CLAIMS

1. A transverse bar (12; 312; 412; 512) for a chain link (10) of an energy guiding chain (1) for guiding lines, wherein the chain link (2) has two mutually spaced side plates (11), wherein the transverse bar (12; 312; 412; 512) has an elongate main body (325; 425; 525) comprising a first plastic and at each of its longitudinal ends a connecting region (361A, 361B), by means of which it can be connected to a respective one of the side plates (11) to define a receiving space (14) for lines (16, 17), wherein the main body (325; 425; 525) of the transverse bar (12; 312; 412; 512) has two narrow sides (323; 423; 523) which are extended in the longitudinal direction (Q) of the transverse bar (12; 312; 412; 512) and which respectively have a holding device for holding separating bars (20; 220), namely a holding device at the one narrow side (323; 423; 523) and a holding device at the other narrow side (323. 423. 523),

characterised in that

- provided on the inside (362; 462; 562) of the main body (325; 425; 525) which in the intended use faces towards the receiving space (14) is a line-protecting layer (365; 465; 565) for handling the lines gently comprising a second plastic different from the plastic of the main body (325; 425; 525) for reducing abrasion upon relative movement between a line and the transverse bar; and

- the line-protecting layer (365; 465; 565) extends from the one narrow side (323; 423; 523) to the other narrow side (323; 423; 523) of the main body (325; 425; 525) and covers the inside (362; 462; 562) of the main body (325; 425; 525) between the narrow sides (323; 423; 523) ) of the main body (325; 425; 525) at least predominantly, preferably substantially completely, while leaving the two holding devices uncovered; and in that

- the line-protecting layer (465; 565) is produced in one piece with the main body in a two-component (2C) injection moulding process is or is injected onto the main body.

2. A transverse bar (12; 312; 412; 512) for a chain link (10) of an energy guiding chain (1) for guiding lines, wherein the chain link (2) has two mutually spaced side plates (11), wherein the transverse bar (12; 312; 412; 512) has an elongate main body (325; 425; 525) comprising a first plastic and at each of its longitudinal ends a connecting region (361A, 361B), by means of which it can be connected to a respective one of the side plates (11) to define a receiving space (14) for lines (16, 17), wherein the main body (325; 425; 525) of the transverse bar (12; 312; 412; 512) has two narrow sides (323; 423; 523) which are extended in the longitudinal direction (Q) of the transverse bar (12; 312; 412; 512) and which respectively have a holding device for holding separating bars (20; 220), namely a holding device at the one narrow side (323; 423; 523) and a holding device at the other narrow side (323. 423. 523),

characterised in that

- provided on the inside (362; 462; 562) of the main body (325; 425; 525) which in the intended use faces towards the receiving space (14) is a line-protecting layer (365; 465; 565) for handling the lines gently comprising a second plastic different from the plastic of the main body (325; 425; 525) for reducing abrasion upon relative movement between a line and the transverse bar; and

- the line-protecting layer (365; 465; 565) extends from the one narrow side (323; 423; 523) to the other narrow side (323; 423; 523) of the main body (325; 425; 525) and covers the inside (362; 462; 562) of the main body (325; 425; 525) between the narrow sides (323; 423; 523) ) of the main body (325; 425; 525) at least predominantly, preferably substantially completely, while leaving the two holding devices

uncovered ; and in that

- the line-protecting layer (465; 565) is in the form of a separate body and is connected to the main body (425; 525).

3. A transverse bar (12; 312; 412; 512) according to claim 2 characterised in that the line-protecting layer (365; 465; 565) extends in the

longitudinal direction (Q) between the longitudinal ends and in the width direction (B) from the one narrow side (323; 423; 523) to the other narrow side and covers the inside (362; 462; 562) of the main body (325; 425; 525) substantially completely and in particular continuously over the full area in the width direction and in the longitudinal direction.

4. A transverse bar (412; 512) according to claim 2 or claim 3 characterised in that the line-protecting layer (465; 565) is in the form of a moulded body, and is connected, in particular releasably, to the main body (425; 525).

5. A transverse bar (412; 512) according to one of claims 2 to 4 characterised in that the line-protecting layer (465; 565) can be fixed on the main body (425; 525) in positively locking and/or force-locking relationship, in particular by a latching connection.

6. A transverse bar (412; 512) according to one of claims 2 to 5 characterised in that the line-protecting layer (465; 565) bears against the inside (462; 562) of the main body (425; 525) in flush-mounted relationship and in particular is in the form of a moulding of a shape complementary to the surface configuration of the inside (462; 562).

7. A transverse bar (412; 512) according to one of claims 2 to 6 characterised in that the main body (425; 525) has at least one fixing region for fixing the line-protecting layer (465; 565) and the line-protecting layer (465; 565) is in the form of a separate moulding and has at least one snap-connection region or latching connection region which co-operates with the at least one fixing region.

8. A transverse bar (412) according to claim 7 characterised in that the fixing region is in the form of a profile groove (470) or recess at the inside (462) of the main body (425) for receiving a respective complementary projection (472) on the line-protecting layer (465), wherein

the projection includes in particular at least one region acting in the manner of a barb (474).

9. A transverse bar (512) according to one of claims 7 and 8 characterised in that the main body (525) has two end fixing regions for fixing the line-protecting layer (565) which are in the form of a longitudinal groove (570) along a respective narrow side (523) of the main body (525) for engagement with a respective edge region (572) of the line-protecting layer (565), wherein the respective longitudinal groove (570) preferably opens at the end in the width direction of the main body (525) and the respective edge region (572) of the line-protecting layer (575) is preferably of a clamp-shaped, in particular C-shaped cross-section and engages with a respective edge region (572) into the corresponding longitudinal groove (570).

10. A transverse bar (312) according to one of claims 2 or 3 characterised in that the line-protecting layer (365) is connected in material-bonded relationship to the main body (325).

11. A transverse bar (312; 412; 512) according to one of claims 2 to 10, characterised in that the line-protecting layer (365; 465; 565) is of a one-piece configuration with a surface which upon an intended operational loading is immobile relative to the surface of the main body (325; 425; 525).

12. A transverse bar (212) according to one of claims 1 to 11 characterised in that each holding device has a respective row of teeth (240) at the respective narrow side (223) for positively locking connection to separating bars (220) of a complementary configuration, with teeth (241) projecting in the width direction (B) of the transverse bar (212), and each tooth (241) is of a dimension in the height direction (H) of the transverse bar (212), that is larger than a dimension of the tooth (241) in the longitudinal direction (Q) of the transverse bar (212).

13. A transverse bar (412) according to one of claims 1 to 11 characterised each holding device includes a respective holding groove (442) at the respective narrow side (423) of the main body (425) for positively locking connection to separating bars (20; 220) of a complementary configuration, the holding groove (442) extending in the longitudinal direction (Q) of the transverse bar.

14. A transverse bar (312; 412; 512) according to one of claims 1 to 13 characterised in that the line-protecting layer (365; 465; 565) is provided only at the inside (362; 462; 562) of the main body (325; 425; 525) and between the narrow sides (323; 423; 523).

15. A transverse bar (312; 412; 512) according to one of claims 1 to 14 characterised in that the line-protecting layer (365; 465; 565) includes a material which in comparison with the main body has a wear-reducing, in particular friction-reducing, action.

16. A transverse bar (312; 412; 512) according to one of claims 1 to 15 characterised in that the line-protecting layer (365; 465; 565) is of a material thickness in a direction perpendicular to the main plane of the transverse bar, that is less than the corresponding dimension of the main body (325; 425; 525), in particular is less than or equal to 40% of the corresponding dimension of the main body.

17. A transverse bar (312; 412; 512) according to one of claims 1 to 16 wherein at at least one of its longitudinal ends the transverse bar has a connecting region (361A, 361B) provided for releasable fixing to a respective one of the side plates (11).

18. A chain link (10) for an energy guiding chain (1) including two side plates (11) which are connected together by transverse bars (12; 212; 312; 412; 512) and which can be pivotably connected to side plates of further chain links in a longitudinal direction, characterised in that the chain link (10)

has at least one transverse bar (312; 412; 512) with a line-protecting layer (365; 465; 565) according to one of claims 1 to 17.

19. An energy guiding chain (1) for dynamically guiding lines like for example cables (17) and/or hoses (16) including at least one chain link (10) according to claim 18.