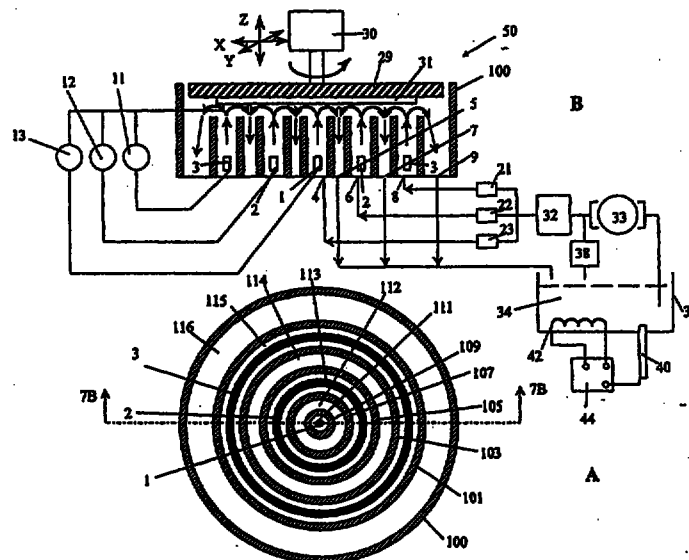


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(54) Title: **METHODS AND APPARATUS FOR ELECTROPOLISHING METAL INTERCONNECTIONS ON SEMICONDUCTOR DEVICES**



(57) Abstract

An electropolishing apparatus for polishing a metal layer formed on a wafer (31) includes an electrolyte (34), a polishing receptacle (100), a wafer chuck (29), a fluid inlet (5, 7, 9), and at least one cathode (1, 2, 3). The wafer chuck (29) holds and positions the wafer (31) within the polishing receptacle (100). The electrolyte (34) is delivered through the fluid inlet (5, 7, 9) into the polishing receptacle (100). The cathode (1, 2, 3) then applies an electropolishing current to the electrolyte to electropolish the wafer (31). In accordance with one aspect of the present invention, discrete portions of the wafer (31) can be electropolished to enhance the uniformity of the electropolished wafer.