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(54) Title: DOWNHOLE ROLLER VANE MOTOR AND ROLLER VANE PUMP

(57) Abstract

A roller vane motor for downhole drilling comprises a housing (1) and a rotor (2). The housing contains wing deflector cams (5) that divide the space between housing and rotor into chambers (8a, b). The rotor is equipped with cylindrical rollers (7) in recesses (6), which rollers can move between an extended and a retracted position. Drilling fluid enters the chamber parts (8a) through inlet ports (10) in the upper bearing part of the housing (1) and pushes rollers (7<sup>1</sup>) into their extended position and in a clockwise direction, making the rotor turn, whilst drilling fluid of lower pressure is pushed from the corresponding chamber parts (8b) through outlet ports (9) in the lower bearing part of the housing (1) and further to the drill bit below. When the rollers (7<sup>1</sup>) reach the wing deflector cams (5) they are forced into the retracted position, their task being taken over by rollers (7<sup>2</sup>).

