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(54) Title: METHOD AND APPARATUS FOR SINGLE-AXIS CROSS-SECTIONAL SCANNING OF PARTS

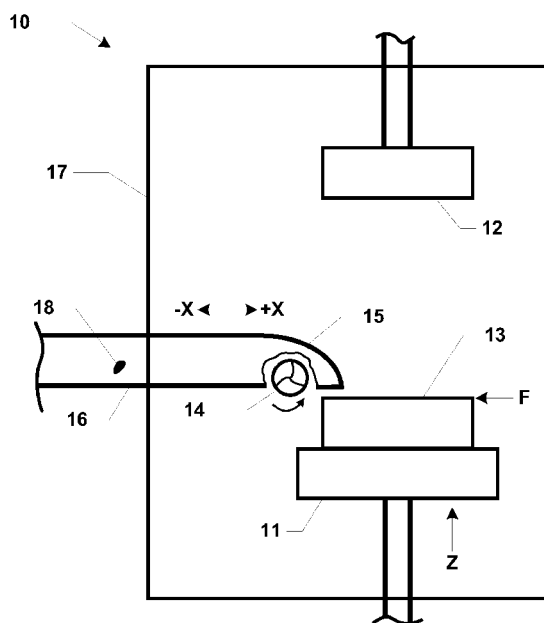


Figure 1

(57) Abstract: Improved methods and apparatus for cross-sectional scanning of parts employ a scanning station in which the focal plane of the scanning apparatus never moves in the vertical direction, i.e., the direction in which the stage of the part/potting combination moves. Distinct steps of material removal and scanning alternate with an intermediate step of moving the part/potting combination in the vertical direction after a surface layer has been removed, thus placing the newly-created surface back into the non-moving focal plane for the next scanning step. A removal station (not the stage carrying the part/potting combination) repeatedly moves into and out of the field of view of the scanning station between scanning steps. The material removal station is specially configured to remove the desired surface layer of the part/potting combination and the created debris, without requiring the separate environment characteristic of previous commercial applications.



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