Claims

1. A drive mechanism for a drug delivery device, comprising:
   - a lead screw (5), a lead screw nut (7) and a drive member (8), aligned with an axis (4) defining an axial direction and an opposite axial direction,
   - a coupling between the lead screw (5) and the lead screw nut (7) allowing a helical movement of the lead screw (5) with respect to the lead screw nut (7) at least in the axial direction,
   - the lead screw (5) being coupled with the drive member (8), the coupling generating a helical movement of the lead screw (5) with respect to the drive member (8) when the drive member (8) is moved in the axial direction with respect to the lead screw (5), and the coupling being overridden to prevent a helical movement of the lead screw (5) with respect to the drive member (8) when the drive member (8) is moved in the opposite axial direction with respect to the lead screw (5),
   - a dispense stop feature (19) of the lead screw nut (7), and
   - a dispense stop feature (20) of the drive member (8),
   - the dispense stop features (19, 20) interacting and thereby preventing the generation of the helical movement of the lead screw (5) when the drive member (8) approaches a specified end position.

2. The drive mechanism according to claim 1, wherein
the dispense stop features (19, 20) have corresponding contact surfaces (22), which are oblique to the axis (4).

3. The drive mechanism according to claim 1 or 2, wherein
the dispense stop features (19 ,20) have corresponding end faces (23), which inhibit a rotation of the drive member (8) with respect to the lead screw nut (7) at least in one direction.

4. The drive mechanism according to one of claims 1 to 3, wherein the dispense stop feature (19) of the lead screw nut (7) has the shape of a prism or truncated prism.

5. The drive mechanism according to one of claims 1 to 4, wherein the dispense stop features (19, 20) guide the drive member (8) with respect to the lead screw nut (7) in a helical movement having the same pitch as the helical movement of the lead screw (5) with respect to the drive member (8).

6. The drive mechanism according to one of claims 1 to 5, further comprising:
a flexible guide feature (15) of the lead screw (5), and
a screw thread (18) of the drive member (8),
the coupling of the lead screw (5) with the drive member (8) being provided by the flexible guide feature (15) engaging the screw thread (18), and
the screw thread (18) having the same pitch as the helical movement of the lead screw (5) with respect to the drive member (8).

7. The drive mechanism according to one of claims 1 to 6, further comprising:
stop features (17) of the lead screw (5),
the stop features (17) inhibiting the helical movement of the lead screw (5) when the drive member (8) is moved in the opposite axial direction with respect to the lead screw (5).

8. The drive mechanism according to one of claims 1 to 7, wherein
the drive member (8) and the lead screw nut (7) are rotationally locked.

9. The drive mechanism according to one of claims 1 to 8, wherein
the dispense stop feature (19) of the lead screw nut (7) is formed as an integral part of the lead screw nut (7), and
the dispense stop feature (20) of the drive member (8) is formed as an integral part of the drive member (8).

10. A drug delivery device, comprising:

- a drive mechanism according to one of claims 1 to 9, and
- a body (1) having a distal end (2) and a proximal end (3), which are spaced apart in the direction of the axis (4).

**CLAIMS**

1. A drive mechanism for a drug delivery device, comprising:
- a lead screw (5), a lead screw nut (7) and a drive member (8), aligned with an axis (4) defining an axial direction and an opposite axial direction,
- a coupling between the lead screw (5) and the lead screw nut (7) allowing a helical movement of the lead screw (5) with respect to the lead screw nut (7) at least in the axial direction,
- the lead screw (5) being coupled with the drive member (8), the coupling generating a helical movement of the lead screw (5) with respect to the drive member (8) when the drive member (8) is moved in the axial direction with respect to the lead screw (5), and the coupling being overridden to prevent a helical movement of the lead screw (5) with respect to the drive member (8) when the drive member (8) is moved in the opposite axial direction with respect to the lead screw (5),
- a dispense stop feature (19) of the lead screw nut (7), and
- a dispense stop feature (20) of the drive member (8),
- the dispense stop features (19, 20) interacting and thereby preventing the generation of the helical movement of the lead screw (5) when the drive member (8) approaches a specified end position wherein the dispense stop features (19, 20) have corresponding contact surfaces (22), which are oblique to the axis (4).

2. The drive mechanism according to claim 1, wherein
the dispense stop features (19 ,20) have corresponding end faces (23), which inhibit a rotation of the drive member (8) with respect to the lead screw nut (7) at least in one direction.

3. The drive mechanism according to one of claims 1 to 2, wherein
the dispense stop feature (19) of the lead screw nut (7) has the shape of a prism or truncated prism.

4. The drive mechanism according to one of claims 1 to 3, wherein
the dispense stop features (19, 20) guide the drive member (8) with respect to the lead screw nut (7) in a helical movement having the same pitch as the helical movement of the lead screw (5) with respect to the drive member (8).

5. The drive mechanism according to one of claims 1 to 4, further comprising:
a flexible guide feature (15) of the lead screw (5), and
a screw thread (18) of the drive member (8),
the coupling of the lead screw (5) with the drive member (8) being provided by the flexible guide feature (15) engaging the screw thread (18), and
the screw thread (18) having the same pitch as the helical movement of the lead screw (5) with respect to the drive member (8).

6. The drive mechanism according to one of claims 1 to 5, further comprising:
stop features (17) of the lead screw (5),
the stop features (17) inhibiting the helical movement of the lead screw (5) when the drive member (8) is moved in the opposite axial direction with respect to the lead screw (5).

7. The drive mechanism according to one of claims 1 to 6, wherein
the drive member (8) and the lead screw nut (7) are rotationally locked.

8. The drive mechanism according to one of claims 1 to 7, wherein
the dispense stop feature (19) of the lead screw nut (7) is formed as an integral part of the lead screw nut (7), and
the dispense stop feature (20) of the drive member (8) is formed as an integral part of the drive member (8).

9. A drug delivery device, comprising:
- a drive mechanism according to one of claims 1 to 8, and
- a body (1) having a distal end (2) and a proximal end (3), which are spaced apart in the direction of the axis (4).