

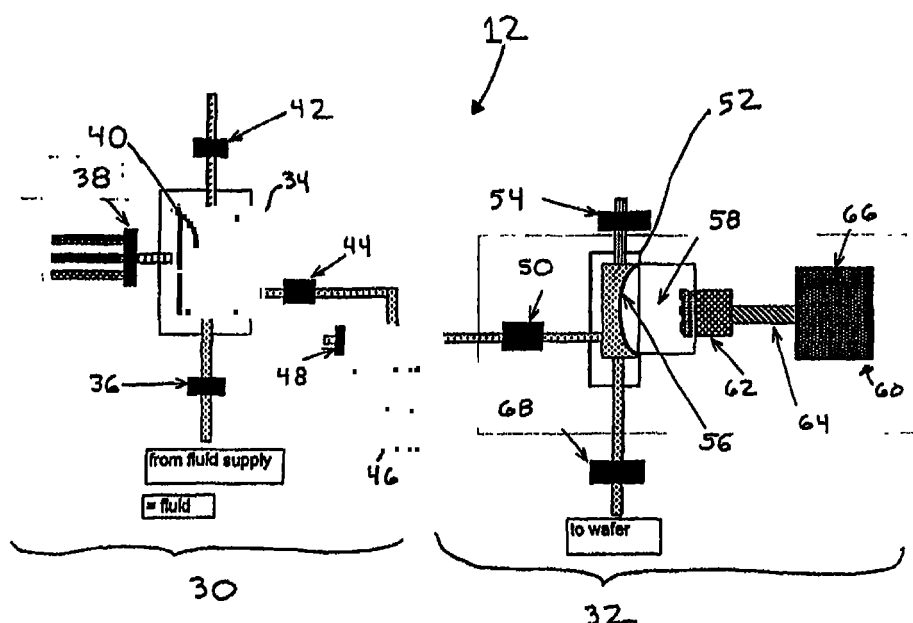


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(54) Title: PUMP CONTROLLER FOR PRECISION PUMPING APPARATUS**(57) Abstract**

A pump controller and pump controlling method for dispensing a precise amount of low viscosity fluid are provided in which the problems of double dispenses and stuttered dispenses are avoided. In particular, the timing of the valves and motors in the pumping apparatus are adjusted to avoid these problems.