when in association with and applied to and over said central treatment member and with said blunt entering point projecting forwardly of said blunt terminal formation.

6. A treatment device of the character disclosed comprising a tubular sheath having a laterally extending circumferential massaging flange at its forward end and adapted to be entered into a normally collapsed cavity and having a blunt entering forward terminus and an applicator member conforming to and adapted to be guided by the inner wall surfaces of said tubular sheath and carrying a swab at its forward end and having a manipulating finger piece at its rearward end and adapted for entrance into the rearward open mouth of said sheath while said sheath is in situ in the cavity and acts as a protecting casing to prevent dislodgement of a medicament upon the swab as the same is moved through said tubular sheath from end to end thereof for the treatment of affected parts forwardly of said sheath.

7. A treatment device for the purpose set forth comprising a central treatment member, and a plurality of tubular treatment members of increasing diametrical measurement adapted to be successively applied to and over said central member and in a series one over the other during the successive steps of a treatment; all of said treatment members being formed for assemblage in interfitting relation to build a treatment device of gradually increased diameter; and each of such treatment members being formed at its forward portion to facilitate the entrance thereof in cooperation with said central treatment member into a normally collapsed cavity by gently guiding the walls of the cavity outward as the device is progressively entered in the cavity.

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