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(54) Title: COMPENSATION OF ACTINIC RADIATION INTENSITY PROFILES FOR THREE-DIMENSIONAL MODELERS

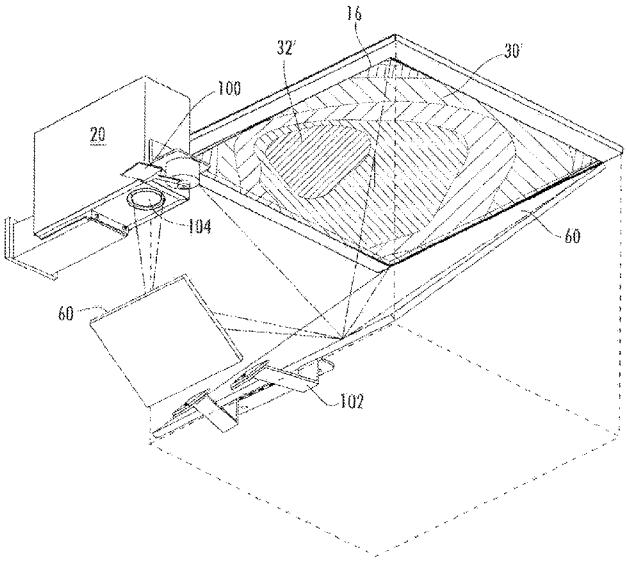

FIG. 10A

(57) Abstract: There is provided methods and apparatus for compensation of intensity profiles of imagers used in three-dimensional modelers. The intensity profile (30) of the actinic radiation projected from the imager (20) is determined by a variety of techniques, including but not limited to manually operated sensors (62), exposed and scanned actinic radiation sensitive paper, and intensity profilers (102). Once the intensity profile of the imager is determined, each layer of the solidifiable liquid material is cured by projecting a plurality of patterns (46) (as opposed to a single pattern) defining the two dimensional cross -section of the part being cured. The patterns vary in duration, number, and / or shape to correlate to the intensity profile so that a single layer of selectively cured solidifiable liquid material is cured with a substantially equivalent (or otherwise controlled) amount of actinic radiation per unit of surface area to provide generally controlled and consistent part quality.

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