

(19)



SUOMI - FINLAND

(FI)

PATENTTI- JA REKISTERIHALLITUS
PATENT- OCH REGISTERSTYRELSEN
FINNISH PATENT AND REGISTRATION OFFICE

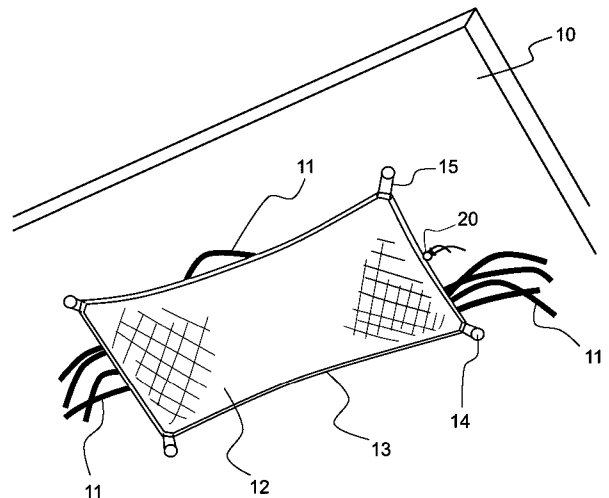
(10) **FI 129714 B**
(12) **PATENTTIJULKAISU**
PATENTSKRIFT
PATENT SPECIFICATION

(45) Patentti myönnetty - Patent beviljats - Patent granted **29.07.2022**
(51) Kansainvälinen patenttiluokitus - Internationell patentklassifikation -
International patent classification
A47B 21/06 (2006.01)
(21) Patenttihakemus - Patentansökning - Patent application 20206173
(22) Tekemispäivä - Ingivningsdag - Filing date **18.11.2020**
(23) Saapumispäivä - Ankomstdag - Reception date **18.11.2020**
(43) Tullut julkiseksi - Blivit offentlig - Available to the public **19.05.2022**

- (73) Haltija - Innehavare - Proprietor
1 •HYBRID VENTURES OY, Federleykatu 14 A 11, 33400 TAMPERE, SUOMI - FINLAND, (FI)
- (72) Keksijä - Uppfinnare - Inventor
1 •RYÖPPY, Toni, TAMPERE, SUOMI - FINLAND, (FI)
- (74) Asiamies - Ombud - Agent
Koivisto Patentit Oy, Pyhäjärvenkatu 5 B 406, 33200 TAMPERE
- (54) Keksinnön nimitys - Uppfinningens benämning - Title of the invention
LAITE KAAPELEIDEN HALLITSEMISEKSI
Anordning för hantering av kablar
A DEVICE FOR CABLE MANAGEMENT
- (56) Viitejulkaisut - Anförda publikationer - References cited
DE 20210220 U1, US 2011043007 A1, US 2019291654 A1, EP 3485765 A1
- (57) Tiivistelmä - Sammandrag - Abstract

Laitteessa johtojen hallitsemiseksi on suorakulmainen kangas (12), joka on kiristetty neljästä kulmasta pöydän (10) alapinnalle. Kangas (12) tukee kaapeleita (11), virtalähteitä tai muita sähkölaitteita pöytää (10) vasten. Kangas (12) voi olla kangasta, kangasta, verkkoa, verkkoa tai vastaavaa, joka on valmistettu joustavasta ohuesta materiaalista. Kangas (12) nostetaan lähelle pöytää (10) kiristämällä narua (15), joka kulkee ulkosaumojen (23) sisällä. Naru (15) kiristetään neljää kiinnitysvälinettä (14) vasten suorakulmaisen kankaan (12) kulmista. Järjestely mahdollistaa eri kokoisten ja muotoisten esineiden tukemisen ja työntämisen kevyesti vasten pöydän alapintaa (10).

A device for cable management has a rectangular cloth (12) that is tightened from four corners to an underside of a table (10). The cloth (12) supports cables (11), power sources or other electrical accessories against the table (10). The cloth (12) may be canvas, fabric, net, mesh or similar, made from flexible thin material. The cloth (12) is lifted close to the table (10) by tightening a cord (15) that travels inside the outer seams (23). The cord (15) is tightened against four fastening means (14) at each corner of the rectangular cloth (12). The arrangement allows items of various sizes and shapes to be supported and gently pushed against the underside of the table (10).



A DEVICE FOR CABLE MANAGEMENT

5

BACKGROUND

The invention relates to managing or organizing cables, power supplies, chargers or other wired electronic accessories. Said items are often hidden under an office desk or stuck behind a TV stand. Electric appliances in domestic or office use require electric power to operate. Even the wireless devices need charging. The home entertainment systems and game consoles have various wired accessories that often clutter the floor. The cable clutter on the floor is difficult to dust, it must be cleaned manually. They prevent the operation of robotic vacuum cleaners or other automated cleaning systems.

15 Cable organizers solve the problem by providing a support that collects the cables and/or power sources and keep them in the organizer. In the office use, cable baskets are connected to an underside of a table, wherein the items may be tucked away from sight, leaving the floor uncluttered. The cable baskets are often relatively tall, allowing them to be visible. For example, cable basket
20 attached to the underside of a living room table may be visible when sitting on a sofa.

DE20210220U1 discloses a cloth attached to an underside of a table, wherein cables may be hidden between the cloth and the table.

25 SUMMARY

This summary is provided to introduce a selection of concepts in a simplified form that will be further described below in the detailed description. This summary is intended to neither identify key features or essential features of the claimed subject matter nor to be used to limit the scope of the claimed subject

matter. Furthermore, the claimed subject matter is not limited to implementations that solve any or all of the disadvantages noted in any part of this disclosure.

5 A device for cable management is disclosed hereinafter. The device has a rectangular cloth that is tightened from four corners to an underside of a table. The rectangular cloth supports cables, power sources or other electrical accessories against the table. The cloth may be canvas, fabric, net, mesh or similar, made from flexible and thin material. The cloth is lifted close to the table's underside by tightening a cord that travels inside the outer seams. The
10 cord is tightened against four fastening means at each corner of the rectangular cloth. The arrangement allows items of various sizes and shapes to be supported and gently pushed against the underside of the table.

The four fastening means are positioned close to the table surface. The cloth, the cord and the fastening means are all thin components, allowing the device
15 to be flush under the table. The cloth may have the same colour as the table, wherein the electronic accessories and cables hidden under the cloth are camouflaged, reminiscing the table structures. The flexible structure is suitable for hiding various objects, such as cables, chargers, even larger power sources for gaming consoles or other appliances, or extension cords.

20 Many of the attendant features will be more readily appreciated as they become better understood by reference to the following detailed description considered in connection with the accompanying drawings. The embodiments described below are not limited to implementations which solve any or all the disadvantages of known cable management devices or cable organizers.

25

BRIEF DESCRIPTION OF THE DRAWINGS

The present description will be better understood from the following detailed description read in light of the accompanying drawings, wherein

30 FIG. 1 illustrates schematically one exemplary embodiment of a device; and

FIG. 2 illustrates schematically a partial view of one exemplary embodiment of the device.

Like reference numerals are used to designate like parts in the accompanying drawings.

5

DETAILED DESCRIPTION

The detailed description provided below in connection with the appended drawings is intended as a description of the present examples and is not
10 intended to represent the only forms in which the present example may be constructed or utilized. However, the same or any equivalent functions and sequences may be accomplished by different examples.

Although the present examples are described and illustrated herein as being implemented in managing cables, they are provided as an example and not a
15 limitation. As those skilled in the art will appreciate, the present examples are suitable for application in a variety of different types of items, electronic accessories, chargers or other usually movable devices related to providing electrical power to devices or transferring data between devices.

FIG. 1 illustrates schematically one exemplary embodiment of a device for cable
20 management. FIG. 2 illustrates schematically a detail of the same exemplary embodiment. The device for cable management comprises a rectangular cloth 12 having four edges 13, configured to support multiple cables 11 or electronic accessories. The rectangular cloth 12 may be made of a fabric, a mesh, a net, a flexible membrane or a combination thereof.

A cord 15 is at least partially connected to the rectangular cloth 12. The cord 15
25 travels, at least partially, along the edges 13. The cord 15 is configured to tighten the rectangular cloth 12 outwards, so the rectangular cloth 12 would rise and lift the cables 11 towards an underside of a table 10. The cord 15 is in one embodiment connected loosely to the rectangular cloth 12. In one embodiment
30 the rectangular cloth 12 is a net and the cord 15 travels via its outer loops.

In one embodiment the cord 15 is configured to travel along the edges 13 inside a tunnel formed by a seam 23. The tunnel may allow the cord 15 to travel freely, to avoid forming wrinkles to the rectangular cloth 12. In one embodiment the cord 15 is configured to travel along the edges 13 inside a tunnel belt loop. The tunnel belt loops may be connected to the outer edge 13 of the rectangular cloth 12.

The cord 15 travels outside the rectangular cloth 12 at each corner. The cord 15 exits the rectangular cloth 12 from the corner, travels via fastening means 14 and re-enters the rectangular cloth 12 at the same corner. The fastening means 14 is attachable to the underside of the table 10. Each fastening means 14 is positioned outside the corner and outside the perimeter of the rectangular cloth 14, wherein pulling the cord 15 via the fastening means 14 pulls each corner of the rectangular cloth 12 towards the fastening means 14. The cord 15 is not tied to the fastening means 14, it is movable to enable tightening the cord. In one embodiment the cord 15 is tied to one of the four fastening means 14. The cord 15 is in one embodiment a flexible cord. In one embodiment the cord 15 is made of rubber. In one embodiment the cord 15 is inflexible.

In one embodiment the fastening means 14 comprises a wheel 22 with a grooved rim around which the cord 15 passes. The cord 15 may sit inside the grooved rim, wherein the grooved rim holds the cord 15 in its place, when the device is assembled. In one embodiment the cord 15 is temporarily removable from the fastening means 14, for example to insert new cables or accessories between the table 10 and the rectangular cloth 12. The grooved rim may comprise a retaining lip, wherein the cord 15 snaps past the retaining lip when inserted into the grooved rim and stays in its place, even without the pulling force from the other fastening means 14. In one embodiment the cord 15 is made of flexible material, which may be pushed into the grooved rim.

In one embodiment the fastening means 14 comprises a pulley. The pulley is one example of a wheel 22. In one embodiment the wheel 22 rotates, in one embodiment the wheel is fixed. In one embodiment the fastening means 14 is a hook, open to opposite side to its near corner of the rectangular cloth 12. The

cable 15 may be suspended by the hooks, one by one, when assembling the device.

In one embodiment, the fastening means 14 comprises a screw for fastening the fastening means 14 onto the underside of the table 10. Alternatively, or in addition, the fastening means 14 comprises an adhesive for fastening the fastening means 14 onto the underside of the table 10. The table 10 may be made of wood, providing easy material for the screw. For various table materials, the fastening means 14 may be glued to the underside of the table 10. A retail package of the device may contain instructions for the dimensions or measurements for fastening the fastening means 14. In one embodiment, the retail package contains a template for marking the spots for the fastening means 14.

The device comprises tightening means 20 for tightening the cord 15 travelling at least partially inside the rectangular cloth 12. In one embodiment the tightening means 20 comprises a cord stopper. The two opposite portions of the cord 15 exiting the rectangular cloth 12 are connected to the cord stopper for adjusting the amount of cord 15 travelling inside the seam 23 or along the outer edges 13. When the cord 15 is being tightened, the cord 15 is first released from the cord stopper, then tightened and finally reattached to the cord stopper. The cord stopper is in one embodiment a closed clamp operated by a spring and a push button, wherein pushing the push button releases the cord 15. In one embodiment, the at least one portion of the cord 15 exiting the cord stopper comprises a knot 21 for retaining the cord's 15 end outside of the cord stopper or at the cord stopper. In one embodiment, the knot 21 is an object integrated into the cord 15, increasing its diameter and preventing it from slipping through the cord stopper.

The tightening means 20 may be positioned at one of the corners, along the fastening means 14 or being integrated with the fastening means 14. In one embodiment, two opposite portions of the cord 15 are configured to exit the middle portion of one edge 13 of the rectangular cloth 12.

A device for cable management is disclosed, comprising a rectangular cloth having four edges, configured to support multiple cables against an underside

of a table; a cord connected to the rectangular cloth, configured to travel along and at least partially inside the edges and outside the rectangular cloth at each corner; fastening means for fastening, to the underside of the table, the cord at each corner of the rectangular cloth; and tightening means for tightening the cord travelling at least partially inside the rectangular cloth. In one embodiment, the cord is a flexible cord. In one embodiment, the fastening means comprises a wheel with a grooved rim around which the cord passes. In one embodiment, the fastening means comprises a pulley. In one embodiment, the fastening means comprises a screw for fastening the fastening means onto the underside of the table. In one embodiment, the fastening means comprises an adhesive for fastening the fastening means onto the underside of the table. In one embodiment, two opposite portions of the cord are configured to exit the edge of the rectangular cloth at one edge. In one embodiment, the tightening means is a cord stopper, and the two opposite portions of the cord exiting the rectangular cloth are connected to a cord stopper for adjusting the amount of cord travelling inside a seam. In one embodiment, at least one portion of the cord exiting the cord stopper comprises a knot for retaining the cord end at the cord stopper. In one embodiment, the cord is configured to travel along the edges inside a seam. In one embodiment, the cord is configured to travel along the edges inside a tunnel belt loop.

Any range or device value given herein may be extended or altered without losing the effect sought.

Although at least a portion of the subject matter has been described in language specific to structural features and/or acts, it is to be understood that the subject matter defined in the appended claims is not necessarily limited to the specific features or acts described above. Rather, the specific features and acts described above are disclosed as examples of implementing the claims and other equivalent features and acts are intended to be within the scope of the claims.

It will be understood that the benefits and advantages described above may relate to one embodiment or may relate to several embodiments. The embodiments are not limited to those that solve any or all of the stated

problems or those that have any or all of the stated benefits and advantages. It will further be understood that any reference to 'an' item refers to one or more of those items.

5 The term 'comprising' is used herein to mean including the method blocks or elements identified, but that such blocks or elements do not comprise an exclusive list and a method or apparatus may contain additional blocks or elements.

10 It will be understood that the above description is given by way of example only and that various modifications may be made by those skilled in the art. The above specification, examples and data provide a complete description of the structure and use of exemplary embodiments. Although various embodiments have been described above with a certain degree of particularity, or with reference to one or more individual embodiments, those skilled in the art could make numerous alterations to the disclosed embodiments without departing
15 from the spirit or scope of this specification.

CLAIMS

1. A device for cable management, comprising:
a rectangular cloth (12) having four edges (13), configured to support
5 multiple cables (11) against an underside of a table (10);
a cord (15) connected to the rectangular cloth (12), configured to travel
along and at least partially inside the edges (13) and outside the
rectangular cloth (12) at each corner;
fastening means (14) for fastening, to the underside of the table (10), the
10 cord (15) at each corner of the rectangular cloth (12); and
tightening means (20) for tightening the cord (15) travelling at least
partially inside the rectangular cloth (12),
c h a r a c t e r i z e d in that:the fastening means (14) comprises a wheel
(22) with a grooved rim around which the cord (15) passes.
15
2. The device according to claim 1, c h a r a c t e r i z e d in that the cord
(15) is a flexible cord.
3. The device according to claim 1 or claim 2, c h a r a c t e r i z e d in that
20 the fastening means (14) comprises a pulley.
4. The device according to any of the claims 1 to 3, c h a r a c t e r i z e d in
that the fastening means (14) comprises a screw for fastening the
fastening means (14) onto the underside of the table (10).
25
5. The device according to any of the claims 1 to 3, c h a r a c t e r i z e d in
that the fastening means (14) comprises an adhesive for fastening the
fastening means (14) onto the underside of the table (10).
6. The device according to any of the claims 1 to 5, c h a r a c t e r i z e d in
30 that two opposite portions of the cord (15) are configured to exit the edge
(13) of the rectangular cloth (12) at one edge (13).

- 5
7. The device according to claim 6, characterized in that the tightening means (20) is a cord stopper, and the two opposite portions of the cord (15) exiting the rectangular cloth (12) are connected to the cord stopper for adjusting the amount of cord (15) travelling inside a seam (23).
- 10
8. The device according to claim 7, characterized in that at least one portion of the cord (15) exiting the cord stopper comprises a knot (21) for retaining the cord (15) end at the cord stopper.
- 15
9. The device according to any of the claims 1 to 8, characterized in that the cord (15) is configured to travel along the edges (13) inside a tunnel formed by a seam (23).
- 20
10. The device according to any of the claims 1 to 8, characterized in that the cord (15) is configured to travel along the edges (13) inside a tunnel belt loop.

VAATIMUKSET

1. Laite johtojen hallintaan, johon kuuluu:
 - 5 suorakulmainen kangas (12), jossa on neljä reunaa (13), joka on järjestetty tukemaan useita johtoja (11) pöydän (10) alapintaa vasten; naru (15), joka on yhdistetty suorakulmaiseen kankaaseen (12), joka on järjestetty kulkemaan reunojen (13) myötäisesti ja ainakin osittain niiden sisäpuolella ja jokaisessa kulmassa suorakulmaisen kankaan
 - 10 ulkopuolella;
kiinnitysvälineet (14), narun (15) kiinnittämiseksi pöydän (10) alapuolelle, suorakulmaisen kankaan (12) jokaiseen kulmaan; ja kiristysvälineet (20), joilla naru (15) kiristetään kulkemaan ainakin osittain suorakulmaisen kankaan (12) sisällä,
 - 15 t u n n e t t u siitä, että:
kiinnitysvälineisiin (14) kuuluu pyörä (22), jossa on uritettu reuna, jonka ympäri naru (15) kulkee.
2. Patenttivaatimuksen 1 mukainen laite, t u n n e t t u siitä, että naru (15)
- 20 on joustava naru.
3. Patenttivaatimuksen 1 tai 2 mukainen laite, t u n n e t t u siitä, että kiinnitysvälineisiin (14) kuuluu plokki.
- 25 4. Jonkin patenttivaatimuksista 1 - 3 mukainen laite, t u n n e t t u siitä, että kiinnitysvälineisiin (14) kuuluu ruuvi, kiinnitysvälineiden (14) kiinnittämiseksi pöydän (10) alapinnalle.
- 30 5. Jonkin patenttivaatimuksista 1 - 3 mukainen laite, t u n n e t t u siitä, että kiinnitysvälineisiin (14) kuuluu liima kiinnitysvälineiden (14) kiinnittämiseksi pöydän (10) alapinnalle.

6. Jonkin patenttivaatimuksista 1 - 5 mukainen laite, t u n n e t t u siitä, että narun (15) kaksi vastakkaista osaa on järjestetty poistumaan suorakulmaisen kankaan (12) reunasta (13) yhdessä reunassa (13).
- 5 7. Patenttivaatimuksen 6 mukainen laite, t u n n e t t u siitä, että kiristysväline (20) on narun pysäytin, ja narun (15) kaksi vastakkaista osaa, jotka poistuvat suorakulmaisesta kankaasta (12), on yhdistetty narun pysäyttimeen säätämään narun (15) määrää, joka kulkee sauman (23) sisällä.
- 10 8. Patenttivaatimuksen 7 mukainen laite, t u n n e t t u siitä, että ainakin yhteen narun (15) osaan, joka poistuu narun pysäyttimestä, käsittää solmun (21) narun (15) pään pitämiseksi narun pysäyttimessä.
- 15 9. Jonkin patenttivaatimuksista 1 - 8 mukainen laite, t u n n e t t u siitä, että naru (15) on järjestetty kulkemaan saumojen (23) muodostaman tunnelin sisällä reunoja (13) pitkin.
- 20 10. Jonkin patenttivaatimuksista 1 - 8 mukainen laite, tunnettu siitä, että naru (15) on järjestetty kulkemaan pitkin reunoja (13) vyölenkkien sisällä.

1/2

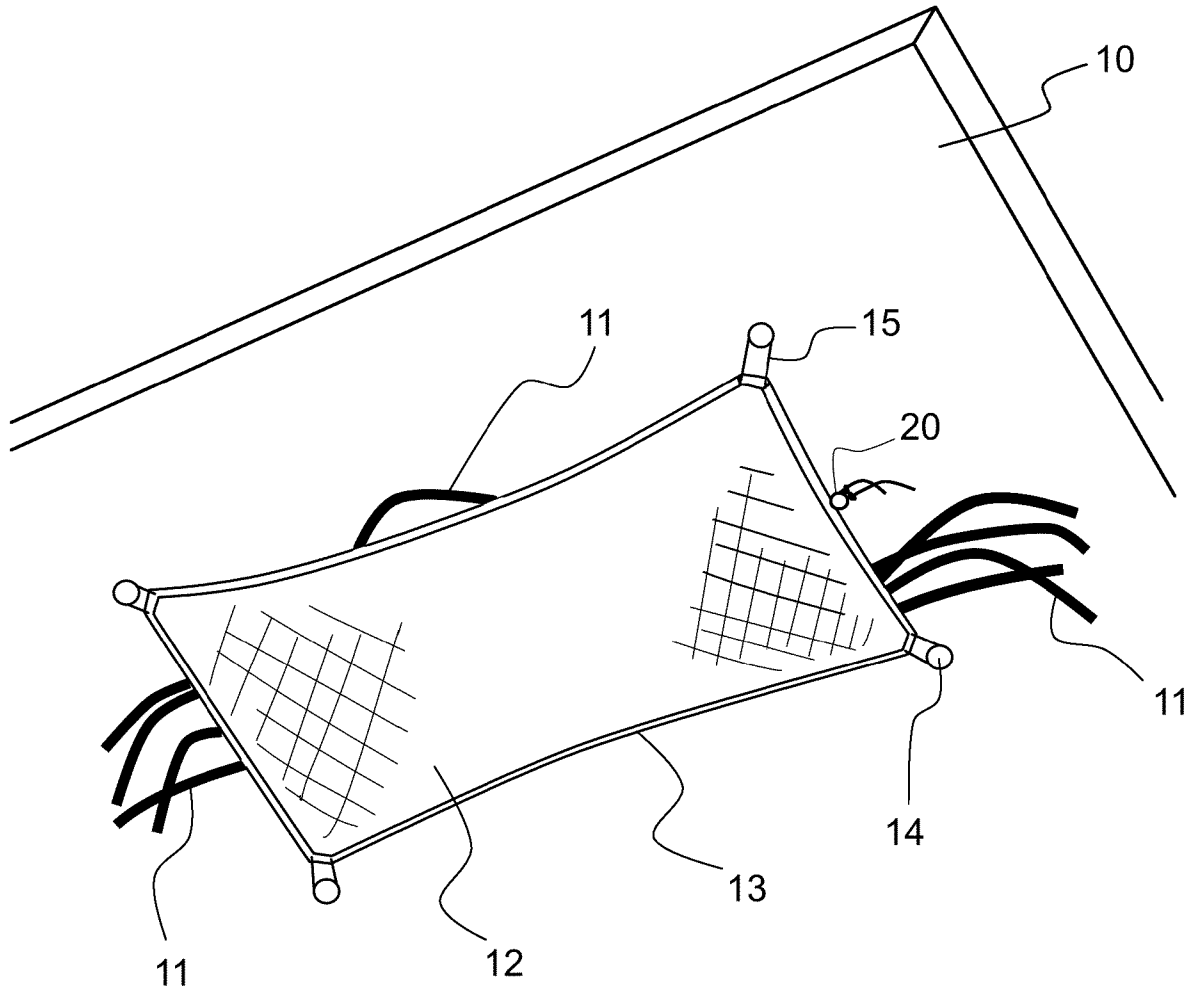


Fig. 1

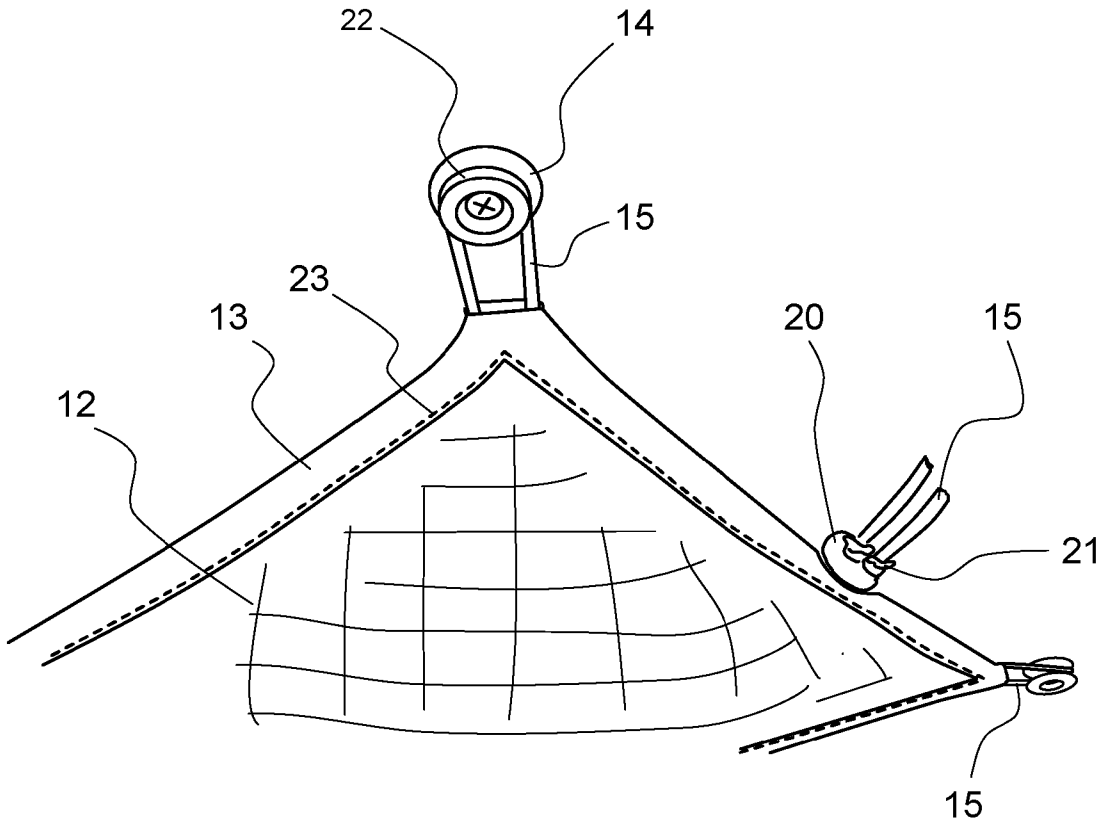


Fig. 2