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# (12) United States Patent Steinetz

### (54) ACOUSTIC SEAL

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277/423; 277/431

(58) **Field of Classification Search** ....................... 277/409, 277/411, 412, 423, 431

See application file for complete search history.

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### (57) ABSTRACT

The invention relates to a sealing device having an acoustic resonator. The acoustic resonator is adapted to create acoustic waveforms to generate a sealing pressure barrier blocking fluid flow from a high pressure area to a lower pressure area. The sealing device permits noncontacting sealing operation. The sealing device may include a resonant-macrosonic-synthesis (RMS) resonator.

### 16 Claims, 9 Drawing Sheets

