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a mechanical advantage means that is not part of said main piezoelectric tube, said mechanical advantage means translates a vertical expansion and contraction of said main piezoelectric tube generated by voltage differentials within a linear operating range of said main piezoelectric tube into a resultant motion of said probe tip, and

a second piezoelectric tube that generates motion in a second plane orthogonal to said first plane; wherein said resultant motion of said probe tip is also linear, and is non-hysteretic and creep-free.

6. The piezo-mechanical scanner of claim 5 wherein: said main piezoelectric tube comprises a plurality of sectors, each one of said sectors being physically separated from each of the other sectors so that motion

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generated by a first pair of opposing sectors along said first axis is not affected by motion simultaneously generated by a second pair of opposing sectors along a second axis.

7. The piezo-mechanical scanner of claim 6 wherein: said main piezoelectric tube is substantially cylindrical in shape, and said sectors are created by longitudinal slots in walls of said main piezoelectric tube, a lower connecting portion of said walls having conducting material removed in a region corresponding to said longitudinal slots to ensure electrical isolation of said sectors.

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