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[54] URETERAL STENT

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[58] Field of Search 604/281, 280, 282, 264, 604/54, 8, 164-170

[56] References Cited

U.S. PATENT DOCUMENTS

4,531,933	7/1985	Norton et al.	604/281
4,671,795	6/1987	Mulchin	604/281
4,790,809	12/1988	Kuntz	604/280 X
4,813,925	3/1989	Anderson, Jr. et al.	604/54 X
4,874,360	10/1989	Goldberg et al.	604/281 X
4,887,996	12/1989	Bengmark	604/281 X
4,950,228	8/1990	Knapp, Jr. et al.	604/8

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[57] ABSTRACT

A ureteral stent includes a stiffer stent body that affords superior columnar and axial strength for smooth advancement during insertion into a patient's ureter, and a softer bladder coil portion for reducing the risk of irritation at the trigone. A collar forms an interface between the stiffer stent body and the softer bladder coil. The collar has an annular shoulder that faces the bladder coil, providing a load transfer surface for controlled placement of the stent with a pusher tube that rides over the bladder coil. A pusher assembly includes a first inner and smaller diameter pusher having the diameter of the bladder coil, and a larger diameter pusher tube having the diameter of the collar annular shoulder. For easier placements, the smaller pusher tube bears against the bladder tube. For more difficult placements, the larger pusher tube can ride over the smaller pusher tube and engage the annular shoulder of the collar. A guide wire fits within the bore of the stent main tube body and the bore of the bladder tube. The guide wire also fits a bore of the smaller pusher tube. The guide defines a path for installation of the stent and for the pushers.

24 Claims, 3 Drawing Sheets

