

Title (en)
NOZZLE FOR A VACUUM CLEANER

Title (de)
DÜSE FÜR EINEN STAUBSAUGER

Title (fr)
BUSE D'ASPIRATEUR

Publication
EP 3616582 A1 20200304 (EN)

Application
EP 18191256 A 20180828

Priority
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Abstract (en)
A nozzle (1) for a vacuum cleaner, comprises: a housing (11) having a turbine chamber (3) equipped with an outflow opening (35) which is in communication with a connection tube (6) connecting the turbine chamber (3) to a suction unit of the vacuum cleaner and an inflow opening (34) which is in communication with a suction opening (12) of the housing (11), a turbine (7) that is rotated by an axis "A2", is placed inside the turbine chamber (3) and being movable connected with a shaft (75) by a displacing means (77) used for axially displacing the turbine (7) with respect to the inflow opening (34) along the shaft (75), a floor cleaning roller (4) mounted in the housing (11) close to the suction opening (12) and rotatable relative to the housing (11) about an axis of rotation "A1", a transmissions means (2) transferring a drive torque "T" produced by the turbine (7) to the floor cleaning roller (4), wherein the displacing means (77) comprises at least one projection (78) provided on inside wall of a tubular section (781) of the turbine (7), a sleeve (79) spaced radially inwardly apart the tubular section (781) on the shaft (75) provided with a guide mean (791) which receives projection (78) and therefore engages the turbine (7) with the sleeve (79) and the guide mean (791) is formed as a closed loop path (92) at least partially shaped as a helical groove (92'), along which the projection (78) is moved accordingly to a difference between the drive torque "T" produced by the turbine (7) and a load torque "L" applied on the shaft (75) by power uptake of the floor cleaning roller (4) through the transmission means (2), therefore an axial displacing (D) of the turbine (7) with respect to the inflow opening (34) is ensured. Thus, a reciprocating movement of the turbine along the shaft with respect to the inflow opening is provided by the projection which slides along the guide mean, that is formed as the closed loop path, what results that the projection is moved from a starting point i.e. when the turbine is not displaced, to the extreme point i.e. when the turbine experiences the maximum axial displacing "D" via longer path than when it returns from the extreme point to the starting, thereby the projection faster achieves the starting point on the sleeve when the load torque "L" falls down.

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Citation (applicant)
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