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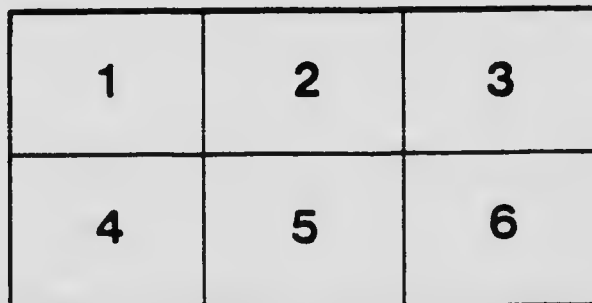
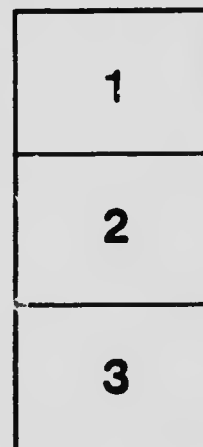
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MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



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A SIMPLE ELECTRIC FEMALE CYSTOSCOPE.

BY THOMAS S. CULLEN, M. B.

Associate in Gynecology, the Johns Hopkins Hospital.



A SIMPLE ELECTRIC FEMALE CYSTOSCOPE. [166]

BY THOMAS S. CULLEN, M. B.

Associate in Gynecology, the Johns Hopkins Hospital.

For the usual exploration of the bladder any cystoscope will answer, but where careful scrutiny of the ureters is required, considerable difficulty is often experienced by those who are not called upon to do vesical work every day.

Electrical cystoscopes if properly constructed render the examination of all parts of the bladder comparatively easy. There are, however, several serious objections to their usage. In the first place the electric lamps are so small that if the utmost care be not exercised they are burned out, occasioning not only much delay, but also considerable expense. Again, the small connecting wires on several of the cystoscopes have only lasted for a few weeks, and with their destruction the usefulness of the cystoscope was entirely gone. Probably the chief drawback to the use of the electrical cystoscope has been the unreliability of the storage battery which would so frequently give out when it was most needed.

With the idea of overcoming all these obstacles the accompanying instrument was planned. In shape it resembles a short male cystoscope. Its connections are all covered, at no point being exposed. The electric lamp is relatively large in size, thus giving good illumination and diminishing the possibility of burning out. The instrument is readily controlled with a long handle. The lumen of the tube is perfectly straight. The controller represented in Fig. 2 has recently been made by one of the Rochester firms and is an admirable addition to our cystoscopic armamentarium. It

1167] does away entirely with the necessity of the battery and can be used wherever the electric current has been installed. This instrument is so small that it can be readily carried in one's pocket. It is to be inserted between the socket and the globe of any electrical fixture. To it the cystoscopic wires are then attached and we can by the small wheel regulate absolutely the amount of current desired. I have been using the same cystoscopic lamps for several months without the slightest difficulty. If, by any chance, the lamp should give out, the cystoscope need not be withdrawn but can be utilized as a Kelly cystoscope, the head mirror and reflected light being used.

Our instrument is handled as follows: Both obturator and cystoscope are placed in pure carbolic acid for ten minutes, then rinsed in alcohol, then in sterile water.¹

A small transformer is now inserted between the ordinary electric globe and its socket. The cystoscopic wires are attached to the transformer, care being taken to note that the small wheel indicates current "off." The cystoscope is now connected up and the wheel gradually turned until the necessary light is obtained. It is unnecessary to darken the room. After cleansing the urethral area with bichloride the ureter and bladder are rendered insensible by weak solutions of cocaine.

¹ This method of preparation has been employed by Young and others with perfect satisfaction. After use the instrument is thoroughly scrubbed with soap and water, a fine brush being used.





LONGITUDINAL SECTION OF THE CYSTOSCOPE.

FIG. 1.— With the obturator in place the sharp angle near the tip of the instrument is completely removed. The lamp is large and is easily withdrawn from the tip of the instrument. There are no wires to get out of order. The electrical attachment is indicated and may be made by an interlocking device if so desired. The wires *a* and *b*, if so desired, can be covered by rubber tubing, allowing of their sterilization. At Fig. 2 in *a* and *b* the other ends of the electric wires which are usually six to eight feet long are shown.

to energy with the sterilizer. The wires *a* and *b*, if so desired, can be covered by rubber tubing, allowing and may be made by an interlocking device if so desired. The current is turned on as usual. With the small wheel at "off" the cystoscope receives no light. When at "on" there is abundant light for the strongest cystoscope. With the wheel in its present position there is sufficient light for the cystoscope.



THE NEW TRANSFORMER IN POSITION.⁷

FIG. 2.—It is inserted between the plug and the ordinary electric lamp bulb. The current is turned on as usual. With the small wheel at "off" the cystoscope receives no light. When at "on" there is abundant light for the strongest cystoscope. With the wheel in its present position there is sufficient light for the cystoscope.

⁷ This transformer was recently designed by a Rochester electrician and will in the large cities practically do away with the use of storage batteries for floating electrical instruments.

