CLAIMS.

1. A device for implanting a prosthesis (12) in a body tissue, comprising:

- a tubular element (7), at its own interior defining a channel (Z) having extension direction along an axis (X-X) and cross section of area (A), within which a prosthesis (12) can slide that has a cross section of area (T);

- a pressure element (16) movable inside the channel (Z) for moving said prosthesis (12);

characterized in that it comprises:

- a cartridge (5) provided with a chamber (C), in communication with the channel (Z), comprising a seat (31), having a preferable extension direction along an axis (H-H) and cross section of area (V), configured for housing the prosthesis (12) and movable inside the chamber (C);

- a pusher element (13) configured in a manner such to operate on the seat (31) in order to facilitate the movement of the seat (31) inside the chamber (C) from a first position, in which the area (V) of the cross section of the seat (31) is outside the area (A) of the cross section of the tubular element (7), the seat (31) not facing the channel (Z), to a second position, in which the area (V) of the cross section of the seat (31) at least partly intersects the area (A) of the cross section of the tubular element (7), inducing a communication between the channel (Z) and the seat (31) suitable for facilitating the insertion of the prosthesis (12) inside the channel (Z) upon command of the pressure

element (16).

2. The device according to claim 1, characterized in that said prosthesis (12), housed inside the seat (31), is movable under the action of the pusher element (13) from the first position, in which the area (T) of the cross section of the prosthesis (12) is outside the area (A) of the cross section of the tubular element (7), to the second position, in which the area (T) of the cross section of the prosthesis (12) is entirely contained inside the area (A) of the cross section of the tubular element (7) in order to facilitate the insertion of the prosthesis (12) inside the channel (Z) through the pressure element (16).

3. The device according to claim 2, characterized in that said prosthesis preferably has an extension direction along an axis (Y-Y).

4. The device according to claim 3, characterized in that said prosthesis (12) is movable, under the action of the pusher element (13), from the first position, in which the axis (Y-Y) is misaligned with the axis (X-X) of the channel (Z), to the second position, in which the axis (Y-Y) is aligned with the axis (X-X) of the channel (Z).

5. The device according to claim 1, characterized in that said pressure element (16) is situated, in a first embodiment, in a rest position in which it is inserted inside the chamber (C), in order to hinder the pusher means (13), maintaining seat (31) in the first position, so that it exits outward from the channel (Z) for a pre-established amount (D1).

6. The device according to claim 1, characterized in that it comprises, in a second embodiment, a closure element (15) situated inside the tubular element (7), at least partly crossing the interior of the chamber (C) in order to hinder the action of the pusher means (13), thus maintaining the seat (31) in the first position; said pressure element (16) being positioned in a trigger position in which it is disconnected from the channel (Z) and from the chamber (C).

7. The device according to claim 5, characterized in that said pressure element (16), when situated in the rest position, is movable under the action of first movement means (21) from a retreated position, in which the pressure element (16) is disconnected from the chamber (C) in order to allow the seat (31) to reach the second position, to a loading position, in which the pressure element (16) crosses the chamber (C), pushing the prosthesis (12) inside the tubular element (7).

8. The device according to claim 6, characterized in that said pressure element (16), when situated in the trigger position, is movable under the action of first movement means (21) from an advance position, in which the pressure element (16) crosses the chamber (C) and the channel (Z) of the tubular element (7), causing the outward exit of the closure element (15) from the tubular element (7), to a retreated position, in which the pressure element (16) is disconnected from the chamber (C) in order to allow the seat (31) to reach the second position,

to a loading position, in which the pressure element (16) crosses the chamber (C), pushing the prosthesis (12) inside the tubular element (7).

9. The device according to claim 7 or 8, characterized in that said first movement means (21) are programmed for moving the pressure element (16) back outside the chamber (C) in order to generate a communication between the seat (31) and the channel (Z) and to allow the pusher element (13) to push the seat into the second position, facilitating the alignment between the prosthesis (12) and the channel (Z).

10. The device according to claim 8, characterized in that said first movement means (21) are programmed for advancing the pressure element (16) inside the tubular element (7) in order to cause the outward exit of the closure element (15) from the latter and the consequent removal of the same.

11. The device according to claim 1, characterized in that said pusher element (13) is defined by elastic means (14) suitable for generating a thrust of the seat (31) from the first position to the second position.

12. The device according to claim 11, characterized in that said elastic means (14) cause a thrust of the seat (31) along a direction (S) incident on the axis (X-X) of the channel (Z).

13. The device according to claims 5 and 11, characterized in that said pressure element (16), when situated in rest position, is configured to oppose the thrust exerted by the elastic means (14)

on the seat (31), constraining the latter in the first position.

14. The device according to claims 6 and 11, characterized in that said closure element (15), when inserted in the tubular element (7), is configured to oppose the thrust exerted by the elastic means (14) on the seat (31), constraining the latter in the first position.

15. The device according to claims 8 and 11, characterized in that said pressure element (16), when situated in the advance position, is configured to oppose the thrust exerted by the elastic means (14) on the seat (31), constraining the latter in the first position.

16. The device according to claims 7, 8 and 11, characterized in that said pressure element (16), when situated in the retreated position, is configured as to free the elastic means (14), allowing the seat (13) to reach the second position.

CLAIMS.

1. A device for implanting a prosthesis (12) in a body tissue, comprising:

- a tubular element (7), at its own interior defining a channel (Z) having extension direction along an axis (X-X) and cross section of area (A);
- a prosthesis (12) having a cross section of area (T) and slidable within said channel (Z);
- a pressure element (16) movable inside the channel (Z) for moving said prosthesis (12);

characterized in that it comprises:

- a cartridge (5) provided with a chamber (C), in communication with the channel (Z), comprising a seat (31) within which said prosthesis (12) is housed, the seat (31) having a preferable extension direction along an axis (H-H) and cross section of area (V)and being movable inside the chamber (C);
- a pusher element (13) configured in a manner such to operate on the seat (31) in order to facilitate the movement of the seat (31) inside the chamber (C) from a first position, in which the area (V) of the cross section of the seat (31) is outside the area (A) of the cross section of the tubular element (7), the seat (31) not facing the channel (Z), to a second position, in which the area (V) of the cross section of the seat (31) at least partly intersects the area (A) of the cross section of the tubular element (7), inducing a communication between the channel (Z) and the seat (31) suitable for facilitating the insertion of the prosthesis (12) inside the channel (Z) upon command of the pressure

element (16).

2. The device according to claim 1, characterized in that said prosthesis (12), housed inside the seat (31), is movable under the action of the pusher element (13) from the first position, in which the area (T) of the cross section of the prosthesis (12) is outside the area (A) of the cross section of the tubular element (7), to the second position, in which the area (T) of the cross section of the prosthesis (12) is entirely contained inside the area (A) of the cross section of the tubular element (7) in order to facilitate the insertion of the prosthesis (12) inside the channel (Z) through the pressure element (16).

3. The device according to claim 2, characterized in that said prosthesis preferably has an extension direction along an axis (Y-Y).

4. The device according to claim 3, characterized in that said prosthesis (12) is movable, under the action of the pusher element (13), from the first position, in which the axis (Y-Y) is misaligned with the axis (X-X) of the channel (Z), to the second position, in which the axis (Y-Y) is aligned with the axis (X-X) of the channel (Z).

5. The device according to claim 1, characterized in that said pressure element (16) is situated, in a first embodiment, in a rest position in which it is inserted inside the chamber (C), in order to hinder the pusher means (13), maintaining seat (31) in the first position, so that it exits outward from the channel (Z) for a pre-established amount (D1).

6. The device according to claim 1, characterized in that it comprises, in a second embodiment, a closure element (15) situated inside the tubular element (7), at least partly crossing the interior of the chamber (C) in order to hinder the action of the pusher means (13), thus maintaining the seat (31) in the first position; said pressure element (16) being positioned in a trigger position in which it is disconnected from the channel (Z) and from the chamber (C).

7. The device according to claim 5, characterized in that said pressure element (16), when situated in the rest position, is movable under the action of first movement means (21) from a retreated position, in which the pressure element (16) is disconnected from the chamber (C) in order to allow the seat (31) to reach the second position, to a loading position, in which the pressure element (16) crosses the chamber (C), pushing the prosthesis (12) inside the tubular element (7).

8. The device according to claim 6, characterized in that said pressure element (16), when situated in the trigger position, is movable under the action of first movement means (21) from an advance position, in which the pressure element (16) crosses the chamber (C) and the channel (Z) of the tubular element (7), causing the outward exit of the closure element (15) from the tubular element (7), to a retreated position, in which the pressure element (16) is disconnected from the chamber (C) in order to allow the seat (31) to reach the second position,

to a loading position, in which the pressure element (16) crosses the chamber (C), pushing the prosthesis (12) inside the tubular element (7).

9. The device according to claim 7 or 8, characterized in that said first movement means (21) are programmed for moving the pressure element (16) back outside the chamber (C) in order to generate a communication between the seat (31) and the channel (Z) and to allow the pusher element (13) to push the seat into the second position, facilitating the alignment between the prosthesis (12) and the channel (Z).

10. The device according to claim 8, characterized in that said first movement means (21) are programmed for advancing the pressure element (16) inside the tubular element (7) in order to cause the outward exit of the closure element (15) from the latter and the consequent removal of the same.

11. The device according to claim 1, characterized in that said pusher element (13) is defined by elastic means (14) suitable for generating a thrust of the seat (31) from the first position to the second position.

12. The device according to claim 11, characterized in that said elastic means (14) cause a thrust of the seat (31) along a direction (S) incident on the axis (X-X) of the channel (Z).

13. The device according to claims 5 and 11, characterized in that said pressure element (16), when situated in rest position, is configured to oppose the thrust exerted by the elastic means (14)

on the seat (31), constraining the latter in the first position.

14. The device according to claims 6 and 11, characterized in that said closure element (15), when inserted in the tubular element (7), is configured to oppose the thrust exerted by the elastic means (14) on the seat (31), constraining the latter in the first position.

15. The device according to claims 8 and 11, characterized in that said pressure element (16), when situated in the advance position, is configured to oppose the thrust exerted by the elastic means (14) on the seat (31), constraining the latter in the first position.

16. The device according to claims 7, 8 and 11, characterized in that said pressure element (16), when situated in the retreated position, is configured as to free the elastic means (14), allowing the seat (13) to reach the second position.