CLAIMS

1. A device for inserting an implant on a human or animal body, the device comprising:

   an operable portion configured to make an incision on the human or animal body and configured to hold the implant for insertion on the human or animal body; and

   an actuator mechanism coupled to the operable portion, the actuator mechanism configured to move the operable portion along a first axis and configured to move the operable portion along a second axis substantially perpendicular to the first axis for making the incision on the human or animal body.

2. The device according to claim 1,

   wherein the operable portion comprises:

   an elongated holder having a length extending from a first end of the holder to a second end of the holder, the elongated holder configured to hold the implant at the first end of the holder.

3. The device according to claim 2,

   wherein the elongated holder further comprises a plurality of claws to hold the implant at the first end of the holder.

4. The device according to claim 2 or claim 3,

   wherein the operable portion further comprises a cutting tool, the cutting tool configured to make the incision on the human or animal body.

5. The device according to claim 4,

wherein the cutting tool comprises a two-step cutting edge.

6. The device according to claim 4 or claim 5,

wherein the elongated holder comprises a cavity extending from the first end of the holder to the second end of the holder, the cavity of the elongated holder configured to receive the cutting tool.

7. The device according to claim 6,

wherein the actuator mechanism further comprises:

a cutter retraction mechanism configured to move the cutting tool between a first position and a second position;

wherein the cutting tool is received in the cavity of the elongated holder when the cutting tool is in the first position; and

wherein the cutting tool is protruded from the cavity of the elongated holder for making the incision on the human or animal body when the cutting tool is in the second position.

8. The device according to claim 7,

wherein the cutter retraction mechanism comprises:

a servo motor;

a crank having a first end and a second end, the first end coupled to the servo motor, the second end coupled to the cutting tool;

wherein the crank is configured to convert rotational motion of the servo motor to linear motion of the cutting tool between the first position and the second position.

9. The device according to any of claims 4 to 8,

wherein the cutting tool comprises a hollow channel; and

wherein the operable portion further comprises a fiberscope arranged at least partially within the hollow channel of the cutting tool.

10. The device according to any of claims 1 to 9,

wherein the actuator mechanism comprises an actuator to move the operable portion along the first axis.

11. The device according to claim 10,

wherein the actuator mechanism comprises a further actuator to move the operable ~~potion~~portion along the second axis.

12. The device according to any of claims 1 to 11,

wherein the device comprises a movable portion and a fixed portion; and

wherein the operable portion is mounted on the movable portion.

13. The device according to claim 12, the device further comprising:

a force sensor coupled between the fixed portion and the movable portion, the force sensor configured to detect the force applied to the movable portion.

14. The device according to any of claims 1 to 13, the device further comprising the implant.

15. The device according to claim 14,

wherein the implant is a grommet.

~~16. A method of using the device in any of claims 1 to 15 to insert an implant into a human or animal body, the method comprising:~~

~~operating the device to move an operable portion of the device along a first axis and to move the operable portion of the device along a second axis perpendicular to the first axis to make an incision on the human or animal body; and~~

~~using the device to insert the implant at least partially through the incision on the human or animal body.~~

~~17. The method according to claim 16,~~

~~wherein the incision is made on a ear membrane.~~

~~18. The method according to claim 17,~~

~~wherein the implant is inserted at least partially through the incision on the ear membrane.~~

~~19. The method according to any of claims 16 to 18,~~

~~wherein the implant is a grommet.~~

~~20~~16. A device for use in a method of inserting an implant into a human or animal body, the method comprising:

operating an actuator mechanism of the device to move an operable portion of the device along a first axis and to move the operable portion of the device along a second axis perpendicular to the first axis to make an incision on the human or animal body; and

using the device to insert the implant at least partially through the incision on the human or animal body.

CLAIMS

1. A device for inserting an implant on a human or animal body, the device comprising:

   an operable portion configured to make an incision on the human or animal body and configured to hold the implant for insertion on the human or animal body; and

   an actuator mechanism coupled to the operable portion, the actuator mechanism configured to move the operable portion along a first axis and configured to move the operable portion along a second axis substantially perpendicular to the first axis for making the incision on the human or animal body.

2. The device according to claim 1,

   wherein the operable portion comprises:

   an elongated holder having a length extending from a first end of the holder to a second end of the holder, the elongated holder configured to hold the implant at the first end of the holder.

3. The device according to claim 2,

   wherein the elongated holder further comprises a plurality of claws to hold the implant at the first end of the holder.

4. The device according to claim 2 or claim 3,

   wherein the operable portion further comprises a cutting tool, the cutting tool configured to make the incision on the human or animal body.

5. The device according to claim 4,

wherein the cutting tool comprises a two-step cutting edge.

6. The device according to claim 4 or claim 5,

wherein the elongated holder comprises a cavity extending from the first end of the holder to the second end of the holder, the cavity of the elongated holder configured to receive the cutting tool.

7. The device according to claim 6,

wherein the actuator mechanism further comprises:

a cutter retraction mechanism configured to move the cutting tool between a first position and a second position;

wherein the cutting tool is received in the cavity of the elongated holder when the cutting tool is in the first position; and

wherein the cutting tool is protruded from the cavity of the elongated holder for making the incision on the human or animal body when the cutting tool is in the second position.

8. The device according to claim 7,

wherein the cutter retraction mechanism comprises:

a servo motor;

a crank having a first end and a second end, the first end coupled to the servo motor, the second end coupled to the cutting tool;

wherein the crank is configured to convert rotational motion of the servo motor to linear motion of the cutting tool between the first position and the second position.

9. The device according to any of claims 4 to 8,

wherein the cutting tool comprises a hollow channel; and

wherein the operable portion further comprises a fiberscope arranged at least partially within the hollow channel of the cutting tool.

10. The device according to any of claims 1 to 9,

wherein the actuator mechanism comprises an actuator to move the operable portion along the first axis.

11. The device according to claim 10,

wherein the actuator mechanism comprises a further actuator to move the operable portion along the second axis.

12. The device according to any of claims 1 to 11,

wherein the device comprises a movable portion and a fixed portion; and

wherein the operable portion is mounted on the movable portion.

13. The device according to claim 12, the device further comprising:

a force sensor coupled between the fixed portion and the movable portion, the force sensor configured to detect the force applied to the movable portion.

14. The device according to any of claims 1 to 13, the device further comprising the implant.

15. The device according to claim 14,

wherein the implant is a grommet.

16. A device for use in a method of inserting an implant into a human or animal body, the method comprising:

operating an actuator mechanism of the device to move an operable portion of the device along a first axis and to move the operable portion of the device along a second axis perpendicular to the first axis to make an incision on the human or animal body; and

using the device to insert the implant at least partially through the incision on the human or animal body.