Claims

1. A dynamic intramedullary nail with a hybrid drive, characterised in that it comprises acasing consisting of a proximal (1) and a distal segment (2), and the casing hascomprised therein a magnetic rotor (3) driven by an external magnetic field, and aninner spring element (4) accumulating potential energy during assembly, constituting driving means for lengthening the nail in a telescopic manner.

2. The dynamic intramedullary nail with a hybrid drive according to claim 1, characterisedin that the proximal segment (1) comprises a first end for mounting in a bone, and a second end.

3. The dynamic intramedullary nail with a hybrid drive according to claim 1, characterisedin that the distal segment (2) comprises a first end for mounting in a bone, and a second end.

4. The dynamic intramedullary nail with a hybrid drive according to claims 1 to 3, characterised in that the second end of the proximal segment (1) is connected telescopically with the second end of the distal segment (2).

5. The dynamic intramedullary nail with a hybrid drive according to claim 1 or 3, characterised in that a driving screw (6) extends from the proximal segment (1) to thedistal segment (2), the screw (6) having a first end comprising a mechanical gear (5), and the second end of the screw (6) being seated in the second end of the distal segment (2).

6. The dynamic intramedullary nail with a hybrid drive according to claim 1, characterisedin that the magnetic rotor (3) is actuated by an external magnetic field generated by an external magnetic actuator (7)

7. The dynamic intramedullary nail with a hybrid drive according to claim 1 or 5, characterised in that the driving screw (6) extends lengthwise through the spring element (4).

8. The dynamic intramedullary nail with a hybrid drive according to claim 1, characterised in that the driving means allow for lengthening or shortening the length of the intramedullary nail depending on the direction of changes in the external magnetic field, simultaneously using the potential energy cumulated in the internal spring element (4).

9. The dynamic intramedullary nail with a hybrid drive according to claim 1, characterisedin that it has a magnetic rotor (3) moved by an external magnetic field originating fromthe magnetic actuator (7) and converted

into the motion of the nail, simultaneously using the forces supporting this extension, originating from the element placed insidethe implant.

10. The dynamic intramedullary nail with a hybrid drive according to claim 1, characterisedin that the mechanical gear (5) constitutes a planetary gearset.

11. A set comprising the dynamic intramedullary nail with a hybrid drive according to claim 1, and a magnetic actuator (7) for use in osteodistraction procedures.