Brief description of the invention

To that end, ~~the invention relates,~~ according to a first aspect, there is provided~~to~~ a device for moving tissue inside the body, in particular bone tissue, said device including a first part referred to as a reference part; a second part, referred to as a transport part, which is slidably mounted relative to the reference part; a rod comprising at least one thread, referred to as the threaded rod, pivotably mounted relative to the reference part; a control shaft; driving means connecting the control shaft to the threaded rod; connecting means, referred to as the connecting nut, between the transport part and the threaded rod, said connecting nut being mounted onto the threaded rod and being rotatably guided relative to the reference part; and means for converting the movement of the connecting nut along the threaded rod into a movement of the transport part relative to the reference part, said device comprising, in order to limit the longitudinal translation of said threaded rod relative to the reference part, a first abutment and a second abutment rigidly connected to the threaded rod, these abutments respectively cooperating with a first bearing and a second bearing rigidly connected to the reference part, these bearings being rigidly connected to the reference part and being placed at a distance from one another between said abutments, the connecting nut being movable along the threaded rod between the first bearing and second bearing.

The distance between the two abutments is advantageously larger than that between the bearings, so as to allow translational play of the threaded rod relative to the reference part.

In normal operation, the control shaft is rotated using any means known by those skilled in the art. For example, the control shaft can be associated with the permanent magnet which, when subjected to a magnetic field, pivots to orient itself in the field and drives the control shaft. Alternatively, the control shaft is connected to a motor, a gear motor, or a key gear.

The device has, according to various embodiments, the following features, which may be combined.

The driving means comprise a flexible transmission shaft and/or at least one helical spring and/or a transmission joint, a chain of transmission joints, a Cardan joint, or a chain of Cardan joints.

The driving means comprise an intermittent device, in particular a Geneva wheel mechanism, rigidly connected to the threaded rod and moved by the control shaft, said

37. An application of the device according to any one of the preceding claims as intramedullary nail or elongation or bone transport plate.

38. An application of the device according to any one of claims 1 to 36 as distraction or compression rod to correct the spine or the thorax.

39. An application of the device according to any one of claims 1 to 36 as growth prosthesis.

40. An application of the device according to any one of claims 1 to 36 in the modification of soft tissue, in particular the elongation of part of the intestine or gastric bands.

41. An application of the device according to any one of claims 1 to 36 in the modification of sections of the conduits of the blood system, in particular artery cerclage, valvuloplasty rings.