



PIEZO-ELECTRIC COMPRESSOR WITH DISPLACEMENT AMPLIFIER



162162

ABSTRACT

[0033] A compressor for successive suction and discharge of a compressible fluid, thereby increasing fluid pressure of the compressible fluid in a substantially closed chamber, the compressor comprising: at least one piezoelectric element; a primary displacement member coupled to the at least one piezoelectric element; a secondary displacement member coupled to the piston; and a non-compressible fluid disposed to fill a fixed predetermined volume between the primary displacement member and the secondary displacement member; wherein electrical actuation of the at least one piezoelectric element is controllable to displace the primary displacement member by a predetermined distance, the predetermined distance being coupled via the non-compressible fluid to displace the secondary displacement member by an amplified distance based upon the fixed predetermined volume.

[0034] FIG.4 accompanies the abstract.