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[54] **SEMI-RIGID LOW-NOISE INTERLINK FOR SPATIALLY EXTENDED HYDROPHONES**

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[57] **ABSTRACT**

[73] **Assignee:** The United States of America as represented by the Secretary of the Navy, Washington, D.C.

A hydrophone interlink that connects hydrophone elements and allows a single sensing fiber to transition between hydrophone elements. The interlink has an outer-structure and a contained element. The outer-structure connects the hydrophone elements and has at least one turn such that the distance traveled along the turns exceeds the linear distance between hydrophone elements. The outer-structure material and shape allow temporary interlink stretching and compression during passes through handling sheaves, with memory to allow the interlink to return to its original shape. The outer-structure contains a groove on either end to transition the sensing fiber between the hydrophone elements and the contained element. The contained element is open cell foam that fills the hollow core of the outer-structure. The sensing fiber transitions from a first hydrophone element to immediately enter the feed at the interlink first outer-structure end, whereupon the fiber transitions to the open cell foam and follows the interlink outer-structure structure while remaining on the foam.

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[52] **U.S. Cl.** 367/173; 367/154

[58] **Field of Search** 367/20, 149, 153, 367/154, 173

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7 Claims, 2 Drawing Sheets

