

(No Model.)

H. R. ALLEN, Jr.
SURGICAL INSTRUMENT.

No. 550,238.

Patented Nov. 26, 1895.

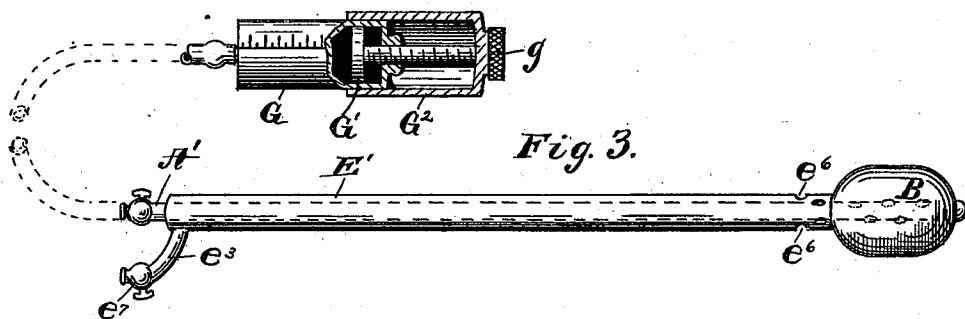
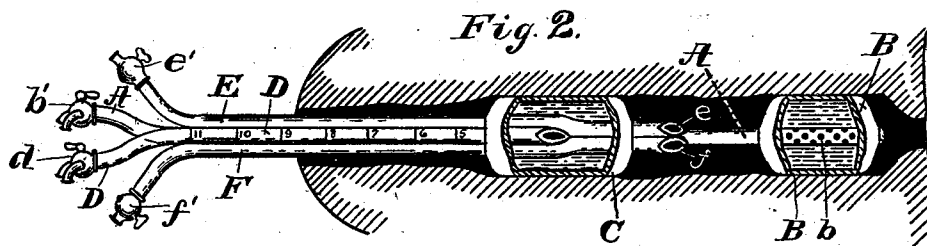
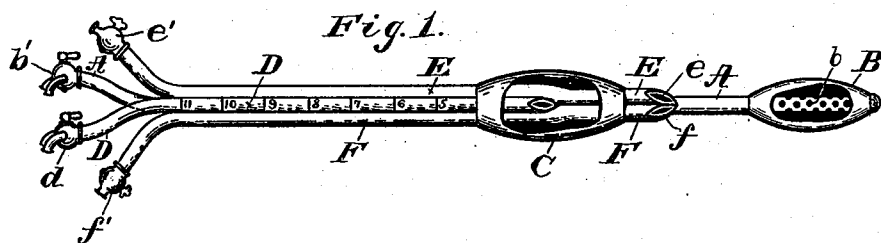


Fig. 4.

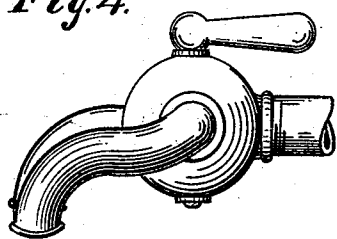


Fig. 5.

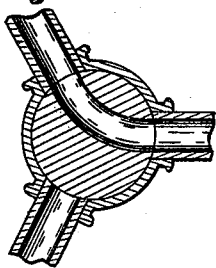


Fig. 6.

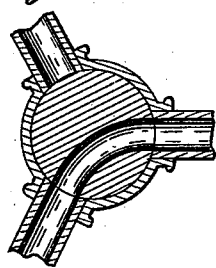
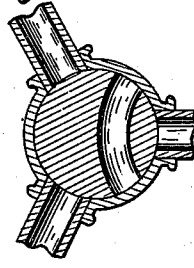


Fig. 7.



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SURGICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 550,238, dated November 26, 1895.

Application filed May 20, 1895. Serial No. 549,930. (No model.)

To all whom it may concern:

Be it known that I, HORACE RUSSEL ALLEN, Jr., a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Instruments for Treating the Male Urethra; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in instruments for treating the male urethra.

The objects of the invention are, first, to prevent injection being carried further up the urethra than the desired point, as is so frequently done by the conventional method of treatment; second, to treat a limited portion of the urethra, said portion being wherever the trouble may be located; third, to dilate the periurethral ducts, and, fourth, to exhaust said ducts by retroinjection, which is a very important feature of my invention. I accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation, partially in section, of my instrument having two bulbs, both of which are shown as collapsed. Fig. 2 is a similar view showing the instrument inserted in the urethra and both of the bulbs inflated. Fig. 3 is a view of a modification employing only a single bulb. Fig. 4 is a detail in perspective of a three-way cock used on the tubes through which the bulbs are inflated; and Figs. 5, 6, and 7, are diagrams in cross-section of the cock shown in Fig. 4, showing the construction and operation of the said cock.

Similar letters of reference refer to like parts throughout the several views of the drawings.

A is a tube of metal, vulcanized rubber, or other suitable material of proper dimensions, and B is a bulb, having walls of flexible material, as rubber, secured to the tube, so as to make an air and water tight joint with said tube. The openings *b* afford communication between the interior of the tube and the bulb, whereby the bulb (through said tube) may be

inflated and collapsed. A stop-cock *b'* enables the tube to be closed and the bulb retained in its inflated condition.

C is a second bulb of flexible material, secured to the tube A, and D is a tube communicating with the interior of the tube through which the bulb is inflated and exhausted. The tube is provided with a stop-cock *d*.

The bulbs B and C may be distended or collapsed irrespectively of each other; or they may both be distended or collapsed simultaneously by the proper manipulation of the tubes A and D, respectively. The bulbs B and C will be distended until they bring sufficient pressure against the wall of the urethra to prevent fluids introduced between them from passing beyond them—that is, from passing between the rubber bulbs and the wall of the urethra. Fig. 2 shows the appearance of the instrument as inserted in the urethra and with the bulbs inflated.

Passing through the bulb C parallel with and adjacent to the tubes A and D are the tubes E and F, which terminate outside of the bulb C and between the bulbs B and C, so that fluid entering the tube E will escape at *e*, and entering at opening *f* will pass out through the tube F. The tubes will be provided with suitable cocks *e'* and *f'*. All of the stop-cocks will be connected with rubber tubes or with tubes and syringes appropriate to the work to be done.

For greater convenience in regulating the degree of inflation of the bulbs and in charging and discharging them I prefer to use the three-way cocks on the tubes leading into said bulbs, which will obviate the necessity of putting the rubber tubes on the nozzles of the bulbs and taking the tubes off while the instrument is in place in the urethra. The cock is well illustrated in Figs. 4, 5, 6, and 7. The handle indicates the direction of flow by pointing over the nozzle, which is open, and over the place not having a nozzle when all of the communications are cut off.

The instrument will be provided with a measuring-scale of any convenient kind to indicate the extent of insertion of the instrument into the urethra.

The method of using the instrument is as

follows: The instrument with both bulbs collapsed is introduced into the urethra until it has reached the required locality. Then both or only one bulb is distended. Usually the bulb B is distended first and the urethra washed out by fluid entering pipe E and leaving same at opening *e*. After washing the urethra the stop-cock *e'* is shut off and no more fluid escapes at *e*. Then the bulb C is distended and like bulb B remains distended by turning off stop-cock *d*. Fluid introduced through pipe E will pass out opening *e*, and after circulating in the urethra between the bulbs C and B will find its exit at 15 openings *f* and will pass out pipe F, if desired, or may be retained by closing stop-cock *f'* of pipe F. If desired, bulb C may be collapsed, leaving bulb B distended, whereby the fluid passing into the urethra at *e* will be allowed 20 to pass between the urethra and the instrument and escape at the meatus of the penis.

The body of the instrument may be corrugated longitudinally or may be round upon cross-section or of any form convenient to the 25 elimination of fluids.

To remove the instrument both bulbs will be collapsed, after which it may be readily withdrawn.

In the modification shown in Fig. 3 pipe A' 30 passes through pipe E', but does not communicate with it, and terminates with the flexible bulb B', which bulb is inflated and collapsed through pipe A' in the same manner as described for the instrument shown in Figs. 35 1 and 2. Pipe E' has the inlet *e'* provided

with the stop-cock *e'*, and at the end next to the bulb is provided with the outlets *e''*.

The instrument is introduced into the urethra with bulb B' collapsed until the required locality is reached. Then bulb B' is 40 distended so as to make a water-tight connection with the wall of the urethra. Then fluid passed through the pipe A' leaves pipe A' at *e''* and finds its exit at the meatus of the penis after passing between the wall of the urethra 45 and the instrument.

Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

In an instrument for treating the male 50 urethra, a tube carrying a pair of flexible bulbs held a suitable distance apart and adapted to be inserted into the urethra, means substantially as specified, for inflating said bulbs so as to connect the walls of the urethra 55 and form a closure that will prevent the passage of liquid between the bulbs and said walls, means for introducing fluid into the space between the bulbs, consisting of a supply and a discharge tube communicating with 60 said space and said tubes having stop-cocks externally placed substantially as shown and for the purposes specified.

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

HORACE RUSSEL ALLEN, JR.

Witnesses:

RUFUS K. MCHARG,
JOHN M. MASSEY.