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Precessional transmissions with floating satellites

Patents: no. 6592 MD, of 31.12.2019;

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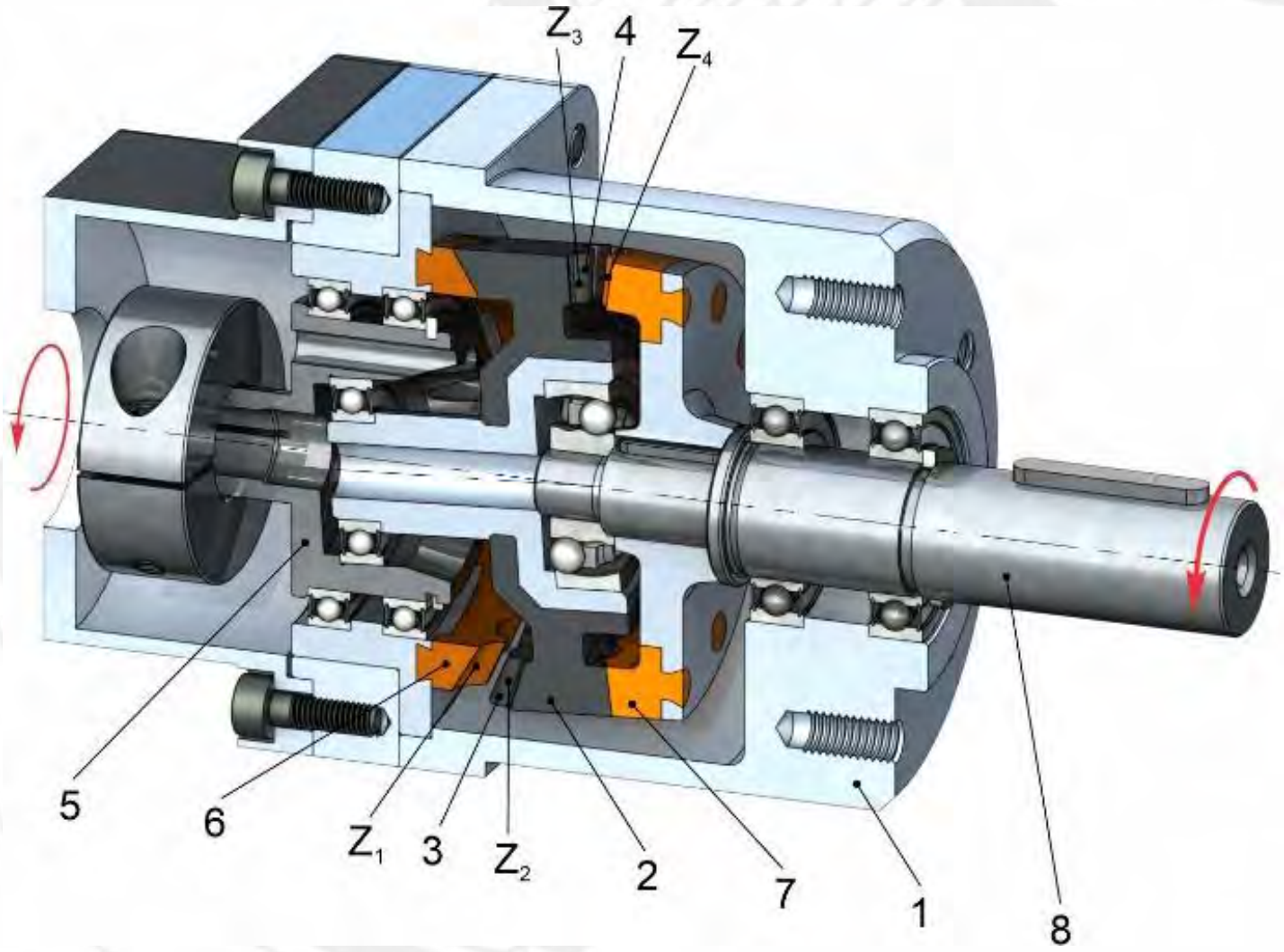
The invention relates to the mechanical engineering, namely to mechanical transmissions. The teeth of the gear rings (3) and (4) of the satellite wheel (2) have a circular arc flank profile, and of the central bevel wheels (6) and (7) variable curvilinear, depending on the angles θ and δ, on the number of Z teeth and the ratio of the numbers of teeth of the mating wheels in the gears (Z1-Z2) and (Z3-Z4), as well as the radius r of the circular arc of the teeth profile of the gear rings (3) and (4).

The technical result consists in increasing the load-bearing capacity and mechanical efficiency of the precessional gear by creating the multipair and convex-concave teeth contact with the minimum difference of curvatures of the flank profiles and with reduced relative frictional sliding between the flanks of the teeth, as well as in extending the kinematic possibilities and functionalities of the transmission.



Computerized model of Precessional transmissions with floating satellites.

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