

FLOW PROCESSING DEVICE

ABSTRACT OF THE DISCLOSURE

A flow processing device includes a cartridge including plural chambers, channel, and valve and a flow processing unit including a rack and a gear set to process a fluid of the cartridge. The rack has plural pistons aligned with the plural chambers and valve of the cartridge, respectively. The gear set includes plural gear shafts, cams, and cranks for fluid disturbing fluid or multiple flow mixing at a first stage and generating the droplet at a second stage. The flow processing device is designed with a self-locking mechanism and programmable control. When the first stage of disturbing or multiple flow mixing is completed, the switch is adjusted to the second stage of pumping the disturbed or mixed droplet with the self-locking mechanism. The flow processing device can be simply actuated without electricity, and has compact structure and extremely low cost.

Fig. 1