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(54) Title: NANOMECHANICAL TESTING SYSTEM

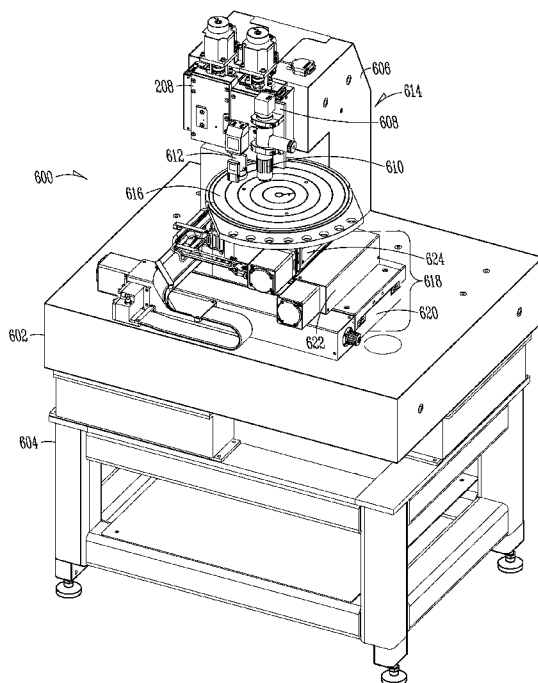


FIG. 6A

(57) Abstract: An automated testing system includes systems and methods to facilitate inline production testing of samples at a micro (multiple microns) or less scale with a mechanical testing instrument. In an example, the system includes a probe changing assembly for coupling and decoupling a probe of the instrument. The probe changing assembly includes a probe change unit configured to grasp one of a plurality of probes in a probe magazine and couple one of the probes with an instrument probe receptacle. An actuator is coupled with the probe change unit, and the actuator is configured to move and align the probe change unit with the probe magazine and the instrument probe receptacle. In another example, the automated testing system includes a multiple degree of freedom stage for aligning a sample testing location with the instrument. The stage includes a sample stage and a stage actuator assembly including translational and rotational actuators.



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