CLAIMS

1. Control device (1, 71, 81) for a bicycle derailleur, comprising a support body (2, 72, 82), a cable-winding bush (13) supported for rotation with respect to the support body (2, 72, 82), an indexer mechanism (12, 12a, 41, 51) housed in the support body (2, 72, 82) and suitable for controlling the angular position of the cable-winding bush (13), and a single manual actuation lever (9, 79, 89), the indexer mechanism (12, 12a, 41, 51) comprising a toothed wheel (15) integral in rotation with the cable-winding bush (13) and having a first plurality of slanting teeth (21) and a second plurality of slanting teeth (26), a first pawl (20, 42, 52) integral with a driven arm (9b) of the lever (9, 79, 89) and brought into thrusting engagement on the first teeth (21) while the lever is manually moved in a first direction (S) beyond a predetermined rotation threshold, and a second pawl (23, 43, 53) driven out of retention engagement with the second teeth (26) by the driven arm (9b) of the lever (9, 79, 89) while the lever (9, 79, 89) is manually moved in the first direction (S) up to the predetermined rotation threshold.

2. Control device (1, 71, 81) according to claim 1, characterised in that while the lever (9, 79, 89) is manually moved up to the predetermined rotation threshold, the first pawl (20, 42, 52) comes into not interfering engagement with the first teeth (21) and at the predetermined rotation threshold, the first pawl (20, 42, 52) comes into interfering engagement with the first teeth (21).

3. Control device (1, 71, 81) according to claim 1 or 2, characterised in that while the lever (9, 79, 89) is manually moved beyond the predetermined rotation threshold, the second pawl (23, 43, 53) comes into not interfering engagement with the second teeth (26).

4. Control device (1, 71, 81) according to any of claims 1-3, characterised in that while the lever (9, 79, 89) rotates in a second direction (S') opposite the first direction (S), the first pawl (20, 42, 52) is out of engagement with the first teeth (21) and the second pawl (23, 43, 53) is in retention engagement with the second teeth (26).

5. Control device (1, 71, 81) according to any of claims 1-4, characterised in that when the lever (9, 79, 89) is manually moved within the predetermined rotation threshold, the toothed wheel (15) and the cable-winding bush (13) rotate in the unwinding direction (U) of a traction cable (K) of the derailleur, fastened to the cable-winding bush (13).

6. Control device (1, 71, 81) according to claim 5, characterised in that when the lever (9, 79, 89) is manually moved up to the predetermined rotation threshold and then rotates in a second direction (S') opposite the first direction (S), the toothed wheel (15) and the cable-winding bush (13) carry out a rotation in the unwinding direction (U) of an amount equal to one pitch between the second teeth (26), and the second pawl (23, 43, 53) moves from a first gap (27a) between the second teeth (26) to an adjacent gap (27b) between the second teeth (26).

7. Control device (1, 71, 81) according to any of claims 1-6, characterised in that when the lever (9, 79, 89) is manually moved beyond the predetermined rotation threshold, the toothed wheel (15) and the cable-winding bush (13) rotate in the winding direction (W) of a traction cable (K) fastened to the cable-winding bush (13).

8. Control device (1, 71, 81) according to claim 7, characterised in that when the lever (9, 79, 89) is manually moved beyond the predetermined rotation threshold, the toothed wheel (15) and the cable-winding bush (13)

carry out a rotation in the winding direction (W) by an amount equal to at least one pitch between the second teeth (26), and the second pawl (23, 43, 53) moves from a first gap (27a) between the second teeth (26) to an adjacent or subsequent gap (27c, 27d) between the second teeth (26).

9. Control device (1, 71, 81) according to any of claims 1-8, characterised in that the rotation of the lever (9, 79, 89) within the predetermined threshold takes place about a pivot (18) supported by a connecting member (16, 49, 60) coaxial (Y) with the toothed wheel (15).

10. Control device (1, 71, 81) according to claim 9, characterised in that the rotation of the lever (9, 79, 89) beyond the predetermined threshold takes place about an axis (Y) of the toothed wheel (15), integrally with the connecting member (16, 49, 60).

11. Control device (1, 71, 81) according to any of claims 1-10, characterised in that said second pawl (23, 43, 53) is formed on a driven arm (24a, 44a, 54a) of a swinging member (24, 44, 54) pivoted (25, 45, 55) onto the support body (2, 72, 82), and the driven arm (9b) of the lever (9, 79, 89), during its manual displacement up to the predetermined rotation threshold, controls a driving arm (24b, 44b, 54b) of the swinging member (24, 44, 54).

12. Control device (1, 71, 81) according to claim 11, characterised in that the driven arm (9b) of the lever (9, 79, 89) has a stepped profile (9c) for controlling the driving arm (24b, 44b, 54b) of the swinging member (24, 44, 54) during the manual displacement of the lever (9, 79, 89) up to the predetermined rotation threshold.

13. Control device (1, 71, 81) according to claim 11, characterised in that the driven arm (9b) of the lever (9, 79, 89) has a peg or a roller (46) for controlling the driving arm (44b) of the swinging member (44).

14. Control device (1, 71, 81) according to claim 11, characterised in that said indexer mechanism (51) further comprises a second swinging member (56) having a first arm (56a) hinge-like coupled with the driving arm (44b) of said swinging member (44), and the driven arm (9b) of the lever (9, 79, 89), during its manual displacement up to the predetermined rotation threshold, controls a second arm (56b) of the second swinging member (56).

15. Control device (1, 71, 81) according to any of claims 1-14, characterised by comprising return means (17, 19) for biasing the lever (9, 79, 89) into rotation in a second direction (S') opposite the first direction (S).

16. Control device (1, 71, 81) according to any of claims 1-16, characterised by comprising elastic means (28) for biasing the second pawl (23, 43, 53) into retention engagement with the second teeth (26).

17. Control device (1, 81) according to any of claims 1-16, characterised by further comprising a brake lever (5, 85) for controlling a brake of the bicycle.

18. Control device (1) according to claim 17, characterised in that an actuation arm (9a) of the lever (9) is provided with an articulation pivot (10) essentially parallel to a pivot (6) of the brake lever (5).