Patent claims

1. Person conveying device (1), particularly an escalator or a moving walkway, comprising a drivable handrail (2), a grip strip (3), a guide (4) with guide surfaces (5) at a balustrade upper side (7), and a drive (8) which moves the handrail (2) along the guide (4) by a traction means (9), wherein the traction means (9, 9a, 9b) comprises at least one traction carrier (12) exchangeably arranged in the grip strip (3), characterised in that guide surfaces (11a-11g) complementary with the guide surfaces (5a-5e) at the balustrade upper side (7) are formed in the interior of the grip strip (3) and that the traction carrier (12) is mechanically positively fitted in place and/or pressed into place and/or glued in place and/or screwed in place and/or integrated in place in a corresponding recess (13) of the grip strip (3).

2. Person conveying device (1) according to claim 1, characterised in that the grip strip (3) is of integral construction along its rolling circumference in a longitudinal direction (14).

3. Person conveying device (1) according to one of claims 1 and 2, characterised in that the grip strip (3) is of multi-piece and/or multi-part construction in the longitudinal direction (14) and/or consists of individual segments.

4. Person conveying device (1) according to any one of the preceding claims, characterised in that a cross-sectional profile (15c) of the guide surfaces (5f-5m) at the balustrade upper side (7) is of negative form and a cross-sectional profile (15d) of the complementary guide surfaces (11h-11n) at the grip-strip lower side (10) is of positive form.

5. Person conveying device (1) according to claim 4, characterised in that rollers and/or needle bearings and/or needle-roller flat belts and/or cylinder-roller flat belts are arranged at the guide surfaces (5f-5m) at the balustrade upper side (7).

6. Person conveying device (1) according to any one of the preceding claims 1 to 5, characterised in that the grip strip (3) consists of a two-material compound, wherein a grip-strip guide part (16) is formed from a plastics material having a coefficient of friction in a range of 0.05 to 0.35, preferably 0.10 to 0.15, and a grip-strip base region (17) is formed from a plastics material having a bending strength in a range of 30 to 185 N/mm^2, preferably 50 to 95 N/mm^2.

7. Person conveying device (1) according to any one of the preceding claims, characterised in that the grip strip (3) consists of a multi-material compound,

- wherein the grip-strip guide part (16) is formed from a plastics material having a coefficient of friction in a range of 0.05 to 0.35, preferably 0.10 to 0.15,
- the grip-strip circumferential region (17) is formed from a plastics material having a bending strength in a range of 30 to 185 N/mm^2, preferably 50 to 95 N/mm^2, and
- preferably a grip-strip cover layer (18) is formed from a plastics material having a roughness in a range of 0.4 to 8 μm, preferably 2 μm, and a specific thermal conductivity λ in a range of 0.05 to 0.5 W/mK, preferably 0.2 to 0.3 W/mK.

8. Handrail (2) for an escalator or a moving walkway comprising a grip strip (3), a guide (4) with guide surfaces (5) at a balustrade upper side (7), and a drive (8) which pulls and/or moves the handrail (2) along the guide (4) by a traction means (9), wherein the traction means (9, 9a, 9b) comprises at least one traction carrier (12) exchangeably arranged in the grip strip (3), characterised in that guide surfaces (11a-11g) complementary with the guide surfaces (5a-5e) at the balustrade upper side (7) are formed in the interior of the grip strip (3) and that the traction carrier (12) is mechanically positively fitted in place and/or pressed in place and/or glued in place and/or screwed in place and/or integrated in place in a corresponding recess (13) of a grip strip (3).

9. Handrail (2) according to claim 8, characterised in that the grip strip (3) is of integral construction along its rolling circumference in its longitudinal direction (14).

Patent claims

1. A person conveying device, comprising a drivable handrail with a grip strip of a multi-piece construction in a longitudinal direction comprising a series of individual grip elements, a guide with guide surfaces at a balustrade upper side, and a drive which moves the handrail along the guide by a traction means, wherein the traction means extend along the balustrade upper side and comprise an endless traction carrier exchangeably arranged within an interior of each of the series of individual grip elements of the grip strip, interiors of a plurality of grip elements of the grip strip having guide surfaces complementary to the guide surfaces at the balustrade upper side and having mating recesses for a corresponding plurality of portions of the endless traction carrier which are removably mounted in the interiors of the grip elements, wherein each individual grip element has at least one receptacle to securely receive, accommodate and retain a portion of the traction means, the receptacle being configured in a manner that allows mating of the traction means with the receptacle solely by a push-pull action along a single axis, the grip strip having a pair of grooves extending in the longitudinal direction about the grip strip on upper surfaces of the individual grip elements for engagement with lateral guides on balustrade return rollers.

2. A person conveying device according to claim 1, wherein a cross-sectional profile of the guide surfaces at the balustrade upper side comprises projections, and a cross-sectional profile of the complementary guide surfaces of the grip strip comprises accommodating recesses.

3. A person conveying device according to claim 2, wherein at least one of rollers, needle bearings, needle-roller flat belts or cylinder-roller flat belts are arranged at the guide surfaces at the balustrade upper side.

4. A person conveying device according to claim 1, wherein the grip strip consists of a single material.

5. A person conveying device according to claim 1, wherein the grip strip has a grip-strip guide part formed from a plastics material having a coefficient of friction in a range of 0.05 to 0.35, a grip-strip base region formed from a plastics material having a bending strength in a range of 30 to 185 N/mm^2.

6. A person conveying device according to claim 1, wherein the grip strip has a grip-strip guide part formed from a plastics material having a coefficient of friction in a range of 0.05 to 0.35, a grip-strip circumferential region formed from a plastics material having a bending strength in a range of 30 to 185 N/mm^2, and a grip-strip cover layer formed from a plastics material having a roughness in a range of 0.4 to 8 µm, and a specific thermal conductivity λ in a range of 0.05 to 0.5 W/mK.