CLAIMS

1. A threaded fastening device, with locking in a screwed state, comprising:
- a body (11) having a threaded cylindrical surface (12) intended to threadingly engage a complementary thread (7);
- at least one jaw (14) connected at least indirectly to the body and having a locking surface (16) on its side (20) turned in use towards the complementary thread (7), configured and positioned to come into locking abutment against the complementary thread, the at least one jaw (14) extending in a direction that is substantially circumferential with respect to an axis (10) of the cylindrical surface (12), between an attachment end (17) connected to the body and an end (18) which is floating in a substantially radial direction; and
- an actuation element (19) that can be moved between a locking and a release position, to selectively place the jaw (14) in a locking state in which the locking surface (16) exerts a locking pressure onto the complementary thread (7), and respectively in a release state of the relative screwing and unscrewing movement;
characterized in that the actuation element is an actuation ring (19) mounted in rotation with respect to the body (11) about the axis (10) of the threaded cylindrical surface (12).
2. The device according to claim 1, characterized in that the actuation element (19) is configured to exert on a side (15) of the jaw facing away from the locking surface (16), a force directed in use towards the complementary thread (7), the return of the jaw to the release state being carried out by elasticity.
3. The device according to claim 1 or 2, characterized in that the actuation element (19) urges the jaw (14) by bending to pass from the release state to the locking state.
4. The device according to claim 1 or 2, characterized in that at least in the locking state, the locking surface (16) of the jaw is closer to the attachment end (12) of the jaw than an interaction area (21) between the jaw (14) and the actuation element (19), so as to cause the jaw to undergo flexural strain between the locking surface (16) and the interaction area (21) when the jaw is in the locking state.
5. The device according to one of claims 1 to 4, characterized in that the attachment end (17) of the jaw is rigidly connected to the body (11).

6. The device according to one of claims 1 to 5, characterized in that the jaw (14) and the body (11) are made from a single piece of material, while being connected together at the attachment end (17) of the jaw.
7. The device according to one of claims 1 to 6, characterized in that the locking surface (16) of the jaw belongs to the threaded cylindrical surface (12).
8. The device according to one of claims 1 to 7, characterized in that the actuation element (19) is permanently connected to the body (11) or in a manner forbidding disassembly except with a tool, so as to be unable to be lost in use, with respect to the body.
9. The device according to one of claims 1 to 8, characterized in that the actuation ring (19) is configured as a protective cover protecting the jaw (14).
10. The device according to one of claims 1 to 9, characterized in that the actuation ring (19) is held axially with respect to the body (11) by means of a retaining ring (46).
11. The device according to claim 10, characterized in that the retaining ring includes two ends (51) shaped to come into abutment against the at least one jaw (14) by circumferential movement, so that the retaining ring is substantially immobilized against rotations with respect to the body (11).
12. The device according to claim 10 or 11, characterized in that for its axial positioning with respect to the body (11), the retaining ring (46) is partially housed in a void (48) arranged between the jaw (14) and the body (11).
13. The device according to one of claims 1 to 10, characterized in that the retaining ring (46) is immobilized against rotations with respect to one of the body (11) and the actuation ring (19), and includes at least one projection (51) which cooperates with at least one recess (53) provided in the other one of the body and the actuation ring, so as to limit the angular travel of the actuation ring (19) with respect to the body (11).
14. The device according to claim 13, characterized in that the recess (53) includes at least one boss (54) that the projection (51) can pass by elasticity of the retaining ring with a hard point effect.
15. The device according to one of claims 1 to 14, characterized in that the actuation ring (19) and the jaw (14) interact by means of respective conjugate cam profiles (25, 26, 27).
16. The device according to claim 15, characterized in that one of the conjugate cam profiles of at least one of the actuation ring (19) and the jaw (14) belongs

to a respective ellipse centred on the axis (10) of the threaded cylindrical surface (12).

17. The device according to claim 15, characterized in that the conjugate cam profiles (25, 26, 27) define a hard point for the movement of the actuation ring (19) between its locking and release positions.

18. The device according to one of claims 1 to 15, characterized in that the movement of the actuation element (19) between the locking and release positions passes by at least one hard point so as to stabilize the locked state of the jaw (14) against mechanical excitations such as vibrations and inertial effects capable of occurring in use.

19. The device according to one of claims 1 to 18, characterized in that it comprises an interlock system (41, 42, 43) which stabilizes the actuation element (19) in each of its positions, locking and respectively release, against unwanted mechanical excitations.

20. The device according to claim 19, characterized in that the interlock system comprises a tooth (43), which is displaced between two stops (41) cooperating with the tooth to delimit the travel of the actuation element (19) with respect to the body (11), and between the two stops of a boss (42) that the tooth (43) can pass by elastic deformation with a hard point effect.

21. The device according to one of claims 1 to 18, characterized in that it comprises stop means (28, 43) which limit the travel of the actuation element (19) in its displacements into the locking and release positions.

22. The device according to claim 21, characterized in that the stop means comprise at least one overthickness (28) of the actuation element (19), protruding between two jaw ends.

23. The device according to one of claims 1 to 22, characterized in that it comprises means (44, 45) indicating the position of the actuation element (19).

24. The device according to one of claims 1 to 23, characterized in that said fastening device is a nut.

25. The device according to claim 24, characterized in that the body (11) includes a tubular wall internally provided with the threaded cylindrical surface (12), and in that the at least one jaw (14) is at least partly defined by material removal from said tubular wall.

26. The device according to one of claims 1 to 25, characterized in that said fastening device incorporates, in a single independent assembly, the body (11)

with its threaded cylindrical surface (12), the at least one jaw (14) and the actuation element (19).

27. The device according to one of claims 1 to 26, characterized in that the at least one jaw comprises several jaws (14) distributed about the axis (10) of the threaded cylindrical surface (12), the actuation element (19) being common to all the jaws.