

The invention relates to mechanical engineering, namely to mechanical transmissions.

The transmission contains a body (1), a satellite wheel (2) with two bevel gear rings (3) and (4), driven by a crank (5) in a spherospacial motion about a fixed point, and two central bevel wheels (6) and (7), one immovable (6), fixed in the body (1), and the other movable (7), mounted on a driven shaft (8).

The teeth of the rings (3) and (4) of the satellite wheel (2) have the side profile in the form of a circular arc, and the teeth of the central bevel wheels (6) and (7) – the curvilinear profile of variable curvature, depending on the angles θ and δ , the number of teeth Z and the ratio of the numbers of teeth of the wheels, mating in gearings ($Z_1 - Z_2$) and ($Z_3 - Z_4$), as well as on the radius r of the circular arc of the tooth profile of the rings (3) and (4). The configuration of numerical values of the said parameters determines the geometry and kinematics of the convex-concave contact of the teeth, the degree of lateral overlap, expressed by the number of simultaneously intermeshing pairs of teeth, and the pressure angle between the profiles of the mating teeth.

Execution of wheels with inclined teeth provides an increase in the total contact line and the proportion of pure rolling of intermeshing teeth, due to their spherospacial interaction. The tooth gearing is multi-pair, the tooth profiles mate in contacts with convex-concave geometry with minimal curvature difference and with reduced relative sliding speed, and

the active side profiles interact with each other with small angles of mutual pressure.

Claims: 6

Fig.: 21

