

CLAIMS

1. A hand free grip-twist control device for mounting in a grip region of a handlebar, which comprises:
 - a housing body having at least a cylindrical extension with a protrusion at its end,
 - a rotating part having a cable retainer proximal to the housing body and a grip part distal to the housing body interposed between the housing body and a ring, and
 - the ring having at least one retaining profile for securing to the at least one protrusion at the cylindrical extension of the housing body.
2. The hand free grip-twist control device of claim 1, wherein a housing body is fixed to a handlebar, the housing body having a cylindrical extension surrounding the handlebar and a housing annulus having a recess.
3. The hand free grip-twist control device of claim 1, wherein a ring positioned at the distal end of the rotating part and connected to the cylindrical extension of the housing body.
4. The hand free grip-twist control device of claim 1, wherein the cylindrical extension having a plurality of protrusions extending from one end, the protrusions having a plurality of retaining profiles for coupling the ring, the protrusions and retaining profiles not exceeding an outer diameter of the cylindrical extension.
5. The hand free grip-twist control device of claim 1, wherein the rotating part having a cable retainer and a gripping part mounted on the cylindrical extension by rotating around the said cylindrical extension, the housing annulus at least partially surrounding the cable retainer;

6. The hand free grip-twist control device of claims 1 and 2, wherein an annular disc having a plurality of indented circular dimples and an indented concentric groove connecting the circular dimples located in the recess of the housing annulus.
- 5 7. The hand free grip-twist control device of claims 1 and 5, wherein an annular disc having a plurality of indented circular dimples and an indented concentric groove connecting the circular dimples located in the groove of the distal end of the gripping part.
- 10 8. The hand free grip-twist control device of claims 1 and 5, wherein an annular disc having a round protrusion on at least one of its surfaces.
- 15 9. The hand free grip-twist control device of claims 1 and 5, wherein the rotating part having a cable retainer with an annular disc at the inner hollow cavity.
- 20 10. The hand free grip-twist control device of claims 1 and 2, wherein a circular tool having a hole in the centre with a saw tooth periphery located in the recess of the housing annulus.
- 25 11. The hand free grip-twist control device of claims 1 and 10, wherein a rotatable annular tool having a cable hanger with an edge at the cable retainer of the rotating part where the edge cooperates with the circular tool.
- 30 12. The hand free grip-twist control device of claim 11, wherein a retaining coil is at the opposite surface of the rotatable annular tool having a cable hanger with an edge.
13. The hand free grip-twist control device of claim 1, wherein a cable retainer having a hole disposed in the centre with at least one square tooth periphery.

14. The hand free grip-twist control device of claims 1 and 13, wherein the rotatable grip part having a protruded disposed in the centre at one end proximal to the cable retainer with at least one corresponding square tooth periphery and a cable hanger on at least one of the square tooth and mounted into the square tooth periphery at the cable retainer.
15. The hand free grip-twist control device of claim 1, wherein the plurality of protrusions has a limited spring travel in a radial direction.
16. The hand free grip-twist control device of claim 1, wherein the retaining profiles are capable of being joined and released to the securing profiles on the ring.
17. The hand free grip-twist control device of claim 1, wherein the retaining profiles are openings in the protrusions.
18. The hand free grip-twist control device of claim 1, wherein the protrusions have a configuration such that the protrusions are connected to and or released from the ring when the hand free grip-twist control device is not mounted onto the handlebar.
19. The hand free grip-twist control device of claim 16, wherein the securing profile is released from the retaining profile by turning the ring relative to the cylindrical extension.
20. The hand free grip-twist control device of claim 1, wherein the rotating part is secured in an axial position by the housing body at one end and an end face of the ring at the other end.
21. The hand free grip-twist control device of claim 1, wherein the rotating part is surrounded by a grip part made from a rubber-elastic material and fixed to the rotating part which is rotational.

22. The hand free grip-twist control device of claim 21, wherein the rotating part is encapsulated by the grip part, thereby attaching it permanently to the rotating part.
- 5 23. The hand free grip-twist control device of claim 1, wherein on a side opposite the cable retainer, the grip part has an angulated rim extending beyond an overall length of the rotating part, pointing radially inward and projecting unto an outward facing groove in the ring to form an intricate seal.
- 10 24. The hand free grip-twist control device of claim 23, wherein the groove of the ring is formed in a collar substantially covering an end of the grip part.
- 15 25. The hand free grip-twist control device of claim 1, wherein the outside diameter of the cylindrical extension is designed as a matching support for the rotating in relation to the rotating part without gaps.
26. The hand free grip-twist control device of claim 1, wherein the retaining profiles are T-shaped and connected with the correspondingly shaped securing profiles on the ring.
- 20 27. The hand free grip-twist control device of claim 16, wherein the securing profiles on the ring are hooks.
- 25 28. Method of controlling the speed of a motor engine with the hand free grip-twist control device for controlling the cable tension to the motor engine transmission comprising:
- Gripping the grip part,
 - Rotating the grip part,
 - Providing a corresponding cable tension to the motor engine transmission,
 - Securing the position of the grip part,
 - 30 ➤ Releasing the position of the grip part.
29. Method of controlling the speed of a motor engine with the hand free grip-twist control device for controlling the cable tension to the motor engine transmission of claim 28, wherein the means to securing and releasing is by a tensional force
- 35 between two corresponding materials.

30. Method of controlling the speed of a motor engine with the hand free grip-twist control device for controlling the cable tension to the motor engine transmission of claim 29, wherein the means to securing and releasing is by a tensional force exerted by a retaining coil.
31. Method of controlling the speed of a motor engine with the hand free grip-twist control device for controlling the cable tension to the motor engine transmission of claim 28, wherein the means to securing and releasing is by attraction force between two corresponding materials.
32. Method of assembling and disassembling the hand free grip-twist control device for controlling the cable tension to the motor engine transmission comprising:
- sliding the housing body onto the handlebar tube of the handlebars of the motorcycle,
 - sliding the annular disc into the housing annulus of the housing body,
 - sliding the rotating part onto the handlebar tube of the handlebars of the motorcycle,
 - pulling a tension cable from a cable inlet to a cable hanger at the cable retainer,
 - rotating the cable retainer with the annular magnet to secure the tension cable on itself,
 - supporting the cable ball of the tension cable at the circular dimple of the annular disc at the recess of the housing annulus,
 - Encapsulating the rotating part in the housing body,
 - sliding the ring onto the handlebar tube of the handlebars of the motorcycle, and
 - securing the housing body, the annular disc and the rotating part with the ring by aligning the retaining profiles at the protrusions with the securing profiles at the ring.
33. Method of assembling and disassembling the hand free grip-twist control device for controlling the cable tension to the motor engine transmission comprising:

- sliding the housing body onto the handlebar tube of the handlebars of the motorcycle,
- sliding the circular tool with a saw tooth periphery similar to a gear into the housing annulus of the housing body,
- 5 ➤ sliding the rotating part onto the handlebar tube of the handlebars of the motorcycle,
- pulling a tension cable from a cable inlet to a cable hanger at the annular tool,
- 10 ➤ rotating the cable retainer with the annular tool to secure the tension cable on itself,
- supporting the edge of the cable hanger in between two saw tooth peaks along the periphery of the circular tool located at the recess of the housing annulus,
- Encapsulating the rotating part in the housing body,
- 15 ➤ sliding the ring onto the handlebar tube of the handlebars of the motorcycle, and
- securing the housing body, the annular disc and the rotating part with the ring by aligning the retaining profiles at the protrusions with the securing profiles at the ring.
- 20
- 34. Method of assembling and disassembling the hand free grip-twist control device for controlling the cable tension to the motor engine transmission comprising:
 - sliding the housing body onto the handlebar tube of the handlebars of the motorcycle,
 - 25 ➤ sliding the rotating part onto the handlebar tube of the handlebars of the motorcycle,
 - pulling a tension cable from a cable inlet to a cable hanger at the cable retainer,
 - rotating the cable retainer to secure the tension cable on itself,
 - 30 ➤ supporting the cable ball of the tension cable at the cable retainer,
 - encapsulating the rotating part in the housing body,
 - having the annular disc with the dimples and concentric groove into the grip part of the rotating part,
 - having the annular magnet with a knob into the ring,

- having the knob resting on one of the dimples of the annular disc,
- sliding the ring onto the handlebar tube of the handlebars of the motorcycle.
- securing the housing body, the annular disc and the rotating part with the ring by aligning the retaining profiles at the protrusions with the securing profiles at the ring.

5

35. Method of assembling and disassembling the hand free grip-twist control device for controlling the cable tension to the motor engine transmission comprising:

- sliding the housing body onto the handlebar tube of the handlebars of the motorcycle,
- sliding the cable retainer having the centre hole with square tooth periphery onto the handlebar tube of the handlebars of the motorcycle,
- sliding the grip part having the protruded centre hole with the corresponding square tooth periphery and insert in the cable retainer,
- pulling a tension cable from a cable inlet to a cable hanger at the grip part,
- sliding the ring onto the handlebar tube of the handlebars of the motorcycle.
- securing the housing body, the annular disc and the rotating part with the ring by aligning the retaining profiles at the protrusions with the securing profiles at the ring.

10

15

20