



[54] ULTRASONIC DEVICE WITH SHEATH AND TRANSVERSE MOTION DAMPING

5,269,297 12/1993 Weng et al. 601/2

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[57] ABSTRACT

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[58] Field of Search 128/24 AA; 606/128, 606/169; 604/22; 601/2

An ultrasonic angioplasty device for use in removing unwanted material from the vascular system of a patient comprises a wire having a proximal end, a sheath or catheter surrounding the wire, and a wave generator operatively connected to the wire at the proximal end for generating an ultrasonic waveform and transmitting the waveform axially along the wire. The ultrasonic device further comprises one or more projections extending radially inwardly from the sheath or catheter towards the wire at a plurality of predetermined axial motion nodes along the wire for minimizing transverse motion of the wire while permitting axial motion of the wire during transmission of the waveform along the wire.

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23 Claims, 3 Drawing Sheets

