

G. N. MURPHY.
SURGICAL INSTRUMENT.
APPLICATION FILED JAN. 8, 1910.

977,825.

Patented Dec. 6, 1910.

Fig. 1.

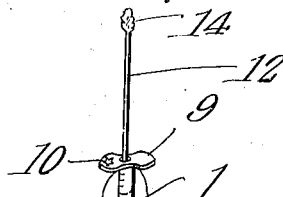
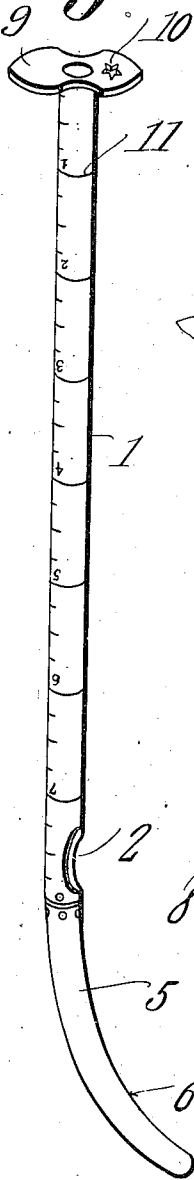


Fig. 2.

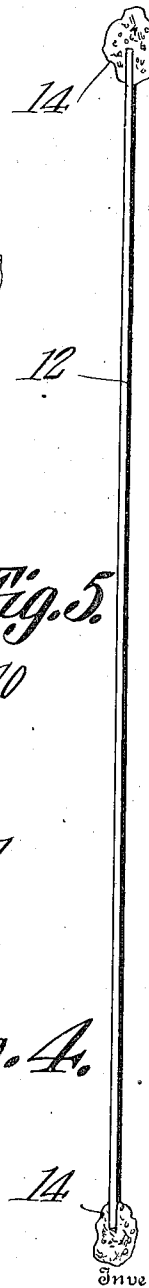


Fig. 5.



Fig. 3.

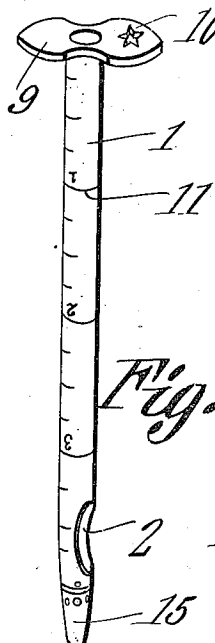


Fig. 4.

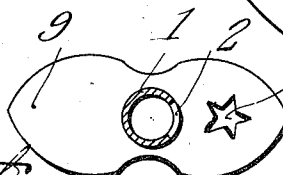


Fig. 6.

Inventor

Witnesses

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UNITED STATES PATENT OFFICE.

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SURGICAL INSTRUMENT.

977,825.

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To all whom it may concern:

Be it known that I, GEORGE N. MURPHY, a citizen of the United States, residing at Paducah, in the county of McCracken and State of Kentucky, have invented a new and useful Surgical Instrument, of which the following is a specification.

The device forming the subject matter of this application, is adapted to be used in the treatment of granulated patches or ulcers, commonly found in the urethra, as a result of gonorrhea of long standing.

In the treatment of urethral ulcers, the medicament should be applied to the pathological tissues, and at no other point, and with this end in view, it has been attempted hitherto, to illuminate the urethra by means of head reflectors and devices more cumbersome, but equally unsatisfactory. These illuminating devices have failed to prove satisfactory, for two reasons; in the first place, their manipulation is so complicated, that the average practitioner of medicine has no opportunity to become adept in their use; and, in the second place, the illumination of the urethra is an unsatisfactory method of locating ulcerated patches therein, for the reason that, under an artificial light, healthy and pathological tissues appear of nearly the same color.

It is the object of this invention to provide a device whereby, without illuminating the urethra, the pathological portions thereof may be accurately located, and the medicament applied to the diseased tissues and at no other points.

With the above and other objects in view, the invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the drawings and claimed, it being understood that, within the scope of what is claimed, divers changes in the form, proportions, size and minor details of the structure may be made, without departing from the spirit of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the figures of the drawings, wherein—

Figure 1 is an elevation of a urethroscope constructed in accordance with my invention, and adapted to be used in the treatment of chronic urethritis in the male; Fig. 2 is an elevation, partly in section, showing the device of Fig. 1, in operation; Fig. 3 is a longitudinal section of the lower extrem-

ity of the instrument shown in Fig. 1; Fig. 4 is an elevation of a modified urethroscope, adapted to be used in the treatment of urethritis in the female; Fig. 5 is an elevation of an applicator adapted to be used in connection with either the instrument shown in Fig. 1 or that shown in Fig. 4; and Fig. 6 is a transverse section of the devices shown in Figs. 1 and 4, parts being in elevation.

Referring to Fig. 1 of the drawings, the device includes a tubular body 1, provided in its side wall, and adjacent one end, with an opening 2. A tip 5 is provided, which, as shown at 6, is curved slightly, laterally. This tip 5 is substantially the same in diameter as the body 1, the adjacent ends of the body 1 and of the tip 5 being adapted to receive a connecting element in the form of a block 3, one end of which is secured, by means of a transverse pin 4, or the like, within the end of the tubular body 1. The other extremity of the connecting element 3 which extends into the tip 5, is provided with a circumscribing recess 8, adapted to be engaged by projections, in the form of studs 7 or the like, extending into the interior of the tip 5, the construction being such that one end of the connecting member 3 is secured within the body 1, while the tip 5 is free to rotate upon the said connecting member.

The upper end of the body 1 is provided with a laterally extended head 9, upon the upper surface of which is located a mark, which, if desired, may be in the form of a star 10, cut entirely through the head 9. This star 10, is aligned, longitudinally of the body 1 with the opening 2 adjacent the bottom thereof. The tubular body 1 is graduated, as denoted by the numeral 11, according to the metric, or any other system. The graduations may be noted by suitable numerals. The graduations may run from the opening 2 toward the head 9, or, as shown in the drawings from zero at the head 9, toward the opening 2.

The form of the invention shown in Fig. 4 of the drawings, which is adapted for female use is of the same construction as the device shown in Fig. 1, saving for the fact that the tip 15 thereof is straight, instead of curved.

For use in connection either with the device shown in Fig. 1 or that shown in Fig. 4 an applicator is provided, which, as shown in Fig. 5 consists of a rod 12, sometimes made

of wood, upon the ends of which are mounted pledgets of cotton, or other suitable material.

The operation of the device is as follows:

- 5 Before introducing the urethroscope into the urethra, the patient should void his urine, and a few drops of a cocaine solution or other local anesthetic, should be liberated in the urethra so as to render the subsequent
- 10 treatment painless. A firm pillow that will elevate the pelvis about four inches, should be placed beneath the hips, so as to tilt the bladder backward, and prevent any residual urine from flowing into the instrument when
- 15 the opening 2 is positioned in the mouth of the bladder. The instrument should be carefully sterilized, warmed and lubricated, and gently introduced into the urethra, until the opening 2 is disposed at the mouth of
- 20 the bladder, which, under average conditions will take place when, as shown in Fig. 2 of the drawings the head 9 is in contact with the meatus. The applicator is then introduced into the tubular body 1 until one
- 25 of the pledgets 14 is positioned opposite the opening 1. This will ordinarily take place when the end of the applicator is in abutment with the upper end of the connecting member 4. When one of the pledgets 14 is
- 30 thus positioned opposite the opening 2, the applicator is gently manipulated with a rotating pressure. If there is any ulceration in the urethra opposite the opening 2, the pledgets, when the applicator is withdrawn
- 35 from the instrument, will show blood, contact between the pledgets and the urethra being insufficient to draw blood unless there is some ulceration at that point. If, however, one end of the applicator comes out of
- 40 the instrument clean, the tubular body 1 is then rotated through a small arc, the pivotal connection between the body 1 and the tip 5 permitting this rotation, and the engagement between the tip 5 and the urethra preventing the tubular body 1 from being
- 45 drawn upwardly, in the absence of a pronounced upward pull. The end of the applicator is then introduced into the tubular body and the area located opposite the opening 2 is examined. This process is continued
- 50 until the entire transverse area of the urethra at a given point has been examined. The instrument is then lifted a short distance and another zone of the urethra is examined,

the process being continued until the entire surface of the urethra has been covered.

The graduations 11 upon the body 1 serve accurately to define the distance of the ulcers either from the bladder or from the meatus, depending upon the direction in which the body 1 is graduated. The star 10 which is located in alinement with the opening 2 serves to show at any given instance the exact position of the opening 2 with respect to the circumference of the urethra. After the ulcerated patch has been located, the applicator, one of the pledgets 14 of which is saturated with any suitable caustic, or other medicament, is introduced into the body, and the pathological tissue treated. The opposite end of the applicator is then introduced into the tubular body, in order to remove any excess of the medicament, thereby avoiding smearing of the canal with the medicament, when the instrument is withdrawn.

From the foregoing it will be seen that I have provided an instrument well adapted, without illuminating the urethra, to locate any ulcerated patches therein, and effectively to treat the same, the construction of the instrument being such that it may be employed without an obturator, and without the possibility of cutting or wounding delicate tissues.

Having thus described the invention what is claimed is:—

A device of the class described comprising terminally abutting tubular members, one of which is provided with an opening in its side wall adjacent its abutting end, the opening being spaced from said end; a connection inserted into the abutting ends of the tubular members; and elements upon the said members, engaging the connection to provide for an independent rotation of said members, one end face of the connection being positioned substantially at right angles to the axis of the device, and disposed between the opening and the abutting end of the member in which the opening is located.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GEORGE N. MURPHY.

Witnesses:

WILLIAM V. EATON,
MATTIE THOMPSON.