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The invention relates to the drilling machines and may be used for drilling deep wells.
The rotary drilling device with liquid drive for deep wells includes a body (1), wherein there are installed a fluid conduit (6), a turbine (2), a reduction gear (3) and a drilling tool (4) fixed onto the output shaft (31) of the reduction gear. The turbine (2) contains chambers (10) wherein there are pumped the drilling fluid and the fluid used for the drive of the rotor (8), and into which it is made an outlet port (13) equipped with a branch pipe (14), a stator (5), to which it is connected the fluid conduit (6) with a system of nozzles (7) placed above the rotor (8) with blades (9), rigidly fixed onto the input shaft (15) of the reduction gear made precession. The input shaft (15), by means of an inclined flange (16) and of the solids of revolution (17), is kinematically joined with the satellite gear unit (18) of the reduction gear, made of two parts (19) and (20) joined between them by means of cams (23) and (24), between which there is placed an elastic element (25). Onto each part of the satellite gear unit (18) there is made a gear ring (21) and (22), each of which meshes with a central gearwheel (26) and (27), both being joined with the body (1), the first (26) – rigidly and the second (27) - by means of the cams (28) and (29) and of the elastic element (30), at the same time the satellite gear unit (18) is joined with the output shaft (31) by means of a ball coupling (32).

Claims: 1
Fig.: 5