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**United States Patent** [19][11] **Patent Number:** **5,103,130****Rolt et al.**[45] **Date of Patent:** **Apr. 7, 1992**[54] **SOUND REINFORCING SEAL FOR  
SLOTTED ACOUSTIC TRANSDUCERS**[76] **Inventors:** **Kenneth D. Rolt**, 132 Washington St.,  
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Cranston, R.I. 02920[21] **Appl. No.:** **286,689**[22] **Filed:** **Dec. 20, 1988**[51] **Int. Cl.:** **H01L 41/08**[52] **U.S. Cl.:** **310/337; 310/322;  
310/369; 367/159**[58] **Field of Search** **310/337, 340, 344, 321,  
310/322, 323; 367/155-161, 165-167, 171, 172**[56] **References Cited****U.S. PATENT DOCUMENTS**2,772,405 11/1956 Schurman et al. 367/159 X  
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4,682,070 7/1987 Plambeck 310/337 X**Primary Examiner**—Mark O. Budd**Attorney, Agent, or Firm**—Denis G. Maloney; Richard  
M. Sharkansky[57] **ABSTRACT**

A split-ring or split-cylinder transducer in which a full or partial boot covering a shell is caused to be looped into the gap of the shell so that outward radial movement and circumferential expansion of the shell causes the boot to also move outwardly thus reinforcing the sound wave generated exterior to the shell of the transducer.

**13 Claims, 2 Drawing Sheets**