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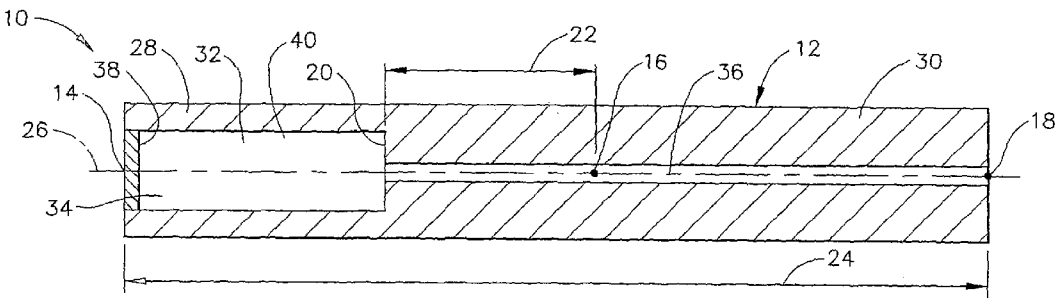
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(54) Title: ULTRASONIC SURGICAL BLADE AND INSTRUMENT HAVING A GAIN STEP



(57) Abstract: An ultrasonic surgical blade, and an instrument, having a gain step. The blade body has, in any half wave length of the ultrasonic-surgical-blade body, a first vibration antinode, a vibration node, a second vibration antinode, and a gain step. The gain step is located between the second vibration antinode and the first vibration antinode. The gain step is spaced apart from the vibration node by a gain-step distance greater than 5% of the distance between the second vibration antinode and the first vibration antinode. The instrument includes the blade, a handpiece having an ultrasonic transducer, and an ultrasonic transmission rod whose proximal end is operatively connected to the ultrasonic transducer and whose distal end activates the blade. In one option, the first vibration antinode is the distal tip, and the gain step is located between the vibration node and the distal tip, resulting in an increased active length of the blade.

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