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[54] MINIATURE HYDROSTAT FABRICATED
USING MULTIPLE
MICROELECTROMECHANICAL
PROCESSES

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73/718, 719, 720, 721, 723, 724, 725, 726,
727, 709, 778

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[57] ABSTRACT

An improved hydrostat constructed on a silicon wafer by microfabrication methods similar to those used for integrated circuits and other devices. A thin section of the wafer acts as a diaphragm, responsive to pressure of ambient water. A lever arm is affixed at its first end to one point on the surface of the wafer and extends over the diaphragm, so arranged that the lever arm will be forced away from the wafer when pressure is applied to the diaphragm. The second end of the lever arm is moved by the diaphragm so that it moves further from the wafer, by a factor of the mechanical advantage of the lever. When the second end moves away from the wafer, it mechanically releases a lock, allowing an ordnance device to which the hydrostat is attached to arm.

7 Claims, 3 Drawing Sheets

