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(54) **SYSTEM FOR FORMATION OF MICROSTRUCTURES IN POLYMERIC MATERIALS WITH 2D PIEZOELECTRIC DRIVE**

(57) The system according to the invention includes a vibrator (1), a matrix (2) fixed at the free end, an excitation-control generator (3), a polymer material workpiece (4) fixed in a tray (5), which is connected to a precision positioning drive (6) controlled from the excitation-control generator (3). High-frequency mechanical vibrations are excited in the matrix (2), and the pressure to the polymer material workpiece (4) according to the set technological mode forms a microstructure corresponding to the shape of the matrix (2). In order to change the microstructure in the polymer material workpiece (4), positioning of the workpiece (4) is performed according to the set program from the excitation-control generator (3). Thus, with the same matrix (2) by positioning in the plane according to the set program, it is possible to prepare a dozen variants of microstructures, i.e., MEMS elements.

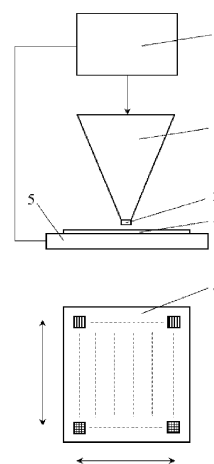


Fig. 1