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**Willoughby**

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(54) **TOUCH PROBE**

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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**Related U.S. Application Data**

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(51) **Int. Cl.<sup>7</sup>** ..... **G01B 5/20**

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(58) **Field of Search** ..... 33/503, 556, 558, 33/559, 561

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(57) **ABSTRACT**

The present invention is a touch probe which can be connected to a computer controlled machine for determining positions of and defining shapes of work pieces, edges, hole centers and contours. The probe due to its design allows for a simpler and effective alternative to previous probes. The probe includes a body, stylus, a shank and an internal assembly. The body contains the internal assembly, which provides signals to a computer. The arrangement of the internal assembly is what makes the present invention simpler to manufacture and allow the probe to be miniaturized. The internal assembly includes an upper circuit board with a Light Emitting Diode (LED), a spring, a spring cap, a stylus mount, a housing, carbide balls, a lower circuit board, a support ring and wires.

**18 Claims, 13 Drawing Sheets**

