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Declarations under Rule 4.17:

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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(54) **Title:** MEGASONIC MULTIFREQUENCY APPARATUS WITH MATCHED TRANSDUCERS AND MOUNTING PLATE

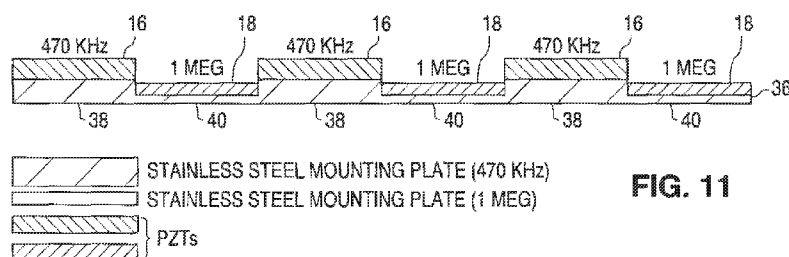


FIG. 11

(57) **Abstract:** A megasonic processing apparatus matches the fundamental resonant or higher-level harmonic frequencies of megasonic thickness-mode transducers to the fundamental resonant or higher-level harmonic frequencies of a plate or other mounting structure upon which the transducers are mounted. The multifrequency transducers are piezoelectric transducers operating in thickness mode at different operating frequencies. The thickness of the mounting plate at the transducer locations is selected to provide a resonant or harmonic frequency matched to that of its corresponding transducer. Two or more megasonic transducers are bonded to the same radiating surface.