CLAIMS

1. Injector for transcutaneously introducing a sensor into a patient,
comprising a cannula, a base element, a sliding element arranged displaceably on the base element, for transcutaneously introducing the cannula into the patient in an injection direction, and comprising an ejection element for automatically pulling the cannula out of the patient counter to the injection direction by the ejection element in an ejection operation,
characterized in that
the injector has a locking element for the ejection element such that, in a delivery state, the ejection element is lockable in an energy-charged state,
in that sliding element and locking element are designed so as to interact indirectly or directly in order, in an injection state, when the cannula is introduced transcutaneously into the patient, to release the locking of the ejection element in order automatically to start an ejection operation,
in that the locking element is designed to be fixable on the base element in a fixing position and is designed to be displaceable on the base element counter to the injection direction in an ejection position, preferably is designed to be displaceable counter to the injection direction; and
in that the sensor remains in the body of the patient during ejection due to the locking element and is not removed when the cannula is ejected.

2. Injector according to claim 1,
characterized in that
the cannula is arranged in a distal end region on a cannula upper part of the injector,
in that the cannula upper part is arranged on the base element so as to be displaceable in the injection direction, and
in that the ejection element is designed so as to interact with the cannula upper part such that the cannula upper part is displaceable counter to the injection direction by the ejection element.

3. Injector according to claim 1,
characterized in that

the locking element is arranged on the base element so as to be rotatable, in particular so as to be rotatable about an injection axis, and is designed to be transferable from the fixing position into the ejection position by rotation of the locking element.

4. Injector according to claim 1 or 2,
characterized in that
the locking element is arranged between the ejection element and the cannula upper part such that a force can be transmitted in the ejection direction to the cannula upper part via the locking element by the ejection element.

5. Injector according to one of the preceding claims,
characterized in that
the ejection element is in the form of an ejection spring.

6. Injector according to claim 5,
characterized in that
the ejection spring can be secured in a tensioned or preferably compressed state by the locking element.

7. Injector according to claim 2,
characterized in that
the cannula upper part has a central element on which the cannula is arranged and has at least one guide extension, and
the base element has at least one guide wall with a guide slot for the guide extension of the cannula upper part, for guiding the cannula upper part in the injection direction,
in particular in that the guide extension penetrates the guide wall of the base element, and the sliding element is designed so as to engage on the guide extension on that side of the guide wall which faces away from the central element of the cannula upper part.

8. Injector according to claim one of the preceding claims,

characterized in that

the base element and/or the sliding element have at least one bevel which is arranged in such a manner that, during the injection operation, rotation of the sliding element relative to the base element takes place in a proximal end region when the sliding element is displaced in the injection direction.

9. Injector according to claim 8,

characterized in that

the sliding element and the locking element have corresponding contact surfaces which are arranged in such a manner that, by rotation of the sliding element, the ejection element can be released from a fixing position, in particular in that the locking element has an extension and the sliding element has a corresponding guide surface.

10. Injector according to either of claims 8 and 9,

characterized in that

the base element (1) and the sliding element have corresponding guide elements which are designed and arranged in such a manner that the sliding element is rotatable relative to the base element only in the proximal end region.

11. Injector according to either of claims 2 and 10,

characterized in that

the sliding element has guide slots for the guide extension of the cannula upper part, said guide slots being arranged in such a manner that, after rotation of the sliding element in the proximal end region, the cannula upper part is displaceable counter to the injection direction.

12. Injector according to claim 11 when it dependents on claim 10,

characterized in that

the bevel (1c, 1d) is formed on the sliding element at a proximal end of the guide slots.

13. Injector according to one of the preceding claims,

characterized in that

the injector has a counterforce spring which is arranged between the base element (1) and the sliding element in a manner acting counter to a displacement of the sliding element in the injection direction.