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(54) **SYSTEM AND METHOD FOR TENSIONING A CANVAS, AND SKYLIGHT COMPRISING SUCH A SYSTEM**

(57) System for tensioning a canvas comprising a tensioning means which comprises a screw member, with a tensioning member around it which can be screwed between its proximal and distal parts under the influence of the rotation of the screw member, wherein the tensioning means is rotatably mounted to an affixing member in a fixed position in such a way that a canvas can be affixed to it, and by rotation of the tensioning means, the tensioning means remains in the fixed position but the tensioning member moves along the screw member in a direction away from the canvas and the canvas can thereby be tensioned, as well as a method and a skylight with such a system.

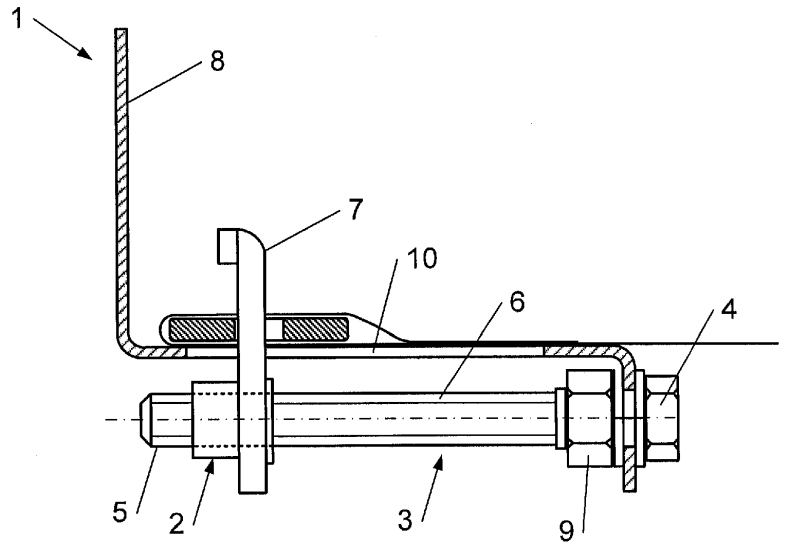


Fig. 1

EP 2 876 228 A1

Description

[0001] The present invention relates to a system and method for tensioning a canvas, and to a skylight comprising such a system.

[0002] Systems of this kind have been know in the art for some time. For example, BE 101 8897 describes a system wherein a canvas comprising an incombustible, light-transmitting fabric is stretched over a frame, forming a partitioning element that spans an aperture for light in a structure. The partition is constructed separately from the structure in the form of a partitioning element, so that, for instance, the partitioning element does not need to be constructed in the vicinity of the structure. Different partitioning elements may be combined for the partitioning element, allowing a modular construction. It is, however, not always simple to transport the frame with its stretched canvas to the structure, and to install it in said structure, considering all the obstacles present such as sprinkler ducts, cable trays, reinforcing sections in the light aperture etc. Furthermore, the frame with canvas needs to be made to measure for each different structure.

[0003] It is therefore an aim of the present invention to provide a system for tensioning a canvas that allows the canvas to be installed in a simpler and more flexible way.

[0004] This aim is achieved by a system showing the technical characteristics of the first claim.

[0005] The system for tensioning a canvas thereto comprises at least one tensioning means, comprising a rotatable screw member, e.g. a bolt, provided with a head and a shaft having a proximal part connected to the head as well as a distal part, wherein a thread extends substantially around the shaft from the proximal part to the distal part, wherein a screwable tensioning member is provided about at least part of the thread, said screwable tensioning member extending along a direction which crosses the lontigutinal axis of the shaft, for instance extending substantially perpendicular to the longitudinal axis of the shaft from a first end to a second end, and said screw member being rotatably affixed to a substantially longitudinally extending affixing member, which is affixable to a building element, such that upon rotation the tensioning member moves with respect to the affixing member so as to tension the canvas.

[0006] Such a system allows a canvas to be tensioned in a simple way by means of simple tools, such as for example a wrench. By rotating the screw member, for instance by turning its head with a wrench, the tensioning member is moved with respect to the affixing member under the influence of this rotation, in a direction away from the canvas, thereby tensioning the canvas which is affixed to the tensioning member. The system can simply be installed in place and can therefore be transported to a building as separate components, which often saves a considerable amount of space. Moreover, the system is compatible with most commonly used building elements, so that all that needs to be provided is a canvas adapted to the space to be spanned. Furthermore, the canvas can be re-tensioned again and again by the contractor when, for instance due to fluctuations in temperature, its tension has been reduced, or the canvas can be replaced without disassembling the system from the building element.

[0007] In preferred embodiments of the system according to the present invention, the tensioning member can be screwed along the shaft between the proximal and distal parts with respect to the head under the influence of the rotation of the screw member around the longitudinal axis of the shaft.

[0008] In preferred embodiments of the system according to the present invention, the tensioning means is held in a predetermined position by means of a nut.

[0009] The use of a nut for holding the tensioning means in the predetermined position has the advantage that such a nut may, for instance, be screwed around the screw member in a simple way until, for instance, the affixing member is held between the nut and the head of the screw member and thus maintains the tensioning means in the predetermined position. Such a nut may, furthermore, be readily available from different suppliers of mechanical parts.

[0010] In preferred embodiments of the system according to the present invention, the tensioning member is fixedly but slideably affixed to the screw member, so that upon rotation the screw member moves together with the tensioning member with respect to the affixing member to tension the canvas.

[0011] In preferred embodiments of the system according to the present invention, the tensioning means is arranged in a cavity provided in the affixing member. Being screwed into a cavity provided in the affixing member, the tensioning means can easily be retained in the fixed, predetermined position, which is defined longitudinally by the position of the cavity in the affixing member. The position of the tensioning means in the lateral direction of the affixing member may be fixed, for example by means of a clamp, a nut, for example a locknut or any means deemed adequate by the person skilled in the art.

[0012] In preferred embodiments of the system according to the present invention, the affixing member comprises a slot extending in a direction which crosses the longitudinal direction of the affixing member, wherein the tensioning means is mounted to the affixing means in such a way that at least part of the tensioning member protrudes from the slot. Preferably, the slot extends substantially perpendicular to the longitudinal direction of the affixing member.

[0013] The presence of such a slot ensures that only the tensioning member protrudes from the system as a moving part, greatly reducing the risk of the canvas becoming entangled, for instance between the screw member and the affixing member, causing it to be tensioned incorrectly and possibly even to tear.

[0014] In preferred embodiments of the system according to the present invention, the length of the slot substantially corresponds to the distance between the

proximal and distal parts of the shaft of the screw member.

[0015] This ensures that the affixing member is wel adapted to the tensioning means and substantially reduces risk of the canvas becoming trapped in the slot and thereby even to tear.

[0016] In preferred embodiments of the system according to the present invention, the tensioning member has a curvature on at least one of its ends, to which a canvas can be attached.

[0017] The curvature of the tensioning member offers the advantage that the canvas can be attached to the tensioning member in a simple way and that the canvas better maintains its connection to the tensioning member. The canvas can for instance be provided with loops or annular apertures such as eyelets, which can hook and remain hooked behind the curvature of the tensioning member.

[0018] In preferred embodiments of the system according to the present invention, the screw member, the tensioning member and the affixing member are made out of metal.

[0019] In preferred embodiments of the system according to the present invention, the affixing member is designed in an L-shape.

[0020] During assembly, an L-shaped affixing member offers the advantage that such an member can be simply and quickly mounted into a skylight. The L-shape also offers an additional side by which the member can be affixed to a building element, for example in a corner. The presence of the additional side allows a tensioning member to be provided at the additional side to tension the canvas along the length direction of the affixing member. The affixing member then resembles an inverted Z-shape.

[0021] The L-shaped affixing member preferably had an additional flange at the horizontal leg of the L-shaped affixing member, to which the rotatable screw member can be affixed and is affixed in use. The additional flange preferably extends along a direction substantially parallel to the vertical leg of the L-shaped affixing member.

[0022] In preferred embodiments of the system according to the present invention, the rotatable screw member is arranged to be mounted to the affixing member in such a way that the screw member is mounted along the canvas, preferably substantially fully along the canvas.

[0023] In preferred embodiments of the system according to the present invention, the canvas also stretches up to along the affixing member, thereby allowing an improved smoke sealing to be realized. In further embodiments of the system according to the present invention, the screw member is then located along part of the affixing member.

[0024] In preferred embodiments of the system according to the present invention, it was also found that when the head is positioned more to the side of the canvas than to the side of the affixing member, the head remains more accessible, since the canvas always spans an aperture, for instance a skylight, and consequently there remains room to the side of the canvas for reaching the head, even when the aperture, for instance the skylight, is located adjacent to a wall.

[0025] In preferred embodiments of the system according to the present invention, the invention further comprises a canvas which is releasably affixed to the tensioning member. The canvas is preferably stretched in a substantially horizontal manner.

[0026] The invention also relates to a skylight provided with a system for tensioning a canvas according to the present invention. The invention provides a skylight for admitting light into a space of a structure located under the skylight, with a light-transmitting cover for screening a light aperture arranged in the structure, and a fire-resistant, light-transmitting canvas for screening off fumes from a fire in the space from the cover, wherein the canvas comprises a heat-resistant and preferably incombustible, light-transmitting fabric which at least partly spans the light aperture, preferably in a substantially horizontal manner, and with a system for tensioning a canvas according to the invention, the affixing member being mounted at least at one side of the skylight in longitudinal direction, and a longitudinally extending connecting member for affixing the canvas being mounted at the opposite side substantially parallel to the affixing member, and the tensioning member being mounted to an affixing member for releasably affixing a canvas, in a direction crossing, for instance substantially perpendicular to, the longitudinal direction of the affixing member, so that the canvas may be releasably affixed to the tensioning member.

[0027] The skylight is mounted over a light aperture arranged in the structure. A light-transmitting cover is provided for screening the light aperture, as well as a fire-resistant, light-transmitting canvas for shielding the the cover from a fire in the space. The canvas comprises an incombustible, light-transmitting fabric which is arranged in such a way that the fabric at least partly spans the light aperture.

[0028] In preferred embodiments of the skylight according to the present invention, the fabric comprises fiberglass or another heat-resistant material. The inventor has found that such a fabric exhibits good light-transmitting properties, combined with sufficient heat-resistance. Furthermore, the fabric preferably comprises a coating for reducing and preferably even preventing the permeability of smoke through the fabric; further preferably, the coating is applied to both sides of the fabric. The coating is preferably white, for optimizing the transmissiblility of light. Preferably, the coating is a silicone coating.

[0029] The invention also relates to a structure provided with a skylight according to the present invention.

[0030] In preferred embodiments of the structure according to the present invention, the structure is provided with a sprinkler installation wherein sprinklers, particularly ESFR sprinklers, are mounted under the skylight.

The inventor has found that the skylight according to the present invention allows preventing the cover from heating up and thereby softening, if, for instance, polycarbonate or polyester plates are used to span the light aperture, and parts of the polycarbonate or polyester from falling onto the sprinklers under the cover causing them to malfunction or function in a reduced way. The cover may, for instance, comprise polycarbonate plates, whether solid or in the form of cavity slabs, which are arranged over the light aperture. However, other materials are also possible for the plates, such as acrylate, PMMA, polyester, composite materials, etc., of other materials which may soften or even soften under the influence of heat caused by a fire in the underlying space. The canvas, in other words, not only has the effect that the cover is shielded from smoke originating from a fire, but also that sprinklers under the cover have a greater operational reliability. ESFR sprinklers, wherein ESFR stands for Early Suppression Fast Response, react more quickly when compared to conventional sprinklers to gain control over the fire more quickly. Unlike conventional sprinklers, ESFRs do not need to be installed at different heights. ESFR sprinklers thus work much faster and have a much greater water yield.

[0031] The invention also relates to a method for tensioning a canvas by means of the system for tensioning a canvas according to the invention, wherein the tensioning means is mounted to the affixing member for releasably affixing a canvas, in a direction crossing, for instance substantially perpendicular to, the longitudinal direction of the affixing member, so that the canvas may be releasably affixed to the tensioning member, wherein the canvas is affixed to a connecting member at the side opposite to the affixing member, and is tensioned by the movement of the tensioning member in a direction away from the canvas along the longitudinal axis of the shaft of the screw member by rotating the screw member around the longitudinal axis of the shaft.

[0032] The invention will be further elucidated by means of the following description and the appended figures of preferred embodiments of the system, the method for mounting such a system and a skylight comprising a system according to this invention.

Figure 1 shows an example of a cross-section a system for tensioning a canvas according to the present invention.

Figure 2 shows an example of an embodiment of a system according to the invention, provided with a seal (lock).

Figure 3 shows a top view of an embodiment of a system according to the present invention.

Figure 4 shows a bottom view of an embodiment of a system according to the present invention.

[0033] In the drawings, the same reference number is assigned to a similar or analogous element.

[0034] In the following description, numerous specific details are described to offer a thorough understanding of the invention and how it can be applied in specific embodiments. It is clear, however, that the present invention may be applied without these specific details. In other cases, well-known methods, procedures and techniques are not described in detail, so as not to obscure the invention. Although the invention will be described with respect to particular embodiments and with reference to certain drawings, the invention is not limited thereto. The drawings contained and described herein are only schematic and do not limit the scope of the invention.

[0035] Figure 1 shows a cross-section of a system 1 according the invention, comprising a tensioning means 2 for tensioning a canvas. The tensioning means 2 comprises a screw member 3 and a tensioning member 7. The screw member 3 is rotatable and is provided with a head 4 and a shaft 5 having a proximal part connected to the head 4 as well as a distal part, wherein a thread 6 extends substantially around the shaft 5 from the proximal part to the distal part. The screw member 3 is for example a bolt, which is then preferably provided with a head which is for instance hexagonal or quadrangular, and by means of which the bolt can be turned from the outside using simple tools, such as for instance a wrench. It is, however, also possible for the screw member 3 to be a screw, wherein the possibility of turning is obtained by a recess in the head. The recess may then for instance be a straight slot, a cross-shaped slot, an inner square or hexagon, a six-pointed star or a twelve-pointed star. The shaft comprises a cilindrical body about which a thread 6 is arranged, wherein the thread may be metric or Withworth or any other type of thread. The screw member is typically made of steel, coated or galvanized or not, optionally of stainless steel. Around the screw member 3 in Figure 1, a nut 9, for instance a locknut, is screwed around the thread 6 of the shaft 5. The outline of the nut 9 in Figures 1 and 4 is hexagonal, but it may also for instance be quadrangular, and the cavity of the nut is provided with a thread. In the system according to the invention, the combination of the nut with a screw member, preferably a bolt, onto which a thread 6 is arranged, is a means for holding the screw member 3 in a predetermined position with respect to the affixing member 8. The nut 9 may for example be screwed around the shaft 5 by means of a wrench.

[0036] Around the thread 6, a screwable tensioning member 7 is provided, which extends in a direction crossing, for instance substantially perpendicular to, the longitudinal axis of the shaft 5 from a first end to a second end. The tensioning member shown in Figures 1 and 4 has a long end and a short end, as measured from the ends perpendicular to the longitudinal axis of the shaft 5. Also visible is that at least one of the ends, in the figures the long end, shows a curvature with which the canvas can be attached, particularly when the canvas is provided with loops or annular apertures. As the tensioning member is exposed to relatively large traction forces, the ten-

sioning member is preferably made from a heat-resistant material with high mechanical strength, such as for instance steel or any material deemed adequate by the person skilled in the art. In the embodiment shown in Figures 1 and 3-4, the tensioning member 7 has a cavity which is threaded. The tensioning member 7 from the embodiment of the figures can be screwed along the shaft 5 between the proximal and distal parts in relation to the head 4, under the influence of rotation of the screw member 3 about the longitudinal axis of the shaft 5. In an alternative embodiment (not shown in the figures), the tensioning member 7 is fixedly but slideably affixed to the screw member 3, so that upon rotation the screw member 3 moves together with the tensioning member 7 with respect to the affixing member 8 to tension the canvas.

[0037] Figures 1 and 3-4 show that the screw member 3 is rotatably affixed to a substantially longitudinally extending affixing member 8. In Figures 3 and 4, the affixing member 8 is affixed to a building element. The affixing member may be affixed to a building element in various ways, such as for instance by means of one or more screws or key bolts, but also by means of a heat-resistant glue or any other way deemed adequate by the person skilled in the art. As visible in Figures 1 and 3-4, a cavity is provided in the affixing member 8 for screwing in the tensioning member 7. The affixing member 8 shown in Figures 3 and 4 comprises a slot 10 extending in a direction crossing, for instance substantially perpendicular to, the longitudinal direction of the affixing member 8, to reduce the risk of the canvas becoming entangled, for instance between the screw member 3 and the affixing member 8. In those latter embodiments, the tensioning means 2 is mounted to the affixing member 8 in such a way that at least part of the tensioning member 7 protrudes from the slot 10. In the examples, the length of the slot substantially corresponds to the distance between the proximal and distal parts of the shaft 5 of the screw member 3.

[0038] The affixing means 8 shown in Figures 3 and 4 is designed in an L-shape which is placed for example along a circumference, preferably along the complete circumference of the light aperture. Such L-shaped affixing members are for instance made of heat-resistant materials such as metal, more specifically from aluminum or an aluminum alloy, galvanized steel, particularly corrugated galvanized steel (plate), cold drawn or hot rolled L-sections (preferably provided with an anti-corrosion treatment).

[0039] Figure 2 shows a system according to the invention wherein the canvas is sealed after tensioning the canvas to ensure that the canvas butts up well to the affixing member 8 and to close off the spaces separated by the canvas in a smokeproof way, considering that an upward smoke pressure will push against the canvas surface. The canvas is thereto clamped by a clamp member 11, which in Figure 2 is provided in the form of a plate 11 for clamping the canvas between plate 12 and affixing member 8, and wherein plates 11 and 12 and affixing member 8 are kept together by a screw.

[0040] The system 1 according to the invention, as illustrated in Figures 1 and 3-4, may be installed in a skylight. The skylight is arranged for admitting light into a space of a structure underlying the skylight. A light-transmitting cover is mounted for screening a light aperture arranged in the structure, and a fire-resistant, light-transmitting canvas is provided for screening off fumes from a fire in the space from the cover, wherein the canvas comprises an incombustible, light-transmitting fabric which at least partly spans the light aperture. The system 1 for tensioning a canvas according to the invention is installed in the skylight in such a way that the affixing member 8 is mounted at least at one side of the skylight in the longitudinal direction (or optionally the lateral direction) and a longitudinally (or optionally laterally) extending connecting member for affixing the canvas at the opposite side is mounted substantially parallel to the affixing element 8 and the tensioning means 2 is mounted to an affixing member 8 for releasably affixing a canvas, in a direction crossing, for instance substantially perpendicular to, the longitudinal direction of the affixing member 8, so that the canvas may be releasably affixed to the tensioning member 7. Such an arrangement has the effect that if a sprinkler installation is provided in the space, particularly under the light aperture, the sprinklers will start spraying more at the same time when activated by a fire in the space, because, since heat rises, it will take longer before the heat needed to activate the sprinklers reaches the sprinklers when the sprinklers are further away from a ceiling that blocks the heat. In other words, when the sprinklers are mounted under a skylight, the sprinklers mounted under the skylight will be activated later than the other sprinklers.

[0041] The preferred sprinklers, where present, are ESFR sprinklers. ESFR stands for Early Suppression Fast Response: to react more quickly to quickly gain control over the fire. Unlike conventional sprinklers, ESFRs do not need to be installed at different heights. ESFR sprinklers work much faster and have a much greater water yield. They are said to spray five times as much water as conventional sprinklers. Furthermore, their extinguishing range is relatively large (up to twelve meters deep) and ESFR drops are relatively thick, giving them a strong extinguishing effect.

[0042] Figure 1 further shows that the affixing member 8 is shaped in such a way that the affixing member 8 can be mounted at an upright side of the skylight, wherein more in particular the affixing member is L-shaped and can be mounted with an upright leg at the inside of the skylight, at an upright side thereof, while the screw member 3 extends along the more horizontal leg of the affixing member 8. Also shown is the additional flange by which the screw member 3 is affixed to the affixing member 8.

[0043] In the context of the present invention, the term light-transmitting is used to indicate that light is not substantially blocked by the partition, so as to transmit a suf-

ficient amount of light into the space. The fabric may for instance comprise fiberglass and may for instance be a woven fiberglass cloth, also known as glass fiber fabric.

[0044] The fabric preferably comprises a coating for further blocking the smoke caused by the fire. Further preferably, this is a double-sided coating, i.e. a coating applied to both surfaces of the fabric.

[0045] The fabric preferably comprises a white coating so as to optimize the clarity of the skylight, to obtain an optimal light transmissibility.

[0046] The fabric comprising a fabric and a coating preferably shows at least one of the following characteristics:

- Yarn of the fabric: warp and weft: EC9-136 ± 5% (DIN EN 12654)
- Yarn density of the fabric:
    - Warp: 18.6 Fd/cm ± 5% (DIN EN 1049)
    - Weft: 11.0 Fd/cm ± 5% (DIN EN 1049)
- Tensile strength of the fabric:
    - Warp: 1080 N/cm (DIN EN 12654)
    - Weft: 640 N/cm (DIN EN 12654)
- Surface weight of the fabric: 415 g/m^2 ± 5% (DIN EN 12127)
- Bind used in the fabric: Cross twill 1/3 (DIN ISO 9354)
- A two-sided white Silicone coating
- Combined weight of the fabric including the coating: 485 g/m^2 ± 10% (DIN EN 12127)
- Thickness of the fabric including the coating: 0,40 mm ± 10% (DIN ISO 4603/E)
- Tensile strength of the fabric including the coating:
    - Warp: 800 N/cm (DIN ISO 4606)
    - Weft: 400 N/cm (DIN ISO 4606)
- Fire classes:
    - BS 476: Part 6, 1981, -Part 7, 1971
    - BS 6575, 1985, App. F M0, EN 1869/1997
- Authorisations: EN 1869 (fire blankets)

[0047] A specific example of a fabric, more specifically a coated fiberglass cloth, which complies with most and even all of the conditions mentioned above, is, for instance, a fabric which was also subjected to a test according to DIN V 14 406-5:2000-10 by Materialprüfungsanstalt für das Bauwesen Dresden (MPA Dresden) in the research report with number 2000-23-1167. 40 l of rapeseed oil were used as fule. The grease fire object according to DIN V 14 406-5:2000-10 was placed with its backside at the wall of the testing space (Freiberg). The fuel was then brought to spontaneous combustion (350°C). In a first test, the energy supply was shut off after a burning time of 60 s (gas burner 50 kW) and the fabric, with a surface area of 1.12 m × 1.75 m, was placed over the grease fire object. Placing the fabric over the grease fire object took about 10 s. After placing the fabric, all flames were extinguished while the energy supply was continued for 7.5 minutes. The evaporating oil condensated onto the fabric and dripped from the overhanging ends with increasing intensity. 11 min after placing the fabric, the fabric was taken off again, causing another spontaneous combustion to occur. In both tests, a positive result was obtained after a pre-combustion of 60 s. In both tests, extinguishment of the flames followed upon the placing of the fabric. Furthermore, no flame penetration or oil soaking were observed.

[0048] When such a partition element was provided with the fabric with the characteristics described above, a transmittance of 60%-69% was measured by placing the partition element onto a light box and placing a spectrophotometer above the partition element. According to a second method, the partition element was illuminated with a direct source with a wavelength of 550 nm and the transmittance was measured by using a integrating white sphere in which all diffused white light was measured. This method yielded a transmittance of 57%. The tests were performed by CENTEXBEL and bear the reference number T803145-ITP fabric (White).

[0049] Furthermore, this specific fabric was subjected to a test for tearing under a uniformly distributed load of at least 150 N/m^2 (15 kg/m^2) for 5 min. The test was performed by Bureau Technique Verbrugghen a.s.b.l under the reference AANV"I"/EN. For this test, a fiberglass fabric was stretched on an aluminum frame with a width of 1.5 m and a length of 3.0 m and a surface area of 4.5 m^2. The fabric was stretched horizontally in the frame and the frame was supported at its 4 corners. As a test weight, fire blankets in their packages (average weight 1.04 kg per fire blanket) were placed on the fabric for 5 minutes. In a first test, 66 fire blankets were placed adjacently onto the fabric, resulting in a substantially vertical load of 15.25 kg/m^2. In a second test, 97 fire blankets were placed adjacently onto the fabric, resulting in a substantially vertical load of 22.4 kg/m^2. It was found that both the fabric and the frame returned to their original shapes after both tests with no permanent deformations or tears.

[0050] When tensioning a canvas by means of the system for tensioning a canvas according to the invention, the tensioning means is mounted to an affixing member 8 for releasably affixing a canvas, in a direction crossing, for instance substantially perpendicular to, the longitudinal direction of the affixing member 8, so that the canvas may be releasably affixed to the tensioning member 7. The canvas is affixed to a connecting member at the side opposite to the affixing member 8. The canvas is tensioned by the movement of the tensioning member 7 in a direction away from the canvas along the longitudinal axis of the shaft of the screw member 3, by rotating the screw member 3 around the longitudinal axis of the shaft.

This is for instance achieved by rotating the screw member 3 by turning its head 4 with a wrench. In a first embodiment, the tensioning member 7 moves along the shaft 5 between the proximal and distal parts with respect to the head 4 under the influence of the rotation of the screw member 3 around the longitudinal axis of the shaft 5, causing the canvas, which is releasably affixed to the tensioning member 7, to be tensioned. In another embodiment, the tensioning member 7 is fixedly but slideably affixed to the screw member 3, so that upon rotation the screw member 3 moves together with the tensioning member 7 with respect to the affixing member 8 to tension the canvas.

Claims

1. System (1) for tensioning a canvas comprising at least one tensioning means (2) comprising a rotatable screw member (3) provided with a head (4) and a shaft (5) having a proximal part connected to the head (4) as well as a distal part, wherein a thread (6) extends substantially around the shaft (5) from the proximal part to the distal part, wherein a screwable tensioning member (7) is provided about at least part of the thread (6), said screwable tensioning member extending along a direction which crosses the longitudinal axis of the shaft (5) from a first end to a second end, and said screw member (3) being rotatably affixed to a substantially longitudinally extending affixing member (8), which is affixable to a building element, such that upon rotation the tensioning member (7) moves with respect to the affixing member (8) so as to tension the canvas.

2. System (1) according to claim 1, wherein the tensioning member (7) can be screwed along the shaft (5) between the proximal and distal parts with respect to the head (4) under the influence of the rotation of the screw member (3) around the longitudinal axis of the shaft (5).

3. System (1) according to any of the previous claims, wherein the screw member (3) is mounted to the affixing member (8) in a direction crossing, for instance substantially perpendicular to, the longitudinal direction of the affixing member (8).

4. System (1) according to any of the previous claims, wherein the affixing member (8) comprises a slot (10) extending in a direction which crosses the longitudinal direction of the affixing member (8), and wherein the tensioning means (2) is mounted to the affixing member (8) in such a way that at least part of the tensioning member (7) protrudes from the slot.

5. System (1) according to any of the previous claims, wherein the length of the slot substantially corresponds to the distance between the proximal and distal parts of the shaft (5) of the screw member (3).

6. System (1) according to any of the previous claims, **characterized in that** the tensioning member (7) has a curvature on at least one of its ends, to which the canvas can be attached.

7. System (1) according to any of the previous claims, **characterized in that** the screw member (3), the tensioning member (7) and the affixing member (8) are made of metal.

8. System (1) according to any of the previous claims, **characterized in that** the affixing member (8) is designed in an L-shape.

9. System (1) according to any of the previous claims, further comprising a canvas which is releasably affixed to the tensioning member (7).

10. Skylight for admitting light into a space of a structure located under the skylight, with a light-transmitting cover for screening a light aperture arranged in the structure, and a fire-resistant, light-transmitting canvas for screening off fumes from a fire in the space from the cover, wherein the canvas comprises a heat-resistant and preferably incombustible, light-transmitting fabric which at least partly spans the light aperture, and with a system (1) for tensioning a canvas according to any of the claims 1-9, the affixing member (8) being mounted at least at one side of the skylight in longitudinal direction, and a longitudinally extending connecting member for affixing the canvas being mounted at the opposite side substantially parallel to the affixing member (8), and the tensioning member being mounted to an affixing member (8) for releasably affixing a canvas, in a direction crossing, for instance substantially perpendicular to, the longitudinal direction of the affixing member (8), so that the canvas may be releasably affixed to the tensioning member (7).

11. Skylight according to claim 10, **characterized in that** the connecting member corresponds to a second affixing member (8).

12. Skylight according to any of the claims 10-11, **characterized in that** the canvas is tensioned between the tensioning member (7) and the connecting member and thus forms a partitioning element which spans the light aperture.

13. Skylight according to any of the claims 10-12, **characterized in that** the fabric comprises fiberglass, or any other heat-resistant material.

14. Structure provided with a skylight according to any

of the claims 10-13.

15. Structure according to claim 14, **characterized in that** the structure is provided with a sprinkler installation wherein sprinklers are located under the skylight.

16. Structure according to claim 15, **characterized in that** the structure is provided with ESFR sprinklers.

17. Method for tensioning a canvas by means of the system (1) for tensioning a canvas according to any of the claims 1-9,

- wherein the tensioning means is mounted to the affixing member (8) for releasably affixing a canvas, in a direction crossing, for instance substantially perpendicular to, the longitudinal direction of the affixing member (8), so that the canvas may be releasably affixed to the tensioning member (7),
- wherein the canvas is affixed to a connecting member at the side opposite to the affixing member (8),
- wherein tensioning is performed by the movement of the tensioning member (7) in a direction away from the canvas along the longitudinal axis of the shaft of the screw member (3) by rotating the screw member (3) around the longitudinal axis of the shaft.

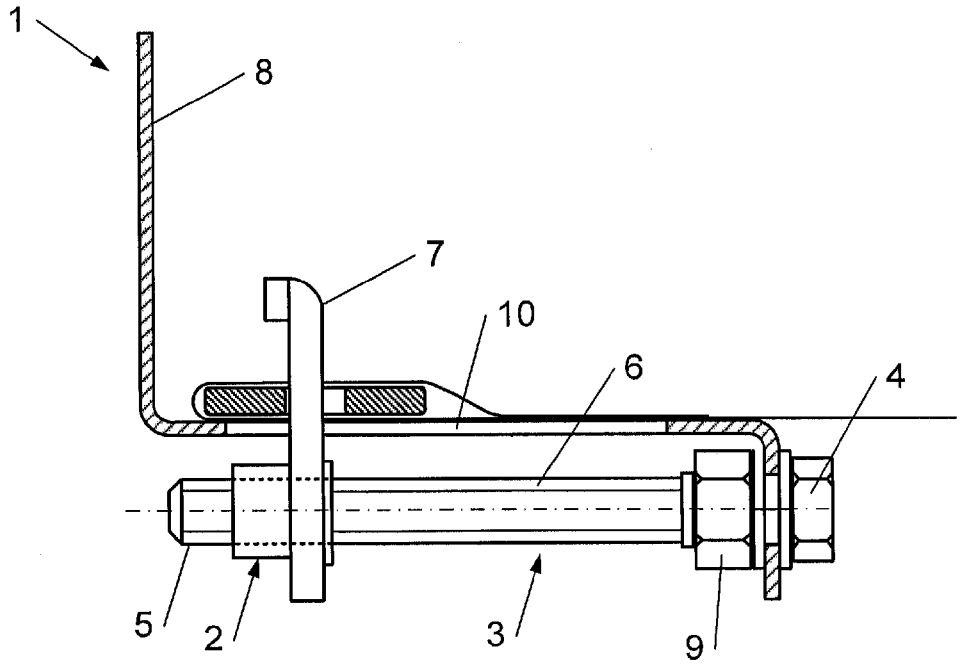


Fig. 1

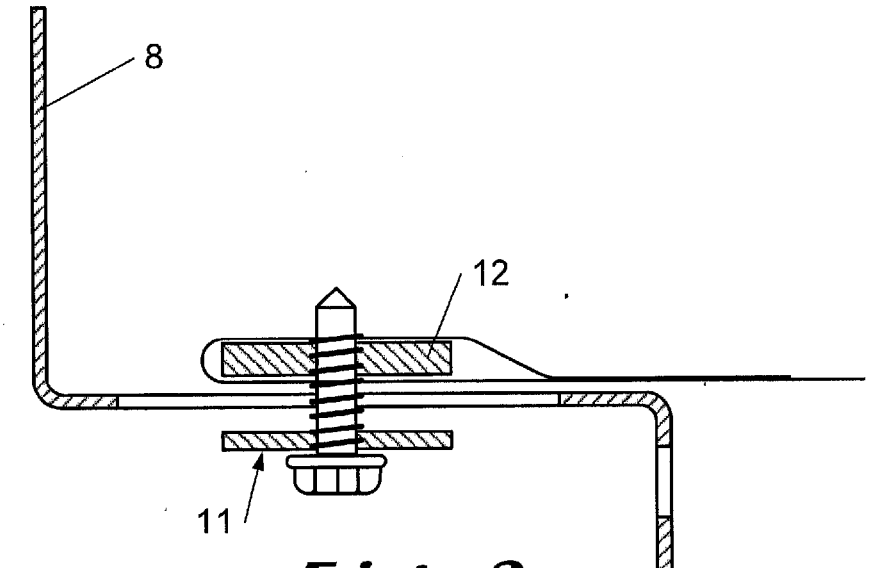
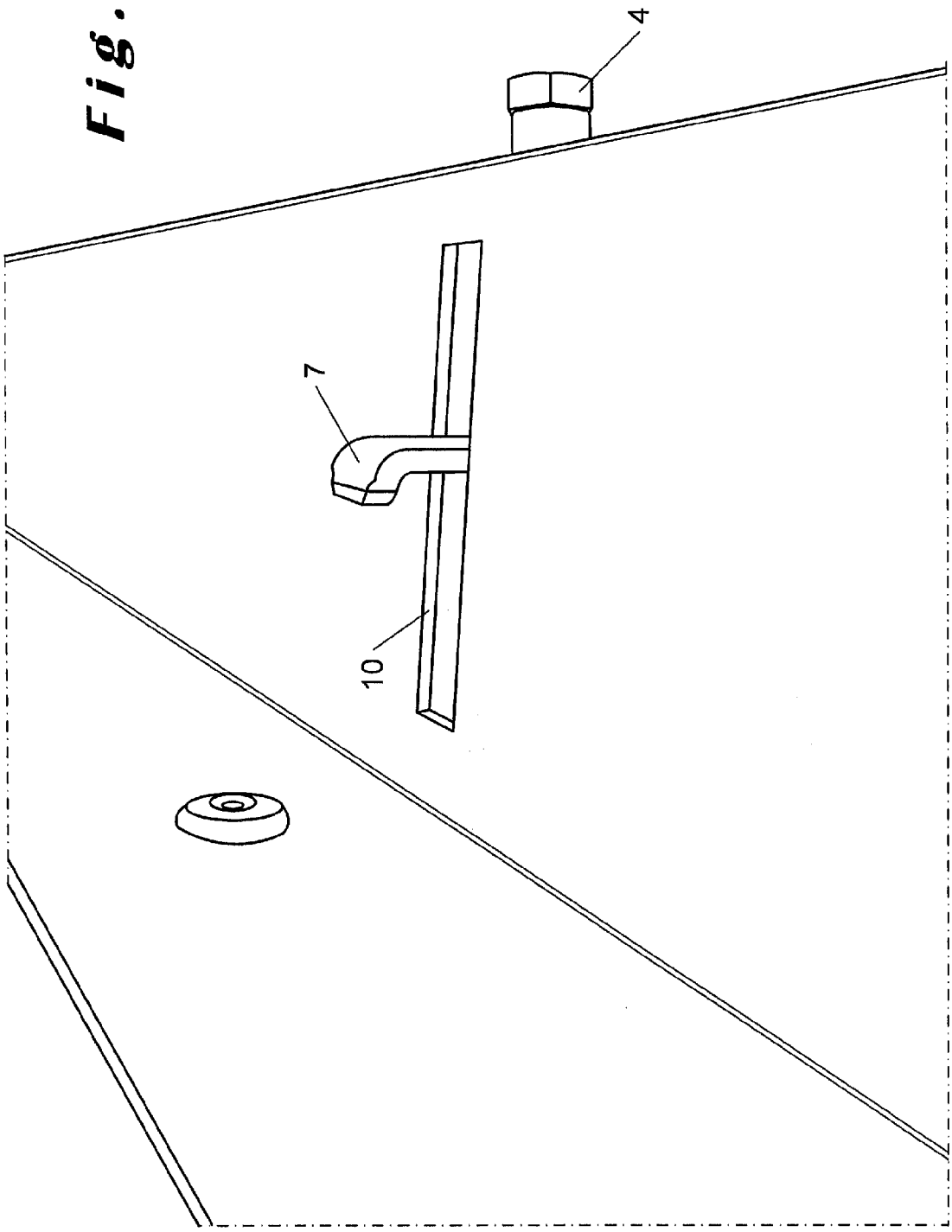


Fig. 2

Fig. 3



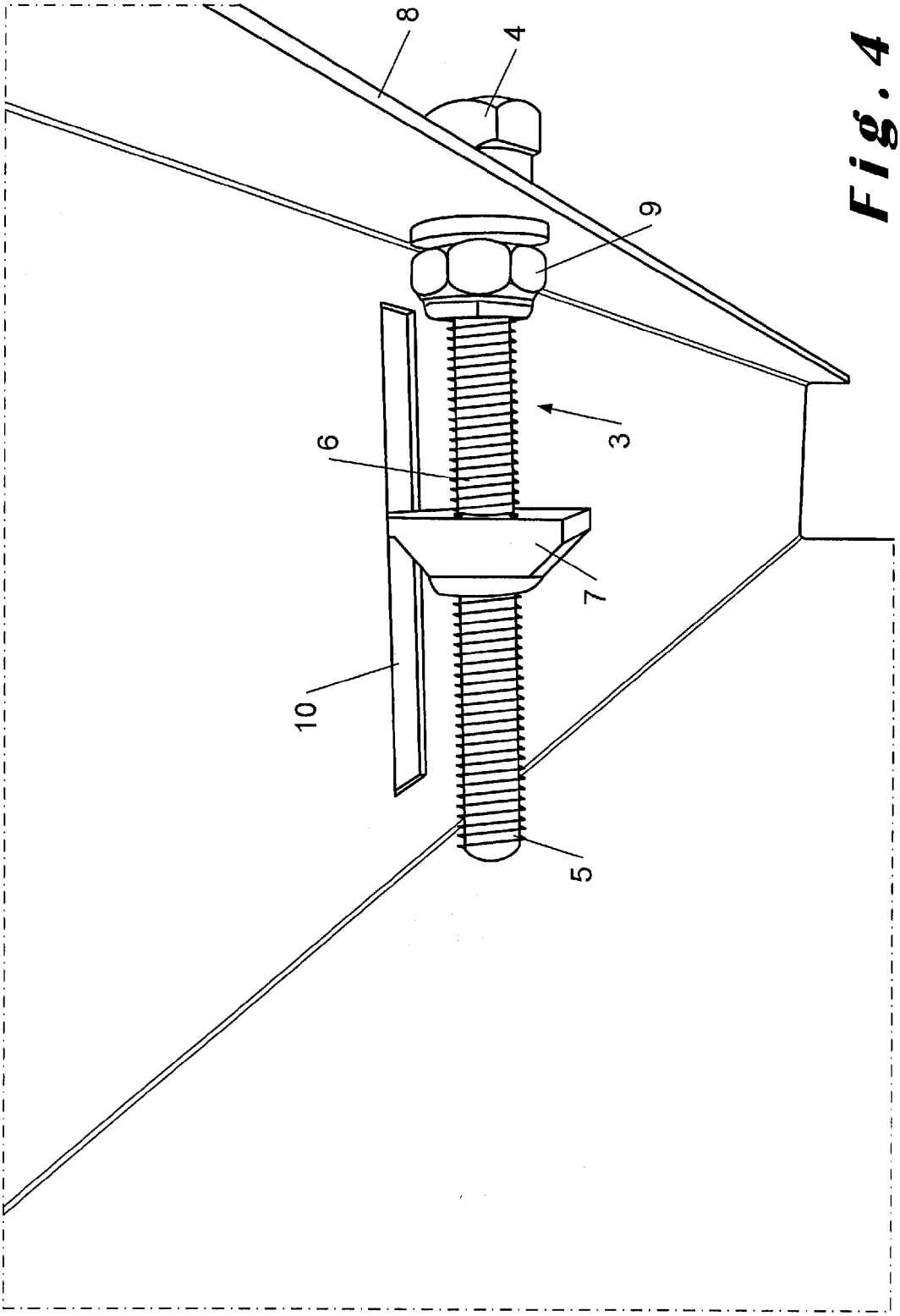


Fig. 4

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EUROPEAN SEARCH REPORT

Application Number
EP 14 19 4312

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	30 March 2015	Demeester, Jan

CATEGORY OF CITED DOCUMENTS

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REFERENCES CITED IN THE DESCRIPTION

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