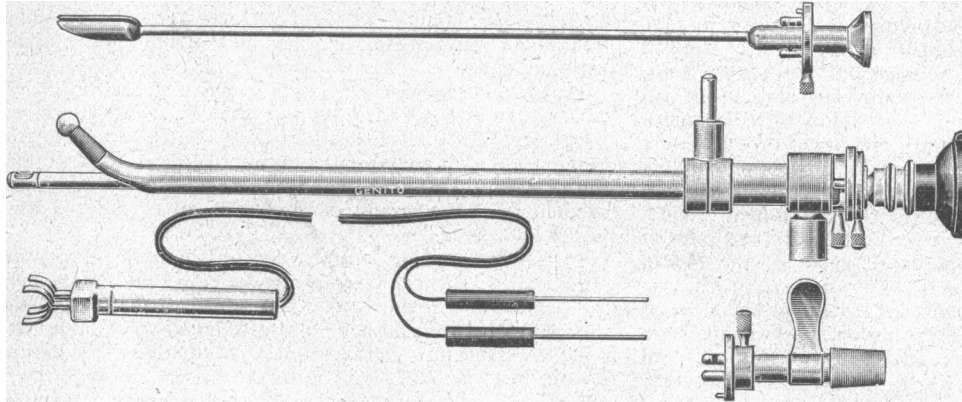


## Preparations and Appliances

### A STANDARD DIATHERMY CYSTOSCOPE

Mr. E. W. RICHES, M.S., F.R.C.S., surgeon and urologist, the Middlesex Hospital, writes: A further addition has been made to the standard cystoscopic instruments



previously described (Riches, 1955). It is based on Frank Kidd's diathermy cystoscope (1925), which was designed for the destruction of large papillary tumours of the bladder at a single session. The use of that instrument over many years has given convincing evidence of its value, but it suffers from the drawbacks of having a small field of vision and in particular a small irrigating channel. Moreover, its bakelite construction makes it fragile and has been found unnecessary.

The present instrument (see Fig.) consists of a metal tube of size 52 Bé (26 Ch) terminating in a stainless-steel ball electrode size 48 Bé (24 Ch); the distal 1.5 cm. next the ball is insulated by plastic material. At the proximal end is a fixed male terminal directed towards the same side as the ball and fitting the standard diathermy cable supplied for bladder electrodes, resectoscopes, and haemostatic forceps. Proximal to this is a single large-bore irrigating inlet on a rotating collar; the standard three-way stopcock supplied for cystoscopes and biopsy forceps fits it, and no change is necessary when substituting one instrument for the other. The obturator, telescope, and faucet are locked in position in the same way as those of the cystoscope, and are easily unlocked by aligning the two short vertical posts. The right-angle telescope with an angle of view in water of 64 degrees covers a field of approximately 1½ inches (3.8 cm.) when the electrode is placed in contact with the tumour. The same faucet is used as for the cystoscope; a bladder syringe fits it internally or a Freyer's evacuator externally, making periodic removal of debris possible. The volume of irrigating fluid passing through the sheath around the telescope is, however, such as to render long periods of coagulation possible without removal of the telescope.

A new spark-proof switch is provided for the lighting circuit; it incorporates a condenser which by damping the circuit precludes all chance of overloading the lamp when the diathermy is switched on. The same switch without the adapting fork can be used for the standard cystoscope, and should be used for the resectoscope.

With this instrument it is possible to destroy cystoscopically large papillomata or papillary differentiated transitional-cell carcinomata of low-grade malignancy. It is desirable that biopsy of all bladder tumours should be performed, but if the cystoscopic appearances suggest that diathermy destruction is possible it is our practice to take the biopsy and proceed at once to coagulation. The effective irrigation system usually allows any bleeding from the biopsy cut to be quickly checked. Donovan (1950) has pointed out that the diathermy current destroys the tumour by

ducing heat coagulation throughout its extent, and that the heating effect increases with the size of the electrode. Although influenced by other factors, the depth of coagulation is roughly equivalent to the diameter of the electrode, which in this case is 8 mm. It is possible with this cystoscope to coagulate and evacuate the bulk of the tumour, leaving a hard core to which deep and prolonged coagulation can be given. This takes time to separate, and after a bladder tumour has been so flattened the slough may not separate for from four to six months. At the end of a year

the area can usually be detected by a white area surrounding a small central pit.

Treatment by coagulation diathermy will not destroy solid infiltrating tumours, which should be treated by excision or irradiation. Tumours situated close to the internal meatus cannot be reached by this cystoscope; they are better treated by a resectoscope or panendoscope fitted with a fore-oblique telescope.

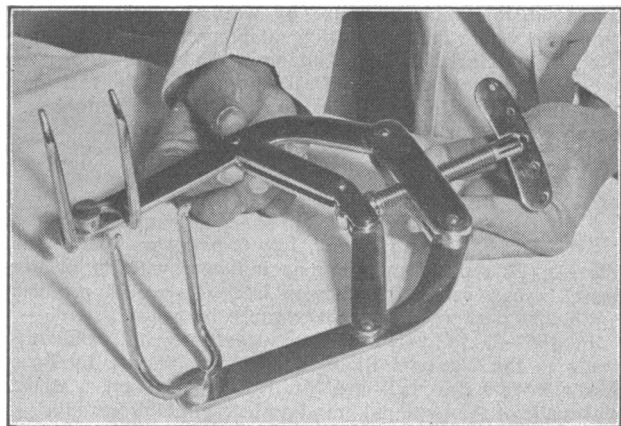
The instrument has been made by the Genito-Urinary Mfg. Co., Ltd., and I am particularly indebted to Mr. A. E. Bean for the improvements he has made in the optical system.

#### REFERENCES

- Donovan, H. (1950). *Brit. J. Urol.*, 22, 332.  
Kidd, F. (1925). *Lancet*, 2, 1282.  
Riches, E. W. (1955). *British Medical Journal*, 2, 1431.

### LAMINECTOMY RETRACTORS

Mr. K. F. HULBERT, consultant orthopaedic surgeon, Dartford Group of Hospitals, writes: The usual type of self-retaining laminectomy retractor has several shortcomings. In fat people the blades are often not deep enough to reach to the depths of the lumbo-sacral wound; the mechanical



efficiency of the apparatus is such that great manual strength is required to open the blades wide enough, and the blades slip too easily.

A laminectomy retractor (see illustration) has been made for me by Messrs. A. L. Hawkins and Co. Ltd., 15, New Cavendish Street, London, W.1. It is an adaptation of a Kirschner wire calliper and tightener with adjustable blades that can be made to any design and are removable. The blades are of two or more prongs, the ends being sharp to avoid slipping and deep enough to reach to the depths of the wound. Retraction is obtained by turning the screw without great manual effort.