

MD.11.**Title****PRECESSIONAL PLANETARY TRANSMISSION
WITH AXIAL FLOATATION OF THE SATELLITE
WHEEL AND PORTSATELLITE****Authors**Viorel BOSTAN; Ion BOSTAN; Sergiu MAZURU; Maxim
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The invention relates to machine construction, namely to
precessional planetary transmissions.

Description

Precessional planetary transmission, which contains a
housing (1) with a flange (2), in which are placed a satellite
wheel (4) with two conical crown gears (6, 7), a driving
shaft with a crank (12), installed on bearings (13), a driven
shaft (14), installed on bearings (15), and two central conical
gears, fixed (3) and movable (5), which interact with the
satellite wheel (4) by means of the crown gears (6, 7); the
satellite wheel (4) is rigidly mounted on a satellite carrier
(8), placed on a spherical support (9), located on the driven
shaft (14) with the possibility of axial movement, in the
center of precession O thereof, coaxial with the movable
wheel (5); the satellite wheel (4) is equipped with a half-
shaft (10), at the end of which bearings (11) are mounted,
kinematically connected to the driving shaft with a crank
(12); in the driving shaft with a crank (12), on the side, an
inner cylindrical surface is made inclined at a nutation angle
 θ to the axis of the central wheels (3, 5), in which the half-
shaft (10) of the satellite wheel (4) is installed with the
possibility of axial movement, so that the satellite wheel (4)
together with the satellite carrier (8) floats axially with a
positioning with clearances between the central wheels (3, 5)
with the center of mass merged with the center of precession
O.

The technical project is developed and the industrial
prototype is experimentally researched.