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(71) Applicant: **Sunconfex**
8900 Ieper (BE)

(72) Inventor: **KESTELYN, Ludwig**
8900 Ieper (BE)

(74) Representative: **Ifori**
Victor Braeckmanlaan 107
9040 Gent (BE)

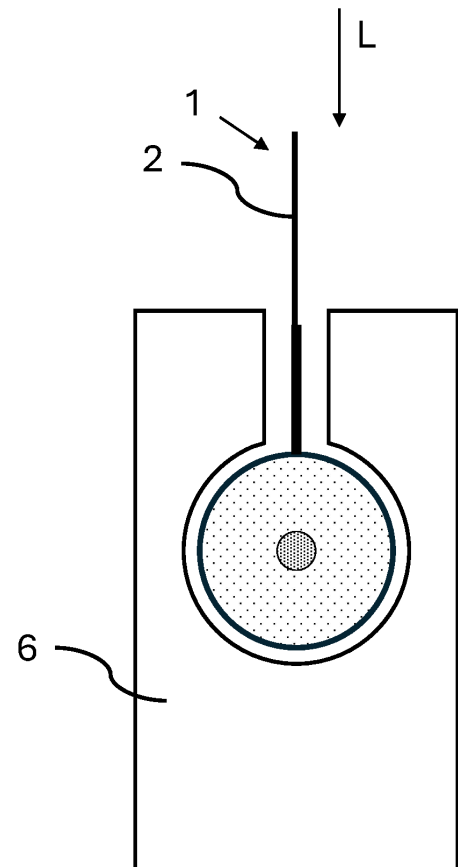
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(54) **SUNSHADE FABRIC WITH INTEGRATED KEDER AND SCREEN SYSTEM WITH SUCH SUNSHADE FABRIC**

(57) The invention relates to a fabric with a reinforced fabric edge, wherein the reinforced fabric edge is formed by a fold of the fabric and an elongate fabric cord incorporated into the fold.

The fabric cord is at least substantially dimensionally stable such that a fabric can be firmly attached thereto; is attached to the fold; and is manufactured from at least two polymers of different hardness; and such that the linear expansion or linear contraction of the fabric is less than 1 mm per meter at temperature fluctuations from +80 °C to -20 °C.

Fig. 2



Description

[0001] The invention relates to a sunshade fabric with a reinforced fabric edge, wherein the reinforced fabric edge is formed by a fold of the sunshade fabric and an elongated fabric cord incorporated into the fold. The fold is formed by a loop for enclosing the cord, which extends between joined parts of the sunshade fabric, and by a folded strip extending from the folded edge of the sunshade fabric.

State of the Art

[0002] In the current state of the art, various methods are used to securely attach screens, such as sun blinds or window coverings, to the bottom profiles of a screen device. One of the most common techniques is the use of a traditional edge finish, whereby a fabric cord is incorporated into the edge of the fabric. This fabric cord is then inserted into a slot in the bottom slat, creating a secure attachment.

[0003] This is often done by folding the fabric over at the edge, securing it with a seam or stitching, and then inserting the fabric tape into this folded edge. Another method for incorporating the fabric cord is the use of a single or double flag keder. With this technique, the fabric cord forms an integral part of the flag keder, which is sewn or welded to the edge of the fabric. Although the flag keder ensures efficient attachment of the fabric, the adhesive residues or weld seams connecting the flag keder to the fabric remain visible. Furthermore, assembly is more complicated, particularly with a double flag keder, which makes installation more time-consuming.

[0004] Although traditional edge finishes offer a functional solution, the use of visible seams or stitching often has adverse aesthetic consequences. These traditional edge finishes can not only reduce the visual appeal of the sunshade fabric, but also lead to uneven tension in the fabric, which affects the appearance of the screen. Furthermore, colour differences in the seams or the use of different materials can contribute to an inconsistent appearance, which is undesirable in applications where aesthetics play an important role. This is particularly the case with architectural or permanent sunshades, but not with temporary sunshade systems found in holiday vehicles or holiday accommodation.

Object of the Invention

[0005] The present invention and its preferred embodiments aim to provide a solution to one or more of the aforementioned disadvantages. One objective of the invention may therefore be to provide a sunshade fabric that prevents aesthetic imperfections (e.g. visible weld seams, colour differences, etc.), but which can at the same time be securely and firmly attached to a

heavy bottom profile weighing approximately 3 kg per running meter. A further objective of the invention may be to provide an improved, simpler sunshade fabric that is both aesthetically pleasing and technically straightforward. Another objective of the invention may be to provide a sunshade fabric suitable for architectural sunshades. A further objective of the invention may therefore be to provide a sunshade fabric that prevents wrinkling caused by changing weather conditions.

Summary of the Invention

[0006] According to the invention, this objective is achieved by a system exhibiting the technical features of one of the independent claims. To this end, the present invention relates to a fabric comprising a fabric with a reinforced fabric edge. Preferably, the fabric is a sunshade fabric. It should be noted that, in the context of the present invention, the term "reinforced fabric edge" refers to a reinforced edge on the fabric, which can be used to slide the fabric into a profile or rail system.

[0007] The reinforced fabric edge is formed by a fold of the fabric and a fabric cord that is at least substantially dimensionally stable, which is incorporated into and secured to the fold. The fold and the fabric cord may be welded or glued together.

[0008] The fold is formed by a loop for enclosing the webbing, which extends along the web between joined sections of the web, and by a folded strip, wherein the folded strip extends from the folded edge of the web to the joined sections of the web and encompasses one of the joined sections. As a result, the folded strip is at least partially attached to another part of the fabric, preferably fully attached to another part of the fabric. In the latter case, the folded strip is one of the joined sections of the fabric. The joined sections of the fabric may be welded or glued together, preferably in the same manner as the attachment of the fabric to the fabric cord. Furthermore, the joined sections of the fabric may be at least partially provided with thermoplastic coatings facing one another, and the thermoplastic coatings may be welded together.

[0009] The inventors have found that by attaching the folded edge of the fabric directly to the fabric cord, the attachment surface between the joined sections can be made smaller without compromising the strength of the reinforced fabric edge. Consequently, the width of this attachment surface can be minimised, and thus the folded strip can also be made narrower, whilst at the same time a heavy bottom profile can still be securely and firmly connected to the reinforced fabric edge. When a traditional bottom profile with a channel-shaped recess is attached to such a fabric, it will be connected in a safe and secure manner and the attachment zone will remain concealed at all times within the channel-shaped chamber of the bottom profile.

[0010] The inventors have further found that the di-

mensional stability of the fabric cord promotes the attachability of the fabric to the bottom profile or an intermediate fastening mechanism, such that the fabric can be securely fastened without deformation, and the attachment points remain stable, even under the influence of external forces such as wind or tension.

[0011] An alternative solution is known from BE 1020902 A3. Here, however, no fabric strap is used, but rather a half-zip which is typically connected to the fabric by means of a weld and an additional connecting profile. This also makes it possible to attach the bottom profile to the fabric without a visible weld seam. A major disadvantage of this solution is that the half-zip and the additional connecting profile require extra components and processing steps, which increase production costs and assembly time.

[0012] In another aspect of the invention, which may be combined with the other aspects and embodiments of the invention described herein, the invention comprises an elongate fabric cord having a linear coefficient of expansion of less than $40 \mu\text{m/m per } ^\circ\text{C}$, preferably less than $30 \mu\text{m/m per } ^\circ\text{C}$, more preferably less than $25 \mu\text{m/m per } ^\circ\text{C}$. Preferably, the linear expansion or linear contraction of the fabric cord is less than 1 mm per meter at temperature differences of $+80^\circ\text{C}$ to -40°C , preferably at temperature differences of $+80^\circ\text{C}$ to -20°C , more preferably at temperature differences of $+60^\circ\text{C}$ to -20°C . In particular, at a temperature rise of 60°C

[0013] The inventors have found that when such a fabric cord is attached to a fabric, this can prevent the fabric from wrinkling. Not only can wrinkling caused by temperature fluctuations, for example in the fabric compartment of a screen device, be prevented, but also wrinkling caused by the ageing of the fabric.

[0014] In a third aspect of the invention, which may be combined with the other aspects and embodiments of the invention described herein, the invention comprises an elongate fabric cord which is made, at least predominantly, from a single polymer, from two or more polymers of different hardness, or from a mixture of two or more polymers of different hardness. In addition to the one or more polymers, the fabric cord may comprise glass fibres, carbon fibres, or aramid fibres in the form of a thread, for example a glass thread or Kevlar carbon thread.

[0015] One or more of the two or more polymers may be a polymeric material of natural origin or a synthetic polymer. The synthetic polymeric material may be a thermoset, a thermoplastic or an elastomer. More preferably, the two or more polymers are selected from the group consisting of polycarbonate, PC, polyethylene, PE, polypropylene, PP, polyvinyl chloride, PVC, polystyrene, PS, polyester, PET, polyurethane, PU, polytetrafluoroethylene, PTFE, polyamide, PA; polyacrylonitrile (PAN), polymethyl methacrylate (PMMA), polyether ether ketone (PEEK), polyvinyl alcohol (PVA), and styrene-butadiene rubber (SBR).

[0016] When the fabric cord is manufactured from different materials, in particular polymers with different degrees of hardness, it can be shaped in such a way that the fabric cord is, on the one hand, easy to attach to a fabric and, on the other hand, possesses the desired linear expansion properties.

[0017] In one embodiment, which may occur in combination with the other aspects and embodiments of the invention described herein, the aforementioned fabric cord comprises two or more polymers, one of which is a polymer made from a thermoplastic material. In an embodiment, which may occur in combination with the other aspects and embodiments of the invention described herein, the aforementioned fabric cord comprises two or more polymers, wherein the two or more polymers comprise a polymer having a Shore A hardness greater than 50 and less than 90, preferably greater than 60 and less than 80, more preferably approximately 70.

[0018] In a fourth aspect of the invention, which may occur in combination with the other aspects and embodiments of the invention described herein, the invention comprises an elongate fabric cord formed primarily by a mantle and a core enclosed by the mantle, wherein the mantle is made from a first polymer of the two or more polymers and wherein the core is made from a second polymer of the two or more polymers. The inventors have found that such a configuration is easier to manufacture, for example by means of co-extrusion.

[0019] In one embodiment, which may occur in combination with the other aspects and embodiments of the invention described herein, the aforementioned cord comprises a core, wherein the outer diameter of the core is approximately 1 mm.

[0020] In one embodiment, which may occur in combination with the other aspects and embodiments of the invention described herein, the aforementioned fabric-covered cable comprises a first polymer made from a thermoplastic material such that the mantle is made from the thermoplastic material. In a preferred embodiment, which may occur in combination with the other aspects and embodiments of the invention described herein, the aforementioned fabric cord comprises a first polymer which is polyvinyl chloride (PVC) and a second polymer which is polyamide (PA). In another embodiment, which may occur in combination with the other aspects and embodiments of the invention described herein, the aforementioned web comprises a first polymer of polyurethane (PU) and a second polymer of polycarbonate (PC).

[0021] In a further aspect of the invention, which may occur in combination with the other aspects and embodiments of the invention described herein, the invention comprises an elongate web strand formed primarily by co-extrusion of a web strand as described above.

[0022] In embodiments, which may occur in combination with the other aspects and embodiments of the invention described herein, the aforementioned web is

such that the outer surface of the fabric cord is approximately equal in shape and dimensions to the inner surface of the loop. In embodiments, which may occur in combination with the other aspects and embodiments of the invention described herein, the aforementioned fabric comprises a fabric in which the distance along the fabric between the joined sections of the sunshade fabric is approximately equal to the outer circumference of the fabric cord. In embodiments, which may occur in combination with the other aspects and embodiments of the invention described herein, the fabric comprises a fold, wherein the folded portion is smaller than the unfolded portion of the fabric. In embodiments, which may occur in combination with the other aspects and embodiments of the invention described herein, the fabric comprises a folded strip, wherein, in cross-section, the distance along the fabric of the folded strip is less than 20 mm, preferably less than 10 mm, more preferably equal to approximately 5 mm. In embodiments, which may occur in combination with the other aspects and embodiments of the invention described herein, the aforementioned web comprises a web in which the diameter of the web core is greater than 4 mm and less than 8 mm, preferably greater than 5 mm and less than 7 mm, and more preferably equal to approximately 6 mm.

[0023] In a fifth aspect of the invention, which may occur in combination with the other aspects and embodiments of the invention described herein, the invention comprises an assembly comprising a fabric as described above and a bottom profile for a screen device, for example a bottom profile or bottom tube, wherein the bottom profile is provided with a passage configured to receive the reinforced fabric edge of the fabric, wherein the shape and dimensions of the passage are adapted such that they substantially correspond to the shape and dimensions of the reinforced fabric edge.

[0024] In a sixth aspect of the invention, which may occur in combination with the other aspects and embodiments of the invention described herein, the invention comprises a method for manufacturing a aforementioned assembly, comprising the steps of:

- providing a fabric as described above;
- aligning the reinforced fabric edge of the fabric and the passage of the lower profile on a common axis; and
- moving the reinforced fabric edge and the passage towards each other along the common axis such that the fabric edge is received within the passage of the bottom profile.

[0025] In a seventh aspect of the invention, which may occur in combination with the other aspects and embodiments of the invention described herein, the invention comprises a screen device comprising a protective housing, a screen roller and a screen fabric, as described above, which can be wound onto and un-

wound from this screen roller and is attached to the screen roller at one of its sides, preferably further comprising at least one lateral guide for guiding the screen fabric during winding and unwinding, wherein a reinforced edge of the fabric is received in the passage of a bottom profile.

[0026] In an eighth aspect of the invention, which may occur in combination with the other aspects and embodiments of the invention described herein, the invention comprises a method for renovating or repairing an installed screen device into a screen device as described above, comprising:

- before or after removing a first fabric from the installed screen device, removing a bottom profile of the installed screen device from the first fabric;
- providing a second fabric of the aforementioned type;
- before or after attaching the second fabric to a fabric roller of the assembled screen device, aligning the reinforced fabric edge of the second fabric and the passage of the bottom profile on a common axis; and

moving the reinforced fabric edge and the passage towards each other along the common axis in such a way that the fabric edge is received within the passage of the bottom profile.

[0027] In a ninth aspect of the invention, which may be combined with the other aspects and embodiments of the invention described herein, the invention comprises a fabric cord as described above.

[0028] In a tenth aspect of the invention, which may occur in combination with the other aspects and embodiments of the invention described herein, the invention comprises a method for manufacturing a aforementioned fabric cord by means of co-extrusion.

[0029] In a further aspect of the invention, which may occur in combination with the other aspects and embodiments of the invention described herein, the invention comprises an apparatus for manufacturing a fabric cord comprising a folding and welding machine for folding and welding the fold with a minimum width, in particular a minimum width of the folded strip, and an integrated fabric cord with a diameter of, for example, 4, 5 or 6 mm. The machine comprises an automatic welding unit, for example a pulse welding unit, an ultrasonic welding unit, a high-frequency welding unit, a hot-air welding unit or other suitable welding technology, which can fold and weld a substrate, preferably in a single processing step. The machine is configured to fold a sunshade fabric around an elongated fabric rod. The machine is further arranged to simultaneously weld the sunshade fabric to the fabric core, for example over a width corresponding to the diameter of the fabric core, and to the sunshade fabric, for example over a width corresponding to the diameter of the fabric core, in order to enclose the fabric core. In particular, the width

d, of the joined sections of the sunshade fabric is smaller than the diameter of the fabric tube.

[0030] The machine is provided with means for receiving a sunshade fabric, providing a fabric cord near the fabric edge, folding the sunshade fabric around the fabric cord, and welding means for simultaneously welding the sunshade fabric to itself to form a loop and to the fabric cord.

[0031] The machine comprises a frame with a support surface for receiving a sunshade fabric and is provided with a welding zone containing welding elements that are movable relative to one another. Preferably, a fixed lower welding element and a movable upper welding element. In the welding zone, the support surface is provided with a heating zone. The temperature of the heating zone can be controlled independently of the welding temperature.

Brief Description of the Figures

[0032] The invention will be further clarified below by means of an embodiment illustrated in the drawing.

Figure 1A shows a longitudinal section of a sunshade fabric according to the invention;

Figure 1B shows a detail of the sunshade fabric shown in Figure 1;

Figure 1C shows a top view of the sunshade fabric shown in Figure 1;

Figure 2 shows the sunshade fabric shown in Figure 1 and a bottom profile attached thereto; and

Figure 3 shows a screen device comprising the sunshade fabric shown in Figure 1.

Detailed Description of the Figures

[0033] The present disclosure will be described with respect to particular embodiments and with reference to certain drawings but the disclosure is not limited thereto but only by the claims. The drawings described are only schematic and are non-limiting. In the drawings, the size of some of the elements may be exaggerated and not drawn on scale for illustrative purposes. The dimensions and the relative dimensions do not necessarily correspond to actual reductions to practice of the disclosure. Furthermore, the terms first, second, third and the like in the description and in the claims, are used for distinguishing between similar elements and not necessarily for describing a sequential or chronological order. The terms are interchangeable under appropriate circumstances and the embodiments of the disclosure can operate in other sequences than described or illustrated herein. Moreover, the terms top, bottom, back, front and the like in the description and the claims are used for descriptive purposes and not necessarily for describing relative positions. The terms so used are interchangeable under appropriate circumstances and the embodiments of the invention

described herein can operate in other orientations than described or illustrated herein. Furthermore, the various embodiments, although referred to as "preferred" are to be construed as exemplary manners in which the disclosure may be implemented rather than as limiting the scope of the disclosure. The term "comprising", used in the claims, should not be interpreted as being restricted to the elements or steps listed thereafter; it does not exclude other elements or steps. It needs to be interpreted as specifying the presence of the stated features, integers, steps or components as referred to, but does not preclude the presence or addition of one or more other features, integers, steps or components, or groups thereof. Thus, the scope of the expression "a device comprising A and B" should not be limited to devices consisting only of components A and B, rather with respect to the present disclosure, the only enumerated components of the device are A and B, and further the claim should be interpreted as including equivalents of those components.

[0034] Figures 1A, 1B and 1C show a sunshade screen 1 comprising a sunshade fabric 2 with a reinforced fabric edge 4, wherein the reinforced fabric edge 4 is formed by a fold 10 of the sunshade fabric 2 and an elongated fabric cord 20 incorporated into the fold 10. The fold 10 is formed by a loop 12 extending along the sunshade fabric between interconnected sections 11, 3 of the sunshade fabric and by a folded strip 11 extending along the sunshade fabric from the folded edge 5 of the sunshade fabric 2.

[0035] The fabric cord 20 consists of a mantle 21 and a core 22 enclosed by the mantle. In the shown embodiment shown, the cross-sectional area of the mantle 21 is greater than that of the core 22. The mantle is made from a first polymer, preferably a thermoplastic material, such that the fabric cord can be welded to a thermoplastic-coated sunshade fabric. The core is made from a second polymer with a higher hardness such that the linear expansion or linear contraction of the sunshade fabric 2 is less than 1 mm at temperature fluctuations ranging from +80 °C to -20 °C. In a first preferred embodiment, the first polymer is polyvinyl chloride, PVC, and the second polymer is polyamide, PA. In a second preferred embodiment, the first polymer is polyurethane, PU, and the second polymer is polycarbonate, PC. The core may also be made of glass fibre or Kevlar carbon fibre.

[0036] Figure 1A shows in detail the reinforced fabric edge 4 of a sunshade screen 1. The mantle has an outer diameter d_M , preferably approximately 4, 5 or 6 mm, and the core has an outer diameter d_C , preferably approximately 1 mm. Furthermore, in the longitudinal direction L of the sunshade fabric 2, the width d_1 of the folded strip 11 is smaller than the length d_2 of the non-folded part of the sunshade fabric 2.

[0037] In the embodiment shown, the fold 10 fits snugly, the folded strip 11 is fully secured to the non-folded part of the sunshade fabric 2 and the loop 12

encloses the fabric cord 20. However, it is also conceivable that the fold is partially free; for example, the folded edge 5 may be free. Alternatively, there may be some play between the loop 12 and the fabric cord 20, the circumference of which is not necessarily fully secured to the loop 12; preferably, the play is located near the joined sections 3, 11.

[0038] Figure 2 shows the sunshade fabric and a bottom profile 6 attached thereto, also referred to as a bottom bar. Figure 3 shows a screen device 7 comprising the sunshade fabric shown in figure 1, which can be rolled up and down, housed in a frame formed by a protective case 8 containing a fabric roller (not shown), two lateral guides 9a, 9b and the bottom profile 6.

Example 1

[0039] A first example concerns a folding and impulse welding machine for the specific welding of a minimal overlap with an integrated round web. The machine preferably has a net welding length of approximately 600 cm.

[0040] The machine consists of a stable (steel) frame with a wear-resistant table top finish and fitted with means for mounting a fixed lower welding beam and a pneumatically operated upper welding beam. At the front is an anodised aluminium channel for positioning the fabric. The machine is equipped with a pneumatically controlled folding beam with nine cylinders for a precise folding movement, a pneumatic clamping system to hold the fabric in place during folding, and a pneumatically operated upper welding beam on a welded steel subframe, also featuring nine cylinders and balancing springs. In addition, there is a pneumatically controlled folding plate that folds the hem beneath the welding bars. The machine is also equipped with a pulse transformer suitable for weld widths of up to approximately 12 mm. For safety, the machine features various protective covers, a safety sensor at the front and a light curtain at the rear for finger protection. The control box includes timers for welding and cooling times, foot pedal control, a PLC controller and a main switch.

[0041] A lower hem profile has been fitted so that the hem can be pleated and both the hem and the round fabric cord remain in place. After pleating the hem, the fabric cord interruption function is used to position the fabric cord (manual positioning by the operator). The folding bar or welding bar is used to press the fabric cord into the hem profile. The functionality includes automatic width and depth adjustment to accommodate three web diameters and different web thicknesses, an automatic horizontal folding blade that folds the web forwards after the web has been inserted, and means for pre-closing the upper welding bar to just above the web so that the horizontal folding blade can be retracted before the welding bar is fully closed.

[0042] The machine is equipped with an integrated

heating zone in the table top, directly beneath the welding zone. This bottom heat provides additional thermal support during the welding process. The zone is fitted with horizontal and vertical glass supports, Teflon cover tape and a 4 mm welding strip. In addition, the system features a secondary temperature control and a separate transformer that delivers a lower and precisely controllable heat of approximately 90 °C. The under-table heat can be freely adjusted and operates independently of the main welding temperature, ensuring maximum control and optimum weld quality.

[0043] The machine is also equipped with an integrated round spline cutter, mounted above the work area on the right-hand side. This module allows the spline to be cut to the desired length directly on the machine, making the workflow more efficient and reducing manual intermediate steps.

[0044] The machine is designed for order input via barcode, whereby an MES system automatically sends a barcode string to the installation containing the recipe numbers for both fabric and fabric cord, as well as the exact length of the round fabric cord. The welding parameters for each fabric group are stored in the machine's internal fabric database, which can hold up to 99 settings. In addition, the mechanical adjustments for each combination of fabric cord and fabric group are recorded in the web/webbing database, which also accommodates 99 separate positions. This enables the operator to work quickly and accurately using pre-configured recipes and standardised parameters.

Example 2

[0045] A second example concerns a system consisting of an ultrasonic welding platform with a total installation length of approximately 11 meters and an effective weld seam length of approximately 8 meters. The system is designed for the precise joining, folding and finishing of technical textile materials, including fabrics for sun blinds, screens and other fabrics that can be processed using thermoplastic tapes or ultrasonic welding energy.

[0046] An overlap guide has been fitted at the top of the working zone, which positions the material with a lateral edge guide of 20 mm and a tape width of 18 mm. The system also comprises two folding modules measuring 30 × 1.5 mm, each fitted with a mechanical brake and roller guides for the precise application of 18 mm thermoplastic adhesive tape. One module operates from right to left and the other in the opposite direction, allowing the material to be fed flexibly in accordance with both process flows.

[0047] The system can be equipped with an electronic roll-up support on the operator side, suitable for material widths of up to approximately 7 meters. In addition, an ultrasonic edge trimming/finishing module can be added for precision edge processing. A multi-functional feed guide enables a variety of edge proces-

sing operations, such as overlapping, integration of zip profiles, application of flexible profiles and other tape-based edge processes.

[0048] If thermal preheating or additional heat is required, an integrated hot-air module can be added. A low-friction assembly table is also available for large workpieces.

List of reference numbers

[0049]

1. Sunshade screen
2. Sunshade fabric
3. Section joined to the folded strip
4. Reinforced fabric edge
5. Folded edge
6. Bottom profile
7. Screen device
8. Protective case
- 9a, 9b. Lateral Guide
10. Cover
11. Folded strip
12. Loop
13. Welded strip of the loop
20. Elongated fabric cord
21. Mantle
22. Core
- A. Central axis of the elongated fabric cord
- L. Longitudinal direction of the sunshade fabric
- d_1 . Width of the folded strip
- d_M . Average diameter of the mantle
- d_C . Average diameter of the core

Claims

1. A fabric with a reinforced fabric edge, wherein the reinforced fabric edge is formed by a fold of the fabric and an elongated fabric cord incorporated into the fold, wherein the fold is formed by a loop extending along the fabric between joined sections of the fabric and by a folded strip extending along the fabric from the folded edge of the fabric to the joined sections of the fabric,
characterised in, that the fabric cord
 - is at least substantially dimensionally stable such that a fabric can be securely attached thereto; and
 - is attached to the fold.
2. The fabric according to claim 1, wherein the fabric cord is at least partially made of thermoplastic material.

3. The fabric according to claim 1 or claim 2, wherein the joined sections of the fabric are welded or glued together.
4. The fabric according to any one of the preceding claims, wherein the fabric cord is made of at least two materials of different hardness such that the linear expansion or linear contraction of the fabric is less than 1 mm per meter at temperature fluctuations ranging from +80 °C to -20 °C.
5. The fabric according to any one of the preceding claims, wherein the outer surface of the fabric cord is approximately equal in shape and dimensions to the inner surface of the loop.
6. The fabric according to any one of the preceding claims, wherein, in cross-section, the distance along the fabric of the folded strip is less than 20 mm, preferably less than 10 mm, more preferably approximately 5 mm.
7. The fabric according to any one of the preceding claims, wherein the fabric cord is attached to the fold over a distance in a longitudinal direction of the fabric of at least 3 mm, preferably at least 4 mm, more preferably equal to approximately 5 mm.
8. The fabric according to any one of the preceding claims, wherein the fabric cord is principally formed by a mantle and a core enclosed by the mantle, wherein the mantle is made of a first polymer and wherein the core is made of a second polymer, a glass fibre or a Kevlar-carbon fibre.
9. The fabric according to claim 8, wherein the first polymer is a polymer made from a thermoplastic material such that the mantle is made from the thermoplastic material.
10. The fabric according to any one of the preceding claims, wherein the width of the reinforced fabric edge is less than 25 mm, preferably less than 20 mm, more preferably equal to approximately 17 mm.
11. The fabric according to one of the preceding claims, wherein the diameter of the membrane tendon is greater than 4 mm and less than 8 mm, preferably greater than 5 mm and less than 7 mm, more preferably equal to approximately 6 mm.
12. An assembly comprising a fabric according to one of the preceding claims and a bottom profile for a screen device, wherein the bottom profile is provided with a passage configured to receive the reinforced fabric edge of the fabric, wherein the shape and dimensions of the passage are adapted

such that they substantially correspond to the shape and dimensions of the reinforced fabric edge.

13. A method for manufacturing an assembly according to claim 12, comprising the steps of: 5

providing a fabric in accordance with any one of the preceding claims 1 to 11;
aligning the reinforced fabric edge of the fabric and the opening of the lower profile on a common axis; and 10
moving the reinforced fabric edge and the passage along the common axis towards one another such that the fabric edge is received within the passage of the lower profile. 15

14. A screen device comprising a protective housing, a screen roller and a fabric rollable onto and off said screen roller in accordance with any one of the preceding claims 1-11, which is attached to the screen roller at one of its sides, preferably further comprising at least one lateral guide for the fabric rollable onto and off the screen roller, wherein a reinforced fabric edge of the fabric is received in the passage of a bottom profile. 20 25

15. A method for renovating or repairing an installed screen device to form a screen device according to claim 14, comprising: 30

- removing a bottom profile from the installed screen device of a first fabric of the installed screen device;
- providing a second fabric in accordance with any one of the preceding claims 1-11; 35
- aligning the reinforced fabric edge of the second fabric and the passage of the bottom profile on a common axis; and
- moving the reinforced fabric edge and the passage along the common axis towards each other such that the fabric edge is received in the passage of the bottom profile. 40

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Fig. 1A

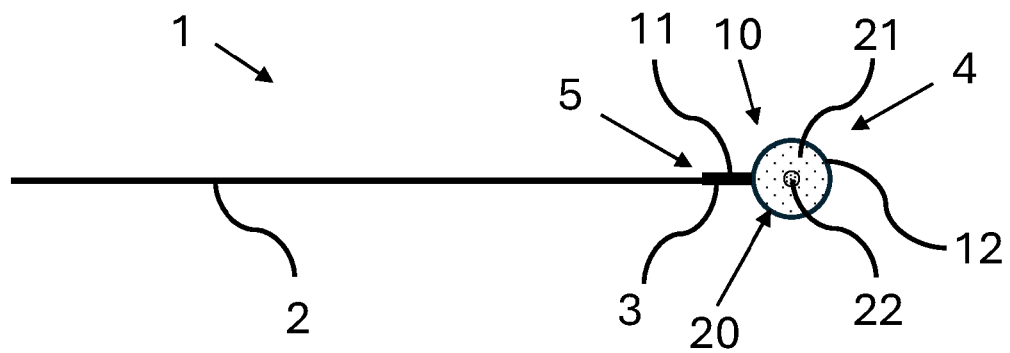


Fig. 1B

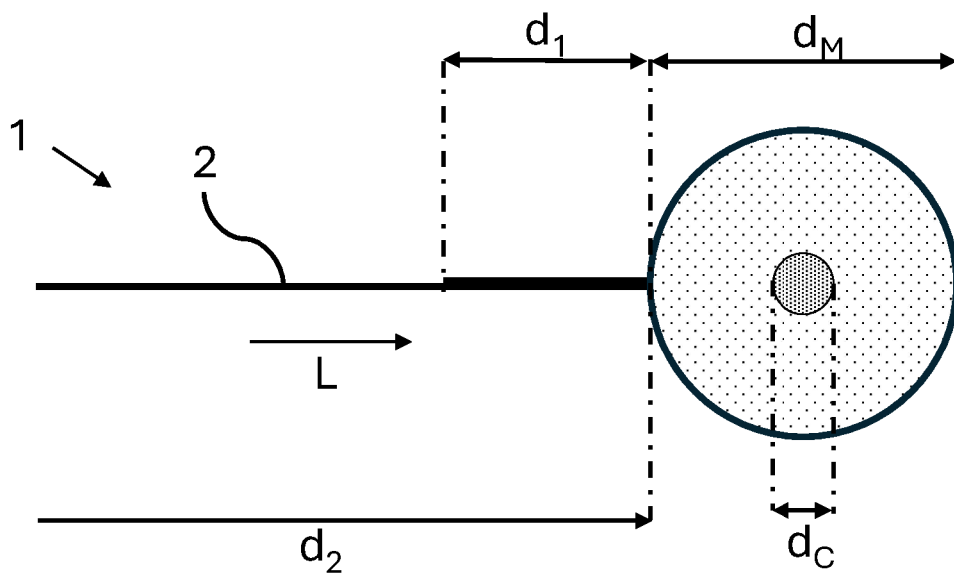


Fig. 1C

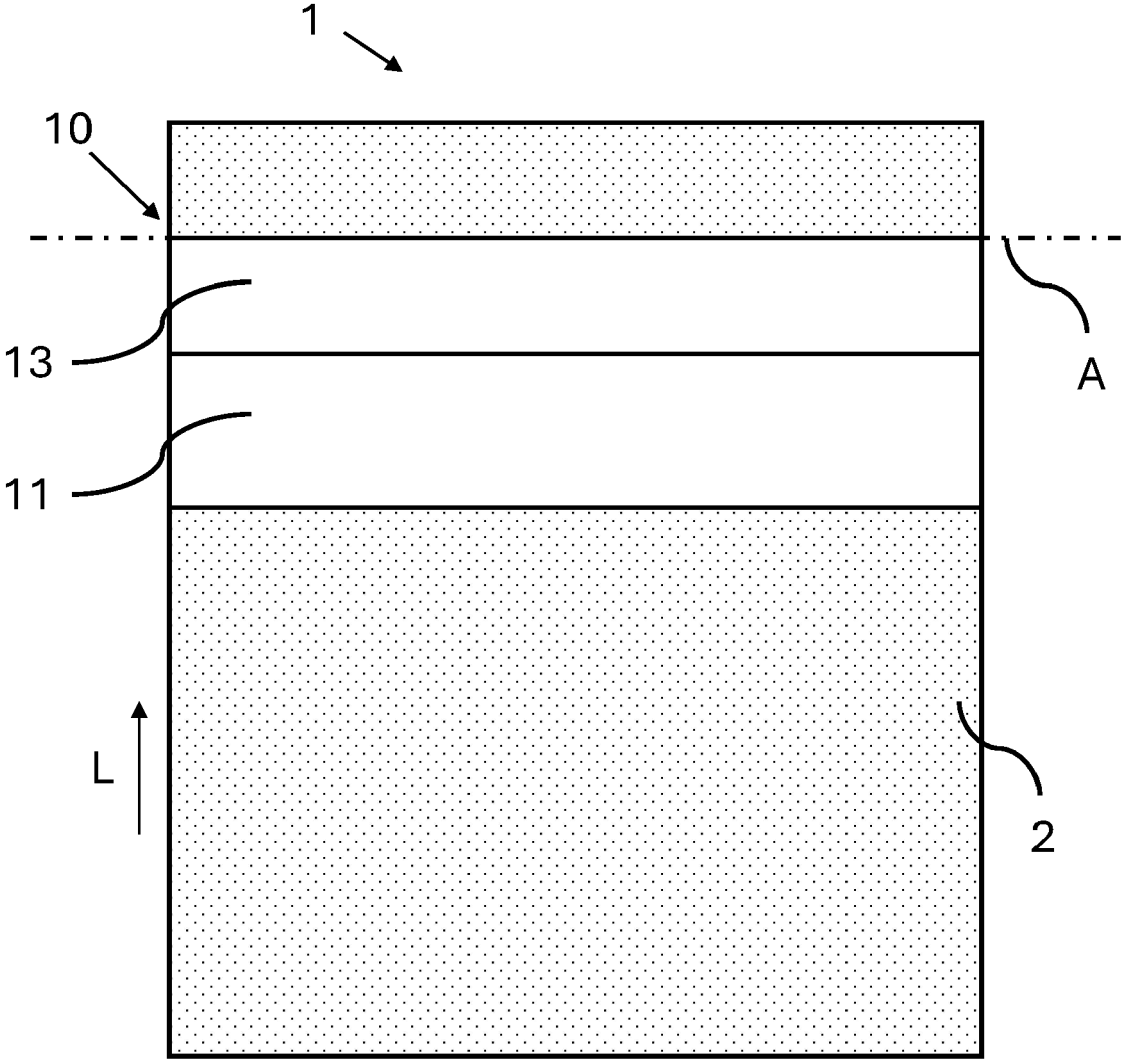


Fig. 2

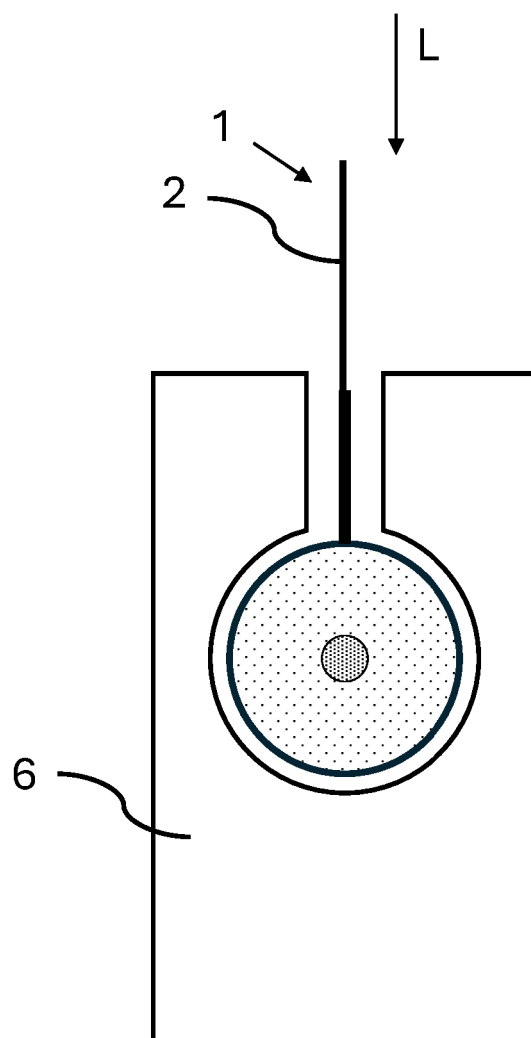
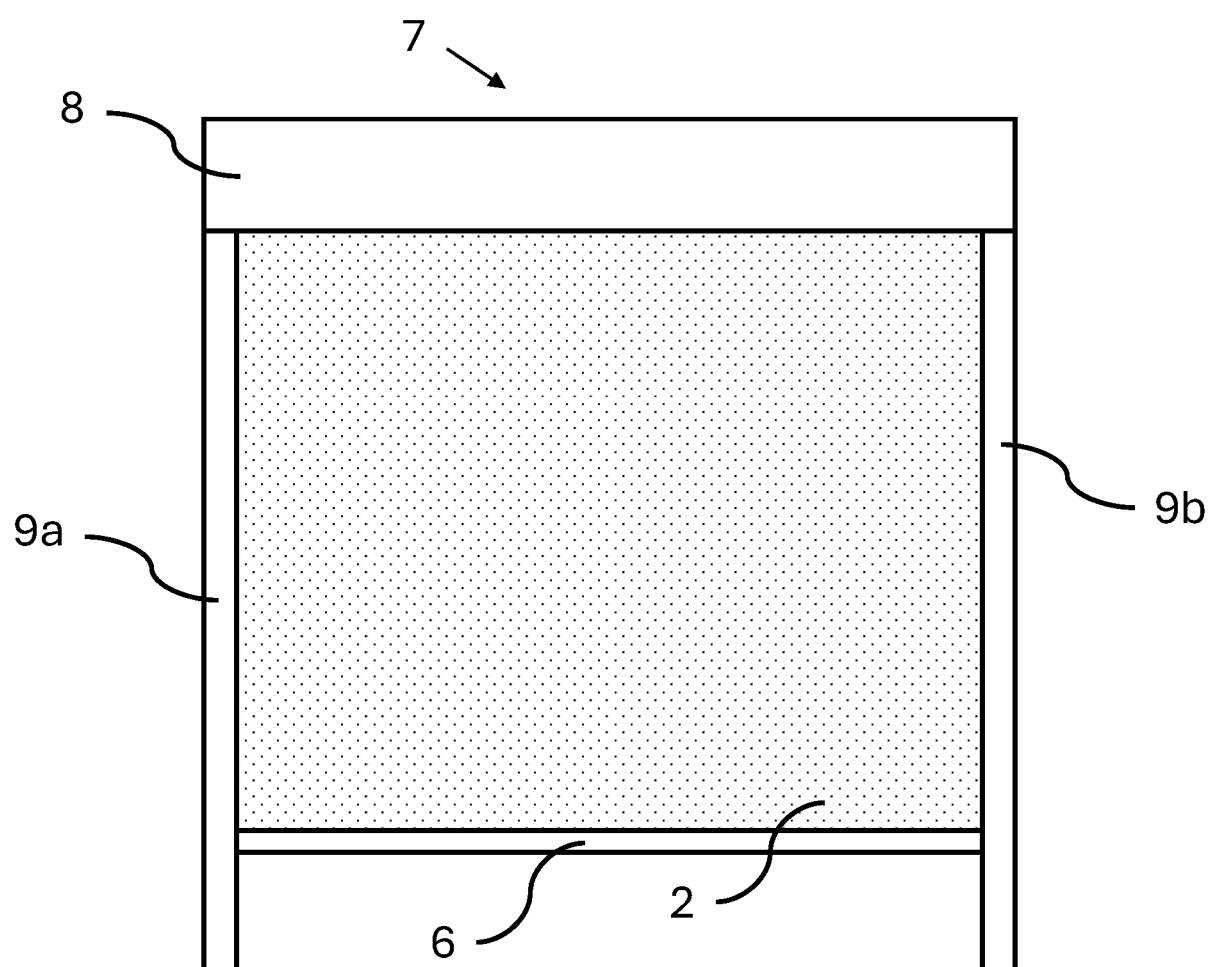


Fig. 3





EUROPEAN SEARCH REPORT

Application Number

EP 26 16 9746

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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