

**PATENT NO. 319799**  
**PNEUMATIC TWISLE**

**APPLICATION NO.** 1519/DEL/2010

**APPLICANT**

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**ABSTRACT**

The present invention relates to the field of pneumatics and actuators and is specifically directed to a "Pneumatic Twistle Assembly" comprising of a braided pneumatic actuator (BPA) for use as artificial muscles, in robotics and prosthetic equipments and provides a mechanism for converting linear force into self-induced torque for simultaneously producing roto-scopic motion.

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**CLAIM 1**

A pneumatic twistle assembly comprising of a braided pneumatic rubber flexible actuator tube mounted with a longitudinal tube section with cover [8] at air-supply-end and cover (13) at activity-end, supply port (15) for supplying high pressure air, guide pipes (2) and (4) are coaxially fixed on covers (8) and (13) respectively, the guide pipe (2) cut with helical slot and being smaller in diameter but larger in length than the guide pipe (4), anchor-screw (5) fixed on wall of guide pipe (4) wherein the anchor-screw (5) holds a roller (7) and its screw (6) at the other end, fit packings (14) and (9) between the pairs (2-13) and (4-8) to ensure rigidity, guide pipe (2) being fixed over end cover (13) with packing (14) and fastened by using two screws (11) along with two clamps (1) with two nut-bolt-washer sets (12), the activity-end pipe (4) also being fastened on end cover (8) with packing (9) having six screws (10); the said actuator being actuated by compressed air wherein the pressure limit is generally 6 bar