

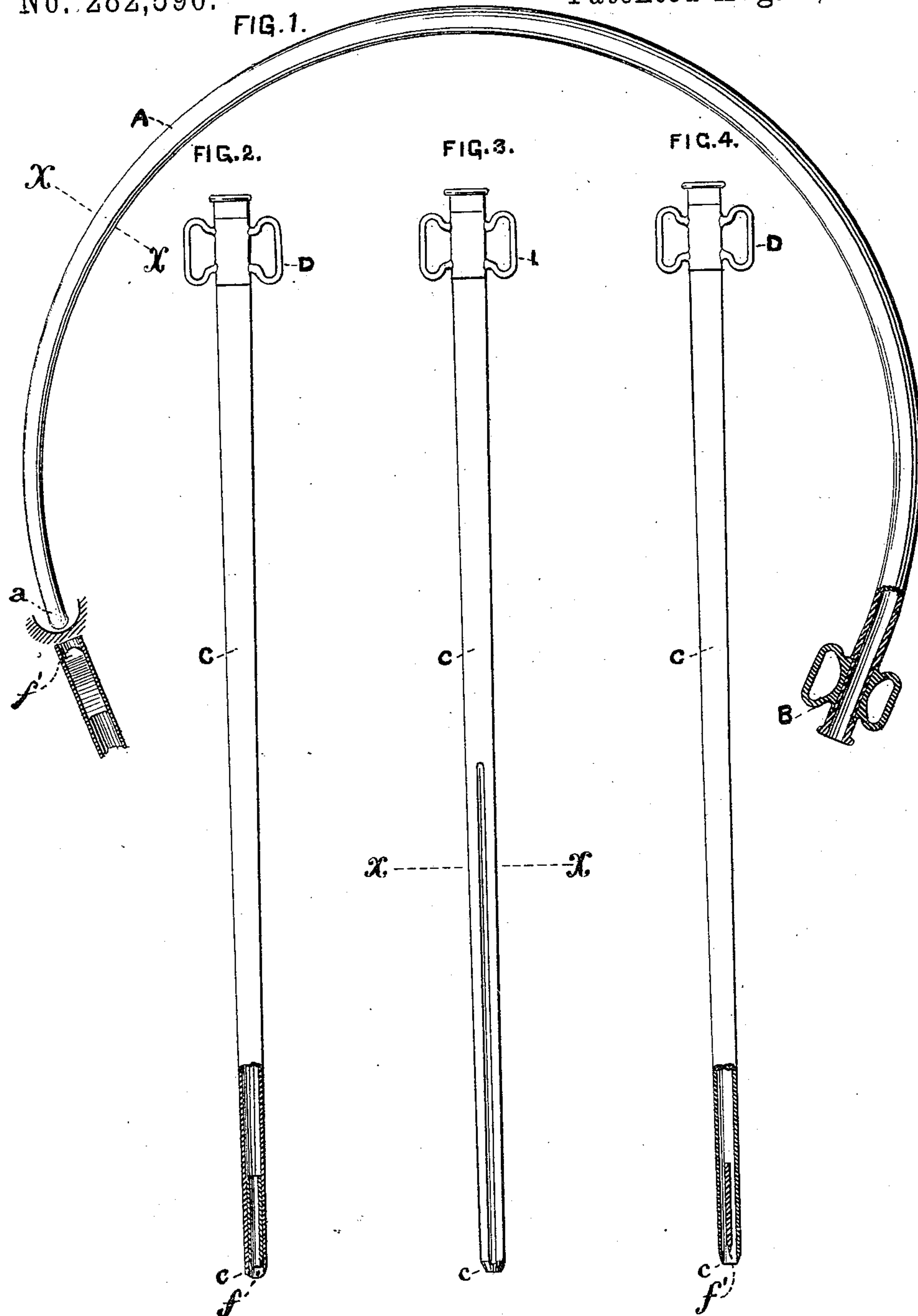
(No Model.)

P. B. TUCKER.

URETHRAL STRICTURE INSTRUMENT.

No. 282,590.

Patented Aug. 7, 1883.



WITNESSES.

*Wm. Allen*  
*for Washington*

FIG. 5



INVENTOR.

*Park B. Tucker*

# UNITED STATES PATENT OFFICE.

PARK B. TUCKER, OF HAMILTON, BERMUDA.

## URETHRAL-STRICTURE INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 282,590, dated August 7, 1883.

Application filed January 16, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, PARK B. TUCKER, of Hamilton, in the Island of Bermuda, have invented certain new and useful Instruments for the Surgical Treatment of Urethral Stricture.

The following is a specification of my invention, reference being had to the accompanying drawings, wherein—

Figures 1, 2, 3, and 4 are side views of the instruments whose combined use constitutes the essential feature. Fig. 5 is a view in cross-section of the instruments represented in Figs. 1 and 3, the lines of section being indicated at *x x*.

My invention is intended for operation upon cases of old or impassable stricture of the urethra, the difficulties of removing which by ordinary methods of cutting are well understood by surgeons. These difficulties arise mainly from the yielding or slipping of the tissues under the pressure of the cutting-instrument and the consequent uncertainty both in location and extent of the actual cut. My invention is designed to obviate this; and to that end it consists in the combination, with a suitable cutting-instrument, of devices whereby the part to be operated upon is maintained in a fixed position during the cutting, thus enabling the operator to limit the cut to the exact spot desired, and to thoroughly sever the stricture.

I employ two holding devices, which, for convenience of description, may be termed "catheters." The first of these, A, (shown in Fig. 1,) is curved in form approximately to the arc of a circle, and should taper toward the end *a*. It is preferably provided with a removable clamp-handle, B, and is grooved longitudinally on the outer periphery of the arc, as indicated in the cross-section in Fig. 5 at *d*. The second device is a straight tube, C, such as shown in Figs. 2, 3, and 4. This tube is also provided with a proper handle, D, and should taper somewhat toward the end *c*, whose orifice is, however, slightly larger than the point of the catheter A. The catheters shown in Figs. 2 and 4 have interior cutting devices, while that shown in Fig. 3 is intended for use in connection with a scalpel or ordinary surgical knife, and is grooved longitudinally on its exterior, as indicated by the cross-section shown in Fig. 5.

The character of the cutting devices may be better explained by reference to the mode of

operation of the combined instrument. An incision being made above the "pubes" in the manner practiced by surgeons for penetration of the bladder, the smaller end of the catheter A is inserted through the bladder into the urethra until the point *a* reaches the stricture. The opposing catheter C is then introduced in the ordinary manner through the external orifice of the urethra and pushed inwardly to the point of stricture. If, in the judgment of the operator, a circular cut is desirable, so as to excise a portion of the tissue, the form of interior cutting apparatus shown in Fig. 2 is employed. This consists of a knife, *f*, whose form is approximately the hollow frustum of a cone mounted firmly in a seat within the tube a short distance from the end *c*. If transverse section only is necessary, the knife shown at *f'* in Fig. 4 may be employed. This knife is a simple flat blade mounted diametrically across the tube C, and having its cutting-edge a short distance from the end *c*. In either case the cutting is effected by holding the catheter A firmly against the stricture and pressing the catheter C inward until the tissue at the place of stricture is forced into the orifice and against the edge of the knife by which the section is performed. Should the operator desire to cut from the exterior, the grooved catheter shown in Fig. 3 is used in connection with the catheter A, the grooves upon both being made to correspond when their tissue at the place of stricture is being held between them, as described. An incision being then made into the urethra near the stricture, the point of the knife should be inserted into the groove of the catheter A, and the edge drawn along the grooves until the section is complete. It will be observed that in all three instances the mode of operation is identical in so far as the above-mentioned objects of the invention are concerned, since whether the cutting be effected within or by external section the tissue is grasped and firmly held on both sides of the stricture by the opposing ends of the catheters.

I have described these modifications of the cutting implement as embodying the best forms known to me for the desired purpose; but as the exact form of such implement is immaterial, provided it be capable of operating in connection with the holding devices, I do not desire to limit my claim to the forms of knife



shown above in such combination. Furthermore, I am aware that it is not new to combine with a catheter an interior cutting device and mechanism to protrude the same; nor is  
5 it new to provide the exterior surface of a catheter with a grooved guide. Both of these old devices differ from my present invention in that they do not provide any means for holding the tissue to be severed on both sides of  
10 the stricture, and hence are open to the objections hereinbefore referred to, and which it is my purpose to avoid.

Having thus described the nature and objects of my invention, what I claim herein

as new, and desire to secure by Letters Patent, 15 is—

In instruments for treating urethral stricture, the combination of the catheter A and the opposing catheter C, having an orifice larger than the end of the catheter A, and  
20 adapted to receive said end, with a cutting device adapted to cut the stricture while the same is held between said catheters, substantially in the manner set forth.

PARK B. TUCKER.

Witnesses:

C. M. ALLEN,  
J. COX WALLINGTON.