

1,234,106.

2 SHEETS—SHEET 1.



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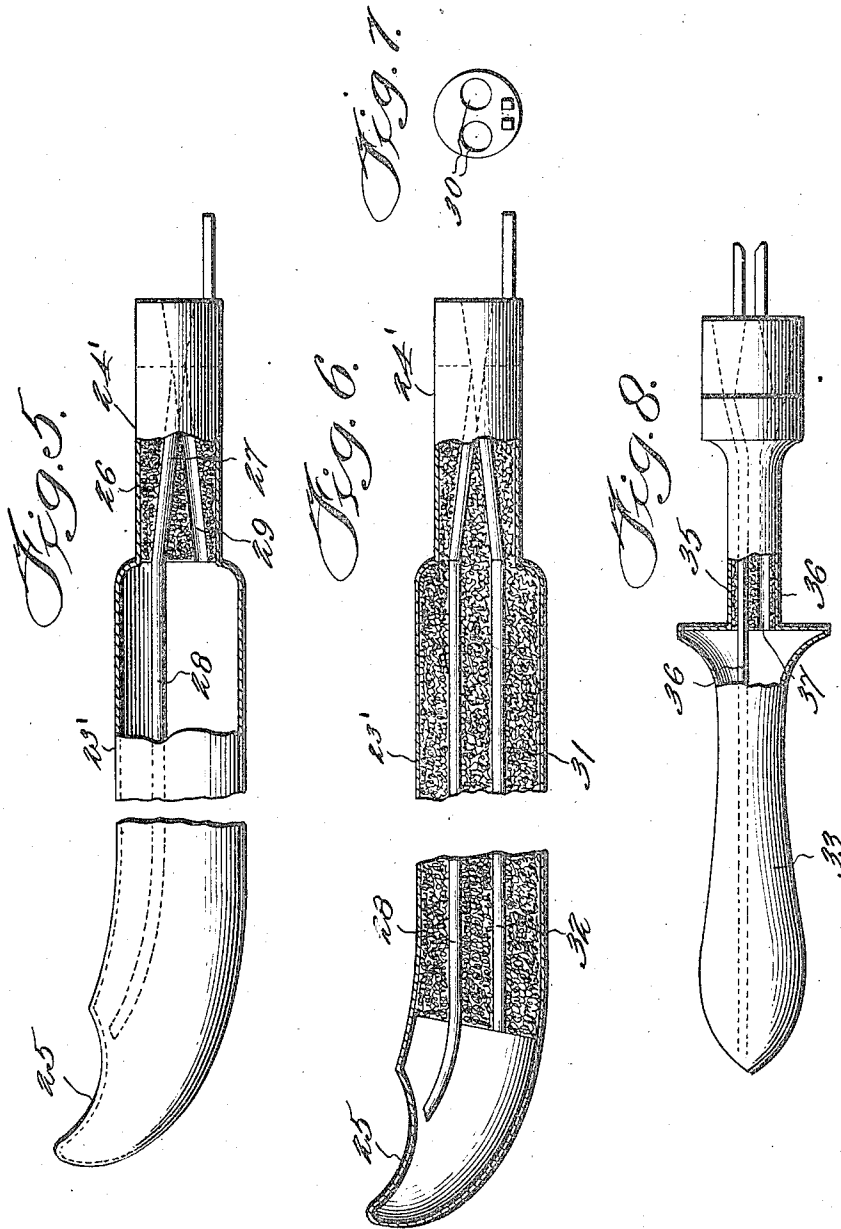
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2 SHEETS—SHEET 2.



WITNESSES

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SURGICAL INSTRUMENT.

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To all whom it may concern:

Be it known that I, GILBERT H. HODGSON, a citizen of the United States, residing at Tampa, in the county of Hillsborough and State of Florida, have invented certain new and useful Improvements in Surgical Instruments, of which the following is a specification.

This invention relates to surgical instruments for the treatment of gonorrhea or other infective diseases producing inflammation of the genito-urinary tract and rectum, etc.

An object of the invention is to provide an instrument for treating infections of the genito-urinary tract in males or females, and may be utilized to equal advantage in either acute or chronic condition.

Another object is to permit the application of heat at a predetermined temperature to the affected parts, which as is known to those skilled in the art, is desirable in the treatment of this species of disease.

A further object of the invention is to equip the device with a means for registering the temperature of the heating agency, when introduced into the device and also a registering means by which the temperature of the agency may be determined when being expelled from the device.

A further object of the invention is to provide applicators of various configurations which may be conveniently introduced into the penis, vagina or rectum, for treatment of diseases therein, all of which may be conveniently associated with the means for registering the temperature of the heating agency.

In the drawings—

Figure 1 is a top plan of one form of my invention, a part thereof being broken away to disclose details.

Fig. 2 is a side elevational view of the same.

Fig. 3 is a longitudinal sectional view of the same, showing to advantage the manner in which the applicator and temperature indicating means is associated.

Fig. 4 is a longitudinal sectional view of a modified form of applicator.

Fig. 5 is a side elevational view of another modified form, a portion thereof being broken away to disclose details.

Fig. 6 is a longitudinal sectional view showing a slight modification over the form shown in Fig. 5, a portion of this form be-

ing shown in side elevation and the body being severed intermediate its ends.

Fig. 7 is a rear elevational view of one of the applicators, and

Fig. 8 is a side elevational view of another modified form of applicator, a portion thereof being broken away to disclose details.

In the drawings I have in Figs. 1, 2 and 3 shown a form of invention adapted for treatment of diseases in the genito-urinary tract of the penis, which in this instance comprises an applicator 1 made of thin metal and consisting of a base 2 which has issuing therefrom a cylindrical tube 3, the outer terminal of which is closed and is of a semi-ovoid configuration, as indicated at 4. The base 2 is provided with an inlet opening 5 which inclines toward the tube 3 and communicates with a duct or pipe 6 leading from said base 2 and terminating short of the outer terminal of the tube 3, as illustrated to advantage in Fig. 3. An outlet opening 7 is formed in said base, this opening also being inclined toward the tube 3. The openings 5 and 7 issue, at a point approximately midway the ends of said base, into ways 8 and 9, respectively, both of which are of a conical configuration.

A temperature registering member generally designated 10 is associated with the applicator 1 and comprises a housing 11 which has a pair of parallelly arranged cells therein, each of which carries a graduated thermometer bulb 12, the mercury tube 13 of each of which is extended through the inner end of the casing 11, portions thereof being concentrically arranged in chambers 14 and 15, the latter being equipped with cone-shaped terminals to engage the conical openings 8 and 9 in the base 2. Each of the chambers 14 and 15 is provided with an inclined tube 17, said tubes inclining in counter directions and communicating with their respective chambers; the tube leading from the chamber 14 comprises an inlet tube and the tube leading from the chamber 15 comprises an outlet tube. It will be noted that each of the free terminals of the tube 17 has an enlarged truncated cone-shaped head 18 thereon, which is adapted for engagement with a suitable means for conveying fluid to, or from said tube.

In order to retain the temperature registering means and the applicator from displacement, a suitable slip joint has been provided which in this instance comprises a pair

of fingers 19 which extend rearwardly from the base 2 of the applicator and straddle a threaded shank 20 upon which is mounted a knurled nut 21. By this construction it is
 5 seen that the applicator and temperature registering means may be held in fixed engagement, although when desired these parts may be separated by merely disengaging the nut 21.

10 In Fig. 4 I have shown a modified form of the applicator in which the outer terminal 22 is curved, so as to especially adapt the same for use in treating the specific point of the irritation in the urethra and may
 15 also, if desired, be used for massaging the prostatic gland. A portion of the applicator is insulated, as indicated at 23, the insulation extending from the base 2' to a point adjacent the curved end 22, thereby
 20 permitting that portion of the applicator which comes in contact with irritated parts to be heated and retaining the remainder of the applicator in a normal state to permit its being conveniently handled. It will be
 25 seen that the heating agency, which in this instance comprises a fluid, will be introduced through the pipe or duct 6' through which it will pass at its outer end into the applicator and will be permitted to return
 30 to the opening 24 in the insulation 23.

In Figs. 5 and 6 I have shown a form of applicator which is especially adapted for use in the treatment of diseases in the genito-urinary tract of females and in this instance
 35 comprises a hollow body 23' preferably made of metal, the rear end 24' of which is constricted. The outer end of said body is slightly curved and has the terminal thereof depressed to provide a cup-shaped
 40 recess 25 which will cover the base of the cervix uteri. The constricted end 24' of the body is filled with a suitable insulating material 26 through which openings are formed, one of which in Fig. 5 is adapted
 45 to receive one end 27 of a tube 28, said tube comprising a means for conveying the heating agency into said body 23 and for expelling the same against the wall of the depressed portion 25 of the body, as illustrated
 50 to advantage in Fig. 6. The other of the openings which is formed in the constricted end 24' of the applicator in Fig. 5, is indicated at 29 and comprises an outlet for the fluid which is emitted through the outer
 55 end of the tube 28. The terminal of the constricted portion 24' of each of the forms shown in Figs. 5 and 6 is provided with conical openings 30 therein, which are adapted to receive the conical terminals 8
 60 and 9 of the temperature registering means 10, in the same manner as the latter is associated with the applicator 1 in Figs. 1, 2 and 3. In Fig. 6 it will be noted that the form shown in Fig. 5 has been slightly
 65 modified, inasmuch as insulating material

31 is packed in the body 23' and terminates substantially at the inception of the curved outer terminal of said body, whereby only said curved terminal will be heated, this form of the invention being especially
 70 adapted for local application of heat to the cervix-uteri. In this form of the invention it will be noted that the tube 28 is extended through the body 23 the same as is shown in Fig. 5 and that a second
 75 tube, as indicated at 32, is passed through the insulating material 31 and comprises an outlet for the fluid which is discharged through the tube 28 and into the body 23'. The inner end of the tube 31
 80 communicates with one of the openings 30 in order to permit the discharge of the fluid into the chamber 15, as shown in Fig. 3.

The form of invention shown in Fig. 8 of the drawings is especially adapted for
 85 the application of heat to the rectum or prostate in the treatment of inflammatory diseases thereof, this form comprising a substantially pear-shaped body 33, the rear terminal of which is enlarged to provide an
 90 annulus 34. The portion 34 issues into a constricted neck 35 in which insulation 36 is mounted, said insulation being provided with parallel inlet and outlet ways, the inlet way having a tube 37 mounted therein
 95 which extends through said body 33 and terminates short of the outer end of the latter, whereby fluid may be introduced through said tube and discharged against the wall of the outer terminal of the body
 100 and permitted to be discharged through the outlet way, indicated at 37, in the insulation 36. The free end of the neck 35 is enlarged and is provided with conical openings 30, as indicated at Fig. 7, and for the
 105 same purpose as the openings shown in said figure.

From the above it will therefore be seen that various forms of applicators have been provided so as to conveniently and effectively treat diseases of the nature aforementioned, and it is readily apparent that the temperature indicating mechanism 10 is
 110 equally applicable to any form of applicators shown in the drawings and may be conveniently and expeditiously attached therethrough by the same connection as shown in Figs. 1 and 2 of the drawings.

I claim:—

1. A surgical instrument including a body
 115 equipped with an enlarged base, fingers projected from the free terminal of the base, a temperature registering device engageable with said base, a threaded shank formed on said temperature registering device and
 120 extending laterally therefrom for slidable engagement between said fingers, and a nut threaded on said shank to engage said fingers for holding said body and temperature
 125 registering device from displacement.

2. A surgical instrument including a body equipped with an enlarged base having conical openings, a temperature registering device, one terminal of the latter being
5 formed to provide parallel cone-shaped members for snug engagement with the conical openings of said base, the apices of said cone-shaped members being open and in communication with said body, an inlet tube
10 communicating with one of said cone-shaped members and having its outlet in proximity to a portion of the registering device, to indicate the temperature of materials passing
through said inlet tube, and an outlet tube in communication with the other of said
15 cone-shaped members and having its mouth adjacent another portion of the temperature recording device to indicate the temperature of materials when passing from
20 said body.

In testimony whereof I affix my signature in presence of two witnesses.

GILBERT H. HODGSON.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."