

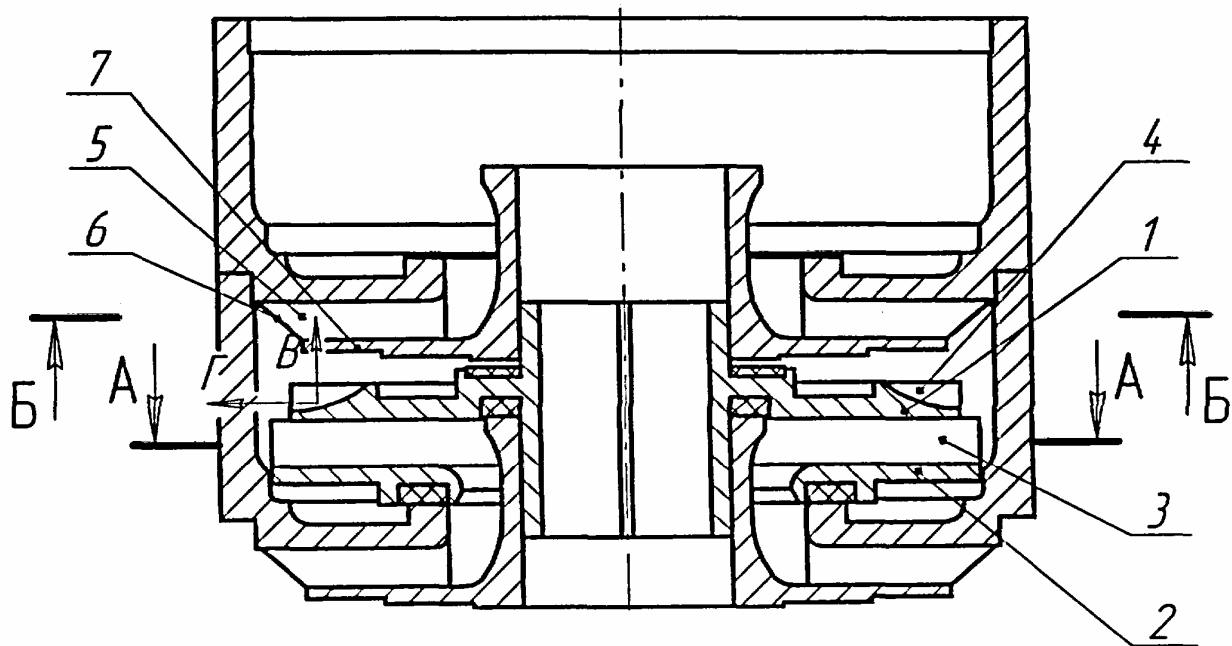
№2232297

FIELD: machine-building industry.

SUBSTANCE: the invention is dealt with machine-building industry -production of centrifugal-vortex pumps, in particular, stages of deep-well pumps for production of a stratum liquid. The stage of the centrifugal-vortex pump has a working wheel containing the driving disk and driven disc with lobes located between them and a wicket gate with airfoil-section blades. On the external surface of the driving disk there are three-sided cells open both in axial and in radial directions. Entry edges of blades protrude beyond the external diameter of the outside cover of the guide vane. The value of a blade-exit angle of the guide vane is defined as $\beta_1 \geq 100^\circ$ and the blade-exit angle of $\beta_2 \geq 45^\circ$. The depth of three-sided cells on the external surface of the driving disk of the working wheel is made equal from 0.035 up to 0.05 of the value of the working wheel outside diameter. The height of the working wheel channels is defined exceeding heights of channels of the guide vane in 1.1-1.5 times, and the cross section area of the inlet face of the guide vane in the axial direction is made exceeding the cross section area of the outlet face of the working wheel in the same direction - in 1.3-1.5 times. The invention is directed to increase efficiency and value of pressure in the working zone of the centrifugal-vortex multistage deep-well pump at preservation of the monotonically dropping pressure characteristic.

EFFECT: increase efficiency and value of pressure in the working zone of the centrifugal-vortex multistage deep-well pump at preservation of the monotonically dropping pressure characteristic.

5 cl, 4 dwg



Фиг. 1