VOLUMETRIC PUMP WITH RECIPROCATED AND ROTATED PISTON

Abstract:

A volumetric pump (1) comprising a first piston (20) inside a first hollow cylindrical part (23), said pump (1) having an inlet port (10) through which a liquid (15) can be sucked into a first pump chamber (26) during an instroke of said piston (20), and an outlet port (11) through which the liquid (15) can be expelled during the outstroke of the piston (20). The pump (1) further comprises a second piston (21) that is positioned opposite to the first piston (20) inside a second hollow cylindrical part (23') to create a second pump chamber (26') through which the liquid (15) can be sucked in through the inlet port (15) during an instroke of the second piston (21) and expelled through the outlet port (11) during the outstroke of said second piston (21). Both cylindrical parts (23, 23') are assembled end-to-end facing each other to form a housing (22). An element (24), preferably a disc, is mounted midway inside said housing (22), said element (24), which comprises the inlet and outlet ports (10, 11), being arranged to be animated, by a preferably combined bidirectional linear and angular movement, to cause relative to-and-fro sliding between the cylindrical housing (22) and the pistons (20, 21) along the axis of said pistons (20, 21) while closing the inlet and outlet ports (10, 11) synchronically to ensure a continuous flow delivery.

(Figure 9)