Claims

[Claim 1] A needle tip guard 10 for a medical device, in particular for an intravenous catheter assembly, the needle tip guard 10 comprising:
a base portion 12 having a bore 14 extending along an axial direction A for receiving a needle 34 having a needle shaft 38 such that the needle 34 may extend through the bore 14 and move relative to the needle tip guard 10 from a spread-apart position in which the needle tip 36 is outside the needle tip guard 10 to a protective position in which the needle tip 36 is covered by the needle tip guard 10;
first 16 and second jaw 18 extending from the distal side of the said base portion 12 generally in the axial direction A;
each of the said first 16 and second jaws 18 having a head portion 20, 22 in the region of its free end, wherein the said first jaw 16 rests over the needle shaft in the spread-apart position;
one or more locking means onto the outer surface of the needle tip guard 10 for securing the said needle tip guard 10 to the said medical device; and
at least one resilient member or elastic element 26 integrally mounted onto the said jaws 16, 18 in a region between the said base portion 12 and the head portions 20, 22 such that said resilient member or elastic element 26 exerts an inward restoring force on the said jaws 16, 18, when the jaws are fully or partially spread apart by the said needle shaft 38.

[Claim 2] The needle tip guard 10 according to claim 1, wherein the said locking means comprise one or more locking shoulder 30 forming a recess or groove 32.

[Claim 3] The needle tip guard 10 according to claim 1, wherein the said resilient member or elastic element 26 forms a partial sidewall such that together with the jaws it defines a chamber 46 and is made from a material having elastic properties.

[Claim 4] The needle tip guard 10 according to claim 1, wherein the said bore 14 has a dimension being adapted to the shape and size of the principal outer profile of the needle 34 such that the needle 34 may extend through the bore 14 and move relative to the needle tip guard 10 to a protective position in which the needle tip 36 is covered by the said needle guard 10.

~~[Claim 5] The needle tip guard 10 according to claim 1, wherein the said first~~

head portion 20 has distal end section 24 at its free end which extends beyond the second head portion 22 and the said distal end section 24 thereof extends towards the said second jaw 18 generally perpendicular to the axial direction A.

[Claim 6] The needle tip guard 10 according to claim 5, wherein the length of the said distal end section 24 is as such that the end section 24 protrudes over at least a part of the said second head portion 22.

[Claim 7] The needle tip guard 10 according to claim 1, wherein the said resilient member or elastic element 26 is mounted to mounting features comprising mounting projections and or mounting recesses or the like provided on each of the said jaws 16, 18.

[Claim 8] The needle tip guard 10 according to claim 1, wherein the said resilient member or elastic element 26 further comprising a ring like integrated form/structure partially or fully surrounding the jaws 16, 18, and/or clamp, bracket, 'C' clip or the like surrounding the jaws 16, 18 only in part.

[Claim 9] An intravenous catheter assembly comprising: a catheter tube 48, a catheter hub/housing 42 defining a chamber, a needle 34 having a needle tip 36 at the distal end, a needle shaft 38 and a needle hub, and a needle tip guard 10 in particular according to any one of the claims 1 to 8 slidably arranged on the needle 34 for protecting the needle tip 36 which is housed partially and/or completely in the said catheter housing 42 such that the distal end section 24 of the first jaw 16 rests over the said needle shaft 38 in the spread-apart position.

[Claim 10] The intravenous catheter assembly according to claim 9, wherein the inner and/or outer surface of the said catheter housing 42 comprises one or more locking and/or releasing means in the form of one or more projections 44 and/or recesses.

CLAIMS

1. A needle tip guard 10 for an intravenous catheter assembly, the needle tip guard 10 comprising:

a base portion 12 having a bore 14 extending along an axial direction A for receiving a needle 34 having a needle shaft 38 such that the needle 34 may extend through the bore 14 and move relative to the needle tip guard 10 from a spread-apart position in which a needle tip 36 is outside the needle tip guard 10 to a protective position in which the needle tip 36 is covered by the needle tip guard 10;

first 16 and second jaw 18 extending from the distal side of the base portion 12 in the axial direction A;

each of the first 16 and second jaws 18 having a head portion 20, 22 in the region of its free end, wherein the first jaw 16 rests over the needle shaft in the spread-apart position;

one or more locking means onto the outer surface of the needle tip guard 10 for securing the said needle tip guard 10 to the said medical device, wherein the locking means comprise one or more locking shoulder 30 forming a recess or groove 32; and

at least one resilient member or elastic element 26 integrally mounted onto the first 16 and second jaw 18 in a region between the base portion 12 and the head portions 20, 22 forming a partial sidewall such that together with the jaws it defines a chamber 46; the resilient member or elastic element 26 is made from a material having elastic properties such that said resilient member or elastic element 26 exerts an inward restoring force on the first 16 and second jaw 18 when the first 16 and second jaw 18 are fully or partially spread apart by the needle shaft 38.

2. The needle tip guard 10 according to claim 1, wherein the bore 14 has a dimension being adapted to the shape and size of the principal outer profile of the needle 34 such that needle 34 may extend through the bore 14 and move relative to needle tip guard 10 to a protective position in which needle tip 36 is covered by the needle guard 10.

3. The needle tip guard 10 according to claim 1, wherein the first head portion 20 has a distal end section 24 at its free end which extends beyond the second head portion 22 and the distal end section 24 thereof extends towards the second jaw 18 generally perpendicular to the axial direction A.

4. The needle tip guard 10 according to claim 3, wherein the length of the distal end section 24 is as such that the end section 24 protrudes over at least a part of the second head portion 22.

5. The needle tip guard 10 according to claim 1, wherein the resilient member or elastic element 26 is mounted to mounting features comprising mounting projections and or mounting recesses provided on each of the jaws 16, 18.

6. The needle tip guard 10 according to claim 1, wherein the resilient member or elastic element 26 further comprising a ring like integrated form/structure partially or fully surrounding the first 16 and second jaw 18 and/or clamp, bracket, surrounding the first 16 and second jaw 18only in part.

7. An intravenous catheter assembly comprising: a catheter tube 48, a catheter hub/housing 42 defining a chamber, a needle 34 having a needle tip 36 at the distal end, a needle shaft 38 and a needle hub, and a needle tip guard 10 in particular according to any one of the claims 1 to 6 slidably arranged on the needle 34 for protecting the needle tip 36 which is housed partially and/or completely in the catheter housing 42 such that a distal end section 24 of first jaw 16 rests over the needle shaft 38 in the spread-apart position.

8. The intravenous catheter assembly according to claim 7, wherein an inner and/or outer surface of the said catheter housing 42 comprises one or more locking and/or releasing means in the form of one or more projections 44 and/or recesses.