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(54) **SUNSHADE BLADE**

SONNENSCHUTZLAMELLE

LAME DE PARE-SOLEIL

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Description

[0001] The present invention relates to a sunshade blade in a system of constraint and articulation of the blades.

[0002] Sunshades with packable and adjustable blades are known, the ends of which are connected to the blade holders of the movement mechanisms inserted inside vertical lateral guides.

[0003] Said blade holders consist of a C-shaped support whose folded ends are inserted into the hinges of articulation of the blades, said C-shaped supports being integral with a pin whose other end is provided with a plate affected by a substantially rectangular hole.

[0004] However, these known systems for attaching the blade holders to the blades have the drawback of a large bulk in the thickness of the blades, so that the total packing of the blades involves a high loss of light with large-sized sunshades (about 39 cm for compartments with a height of 2.7 m of inter-plane).

[0005] WO 2016103123 A1 describes sunshade apparatus (1) comprising at least one slat having a guide integral therewith and extending along a longitudinal direction of the slat; at least one movement element configured to be coupled to one end of the slat; a locking element slidably coupled to the guide of the slat, to be movable along the longitudinal direction between a deactivated position, where it does not interfere with the movement element , and an active position, where it is at least partly superposed on the movement element to lock it relative to the slat; an elastic structure for applying a force perpendicular to a contact surface between the slat and the movement element when the locking element is at the active position.

[0006] The object of the invention is to eliminate these drawbacks and to provide a fastening system for the blade holders which has a reduced thickness so as to be able to reduce the overall dimensions of the packed blades of the sunshade.

[0007] This object is achieved according to the invention with a system of constraint and articulation of the blades in sunshade with packable blades as described in claim 1.

[0008] The present invention is further clarified hereinafter in a preferred embodiment shown purely by way of example and non-limiting with reference to the attached drawing tables in which:

Figure 1a shows an exploded perspective view of the articulation system of the holder,
Figure 1b shows it in assembled form
Figure 2 shows a cross-section of a shading blade constrained at the ends to the blade holder,
Figure 3 shows in perspective view the blades in an open and packed configuration,
Figure 4 shows a blade attached to a blade holder in frontal front view,
Figure 5 shows it in a rear perspective view,
Figure 6 shows the clip that secures the blade holder to the flap,
Figure 7 shows the blade and the clip in an exploded perspective view,
Figure 8 shows the sliding shoe.

[0009] As can be seen from the figures, the constraint and articulation system of the sunshade blades in packable blades substantially comprises a plurality of elements 2, 2' in zamak to form two hinges 4.

[0010] In particular, the elements 2 are articulated by a brass eyelet 6, while the elements 2' are articulated to each other by means of steel or plastic pegs 8 which also engage in a hole 10 provided at the end of a wing 12 of a zamak blade holder 14 and in a sleeve 16 present at the other end of the wing 18 of the blade holder 14.

[0011] The blade holder 14 has a cross shape and is formed by a cylindrical sleeve 20 to which a substantially quadrangular plate 22 is integral with a slot 24 and two reliefs 26.

[0012] The system comprises a blade 28 in aluminum with a thickness between 0.7 mm and 1.20 mm, formed by a central body 30 slightly curved which extends into two lateral fins 32 folded towards the bottom and rolled up at the ends 34.

[0013] The central body 30 presents a slot 36 whose dimensions correspond to the dimensions of the slot 24 and two further slots 38 whose dimensions correspond to those of the reliefs 26.

[0014] The elements 2, 2', the blades holder 14, the plate 22, the central body 30 and the clip 42 have a height of less than 7 mm.

[0015] The connection between the central body 30 of the blade 28 and the blade holder 16 is obtained by inserting the reliefs 26 of the central body 30 in the slots 38 of the blade 28 and subsequently inserting a clip 40 with curved appendages 42 which snap into undercut slots 36. A slide 50 made of thermoplastic material sliding along a vertical slot 52 provided is snapped onto the cylindrical sleeve 20 in a cylindrical seat 48 in the case 54 housing the hinge. The slide 50 has, in correspondence with two surfaces, two vertical appendages 56 facing downwards which, when the runner is superimposed in contact with the lower runner, is engaged in corresponding seats 58 of the underlying runner.

[0016] From what has been said it is clear that the constraint and articulation system of the blades in packable blade holders with folding blades allows, thanks to the materials used and the heights of the elements 2, 2', blade holders 14, plate 22, central body 30 and clips 42 which have height of less than 7 mm to reduce the overall dimensions of the packed blades of the sunshade.

[0017] Moreover, thanks to the presence of the two reliefs 26 which are inserted in the two slots 38, the constraint system has a greater torsional rigidity.

Claims

1. Sunshade blade (28) comprising a system of constraint and articulation of the blade (28), wherein the constraint and articulation system substantially comprises a plurality of elements (2, 2') to form two hinges (4) at whose articulation nodes a blade holder (14) is articulated, which blade holder (14) has a cross shape and is formed by a cylindrical sleeve (20) to which a substantially quadrangular plate (22) presenting a slot (24) is integral, wherein the blade (28) is formed by a central body (30) slightly curved which extends into two lateral fins (32) rolled up at the ends (34), and wherein the blade (28) is attached to said blade holder (14), **characterized in that** said central body (30) presents a slot (36) whose dimensions correspond to the dimensions of the slot (24) of the quadrangular plate (22), the connection of the blade (28) to the blade holder (14) is obtained by means of a clip (40) with curved appendages (42) which engage as undercut in both said slots (24, 26), and **in that** the elements (2, 2'), the blade holder (14), the quadrangular plate (22), the central body (30) and the clip in the assembled configuration (40) have a height of less than 7 mm.

2. Sunshade blade according to claim 1, **characterized in that** the quadrangular plate (22) presents two reliefs (26).

3. Sunshade blade according to claim 1, **characterized in that** the blade (28) is made of stainless steel or aluminum with a thickness of between 0.7 mm and 1.35 mm.

4. Sunshade blade according to claim 1, **characterized in that** the blade (28) is formed by a slightly curved central body (30) which extends into two lateral fins (32) folded down and rolled up at the ends (34).

5. Sunshade blade according to claims 1 and 2, **characterized in that** the central body (30) presents two further slots (38) whose dimensions correspond to those of the reliefs (26).

6. Sunshade blade according to claim 1, **characterized in that** the blade (28) further comprises a thermoplastic slide (50) adapted to slide along a vertical slot (52) in a case (54) housing the hinges (4), wherein the slide (50) provides a cylindrical seat (48) which is snapped onto the cylindrical sleeve (20).

7. Sunshine blade according to claim 6, **characterized in that** the slide (50) has two vertical appendages (56) facing downwards in correspondence with two surfaces which, when the slide is superimposed in contact with a lower slide , are adapted to engage in corresponding seats (58) in the slide below.

Patentansprüche

1. Sonnenschutzlamelle (28) mit einem Zwangs- und Gelenksystem der Lamelle (28), wobei das Zwangs- und Gelenksystem im Wesentlichen eine Vielzahl von Elementen (2, 2') umfasst, um zwei Scharniere (4) zu bilden, an deren Gelenkknoten ein Lamellenhalter (14) angelenkt ist, wobei der Lamellenhalter (14) eine Kreuzform aufweist und durch eine zylindrische Hülse (20) gebildet wird, mit der eine im Wesentlichen viereckige Platte (22), die einen Schlitz (24) aufweist, fest verbunden ist, wobei die Lamelle (28) aus einem Zentralkörper (30) gebildet wird, der leicht gekrümmt ist und sich in zwei seitliche Rippen (32) erstreckt, die an den Enden (34) aufgerollt sind, und wobei die Lamelle (28) an dem Lamellenhalter (14) befestigt ist, **dadurch gekennzeichnet, dass** der Zentralkörper (30) einen Schlitz (36) aufweist, dessen Abmessungen den Abmessungen des Schlitzes (24) der viereckigen Platte (22) entsprechen, die Verbindung der Lamelle (28) mit dem Lamellenhalter (14) mittels einer Klammer (40) mit gekrümmten Fortsätzen (42) erhalten wird, die als Hinterschneidung beide Schlitze (24, 26) in Eingriff nehmen, und dadurch, dass die Elemente (2, 2'), der Lamellenhalter (14), die viereckige Platte (22), der Zentralkörper (30) und die Klammer in der zusammengebauten Konfiguration (40) eine Höhe von weniger als 7 mm aufweisen.

2. Sonnenschutzlamelle nach Anspruch 1, **dadurch gekennzeichnet, dass** die viereckige Platte (22) zwei Reliefs (26) aufweist.

3. Sonnenschutzlamelle nach Anspruch 1, **dadurch gekennzeichnet, dass** die Lamelle (28) aus Edelstahl oder Aluminium mit einer Dicke zwischen 0,7 mm und 1,35 mm hergestellt ist.

4. Sonnenschutzlamelle nach Anspruch 1, **dadurch gekennzeichnet, dass** die Lamelle (28) aus einem leicht gekrümmten Zentralkörper (30) gebildet wird, der in zwei seitliche Rippen (32) erstreckt, die nach unten gefaltet und an den Enden (34) aufgerollt sind.

5. Sonnenschutzlamelle nach einem der Ansprüche 1 und 2, **dadurch gekennzeichnet, dass** der Zentralkörper (30) zwei weitere Schlitze (38) aufweist, deren Abmessungen denen der Reliefs (26) entsprechen.

6. Sonnenschutzlamelle nach Anspruch 1, **dadurch gekennzeichnet, dass** die Lamelle (28) ferner einen thermoplastischen Schieber (50) umfasst, der geeignet ist, entlang eines vertikalen Schlitzes (52)

in einem Gehäuse (54) zu gleiten, das die Scharniere (4) aufnimmt, wobei der Schieber (50) einen zylindrischen Sitz (48) bereitstellt, der auf die zylindrische Hülse (20) aufgerastet wird.

7. Sonnenschutzlamelle nach Anspruch 6, **dadurch gekennzeichnet, dass** der Schieber (50) zwei vertikale Fortsätze (56) aufweist, die nach unten gerichtet sind in Übereinstimmung mit zwei Flächen, die, wenn der Schieber in Kontakt mit einem unteren Schieber aufgelagert ist, geeignet sind, entsprechende Sitze (58) in dem darunter liegenden Schieber in Eingriff zu nehmen.

Revendications

1. Lame de pare-soleil (28) comprenant un système de contrainte et d'articulation de la lame (28), dans laquelle le système de contrainte et d'articulation comprend sensiblement une pluralité d'éléments (2, 2') pour former deux charnières (4) aux noeuds d'articulation desquelles s'articule un porte-lame (14), lequel porte-lame (14) a une forme transversale et est formé d'un manchon cylindrique (20) auquel est intégrée une plaque sensiblement quadrangulaire (22) présentant une fente (24), dans lequel la lame (28) est formée d'un corps central (30) légèrement incurvé qui se prolonge par deux ailettes latérales (32) enroulées aux extrémités (34), et dans lequel la lame (28) est attachée audit porte-lame (14), **caractérisée en ce que** ledit corps central (30) présente une fente (36) dont les dimensions correspondent aux dimensions de la fente (24) de la plaque quadrangulaire (22), la liaison de la lame (28) au porte-lame (14) est obtenue au moyen d'un clip (40) à appendices incurvés (42) qui s'engagent en contre-dépouille dans lesdites deux fentes (24, 26), et **en ce que** les éléments (2, 2'), le porte-lame (14), la plaque quadrangulaire (22), le corps central (30) et le clip dans la configuration assemblée (40) ont une hauteur inférieure à 7 mm.

2. Lame de pare-soleil selon la revendication 1, **caractérisée en ce que** la plaque quadrangulaire (22) présente deux reliefs (26).

3. Lame de pare-soleil selon la revendication 1, **caractérisée en ce que** la lame (28) est en acier inoxydable ou en aluminium avec une épaisseur comprise entre 0,7 mm et 1,35 mm.

4. Lame de pare-soleil selon la revendication 1, **caractérisée en ce que** la lame (28) est formée d'un corps central (30) légèrement incurvé qui se prolonge par deux ailettes latérales (32) rabattues et enroulées aux extrémités (34).

5. Lame de pare-soleil selon les revendications 1 et 2, **caractérisée en ce que** le corps central (30) présente deux autres fentes (38) dont les dimensions correspondent à celles des reliefs (26).

6. Lame de pare-soleil selon la revendication 1, **caractérisée en ce que** la lame (28) comprend en outre une glissière thermoplastique (50) adaptée pour glisser le long d'une fente verticale (52) dans un boîtier (54) logeant les charnières (4), dans lequel la glissière (50) fournit un siège cylindrique (48) qui est encliqueté sur le manchon cylindrique (20).

7. Lame de soleil selon la revendication 6, **caractérisée en ce que** la glissière (50) présente deux appendices verticaux (56) orientés vers le bas en correspondance avec deux surfaces qui, lorsque la glissière est superposée au contact d'une glissière inférieure, sont adaptées pour s'engager dans des logements correspondants (58) de la glissière située en dessous.

FIG. 1a

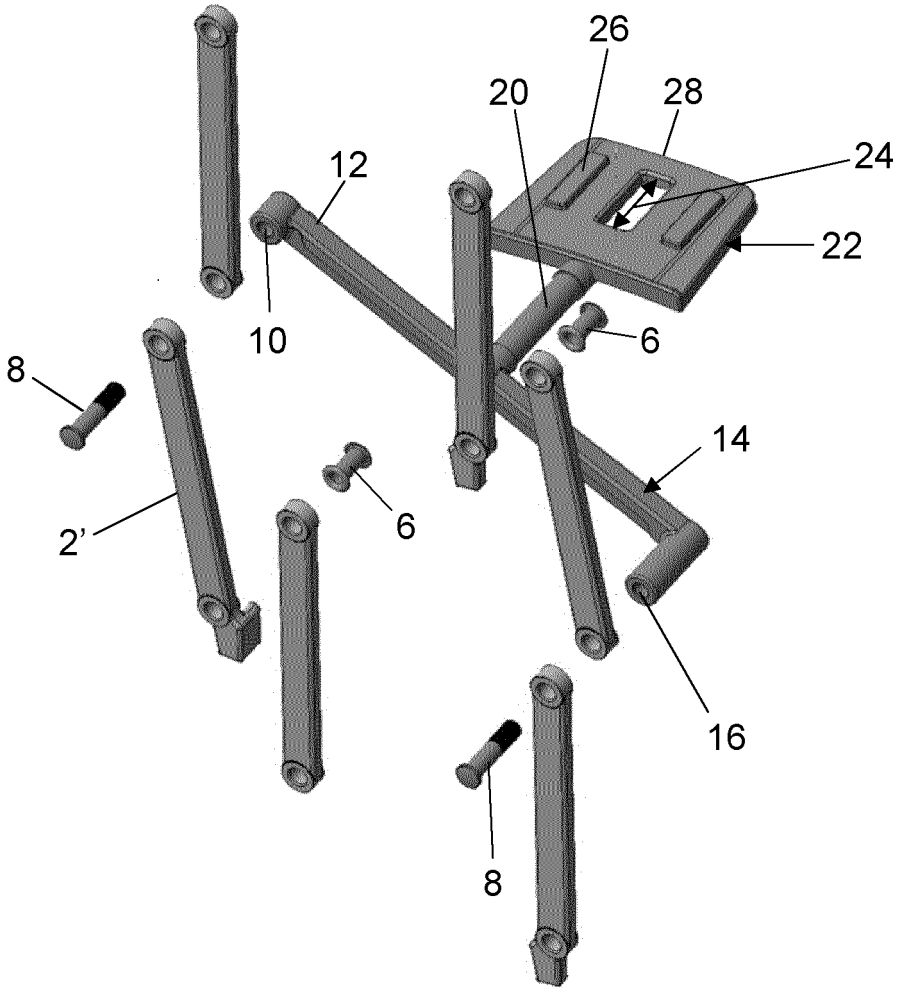


FIG. 1b

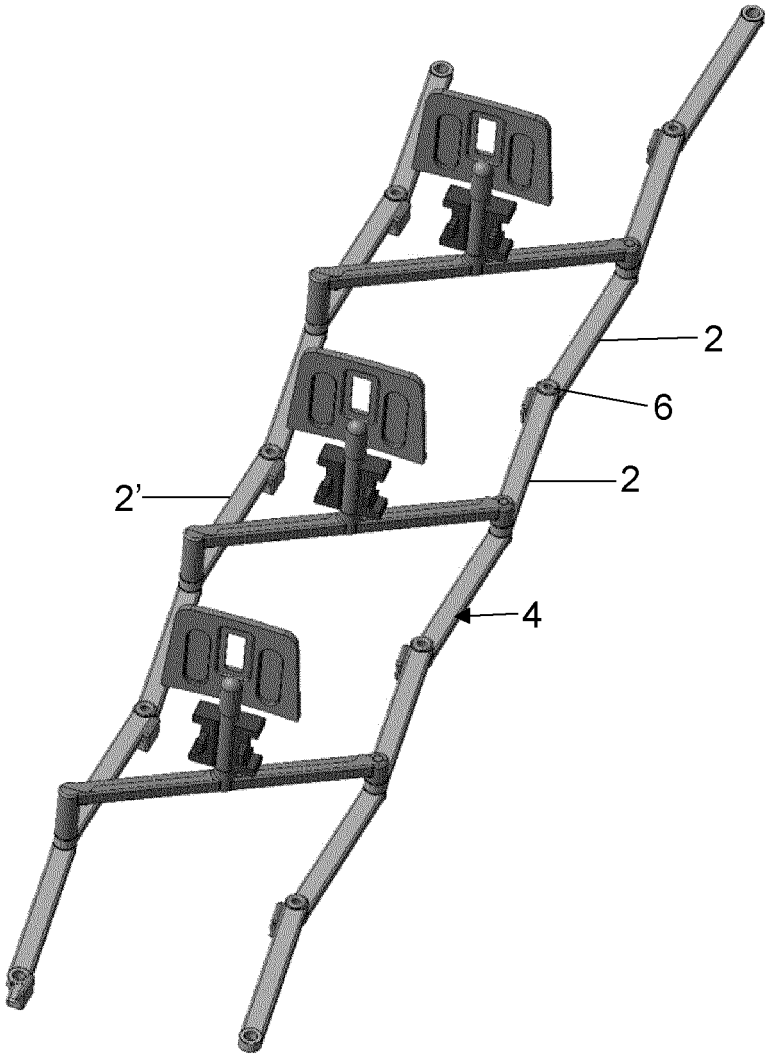


FIG. 2

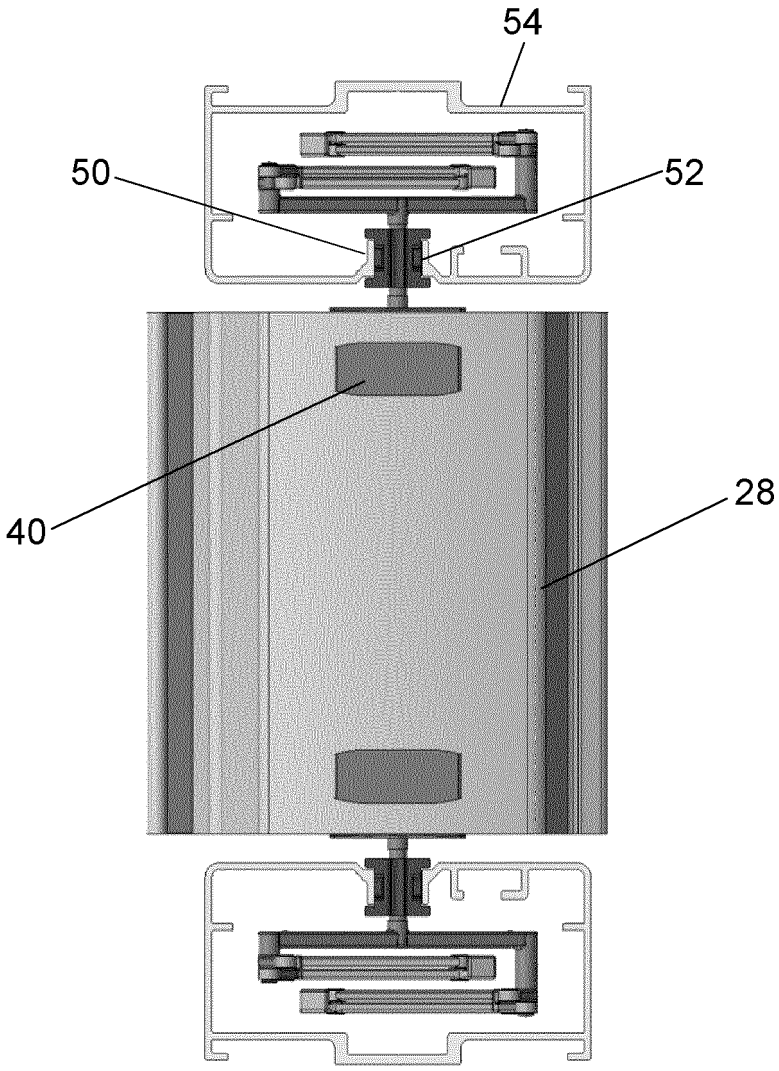


FIG. 3

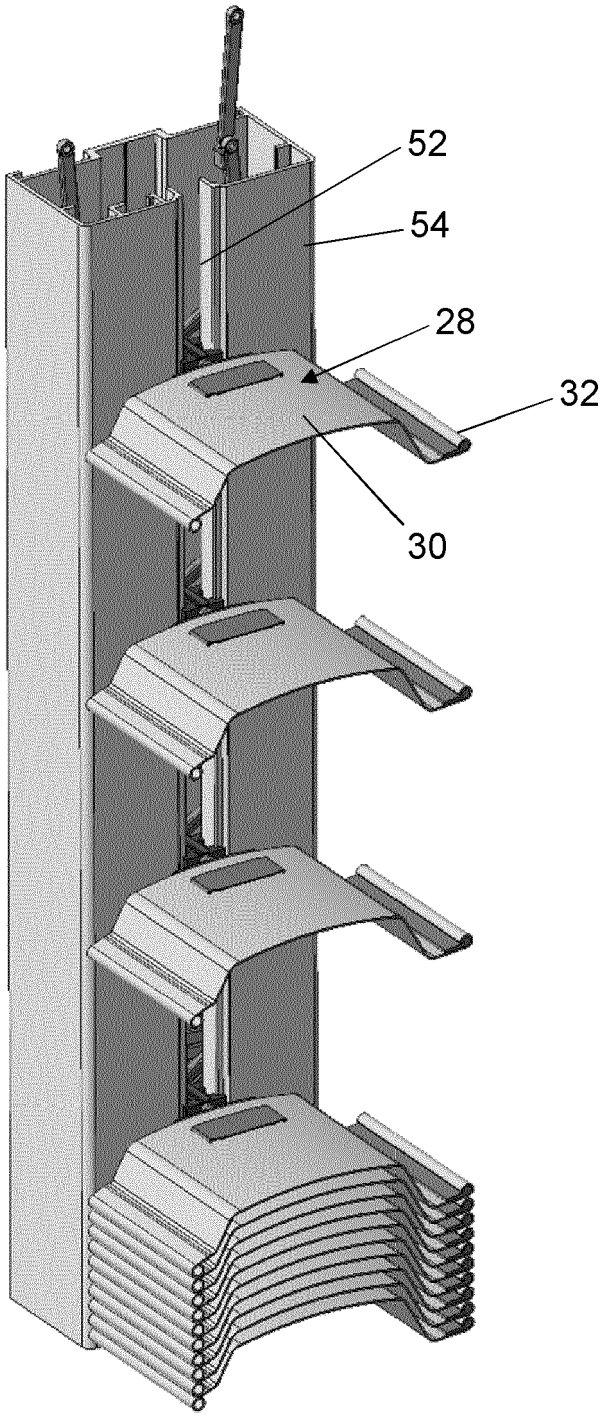


FIG. 4

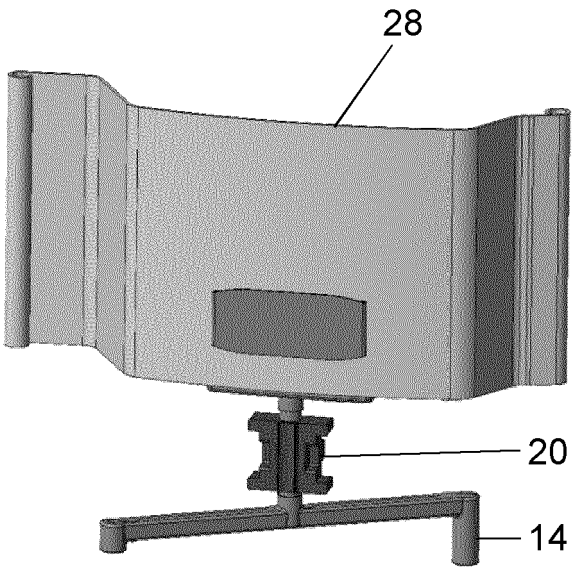


FIG. 5

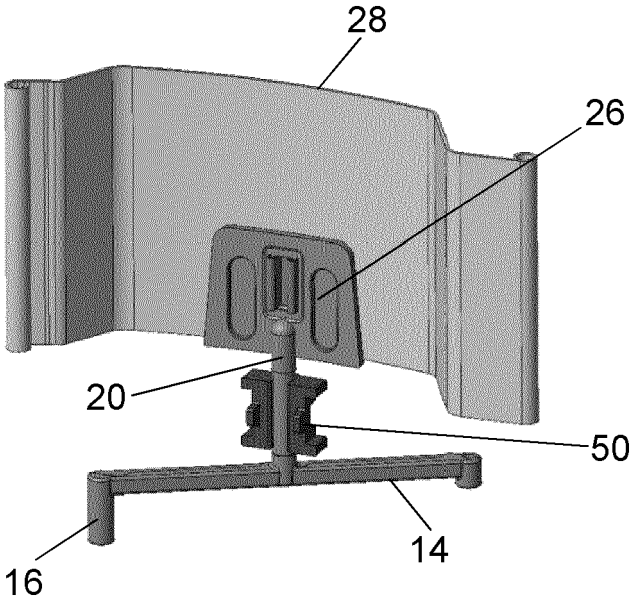


FIG. 6

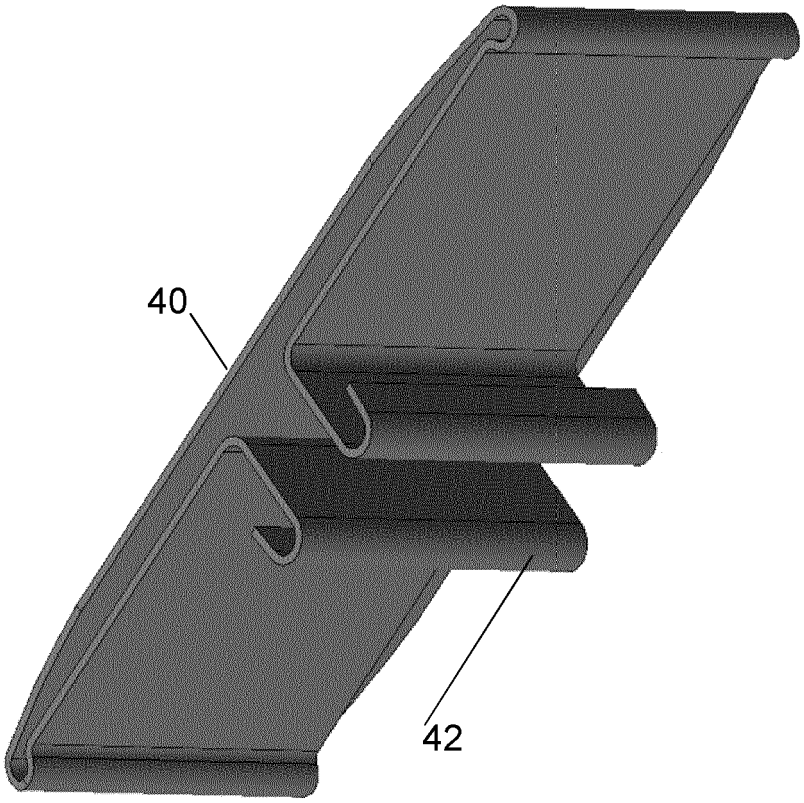


FIG. 7

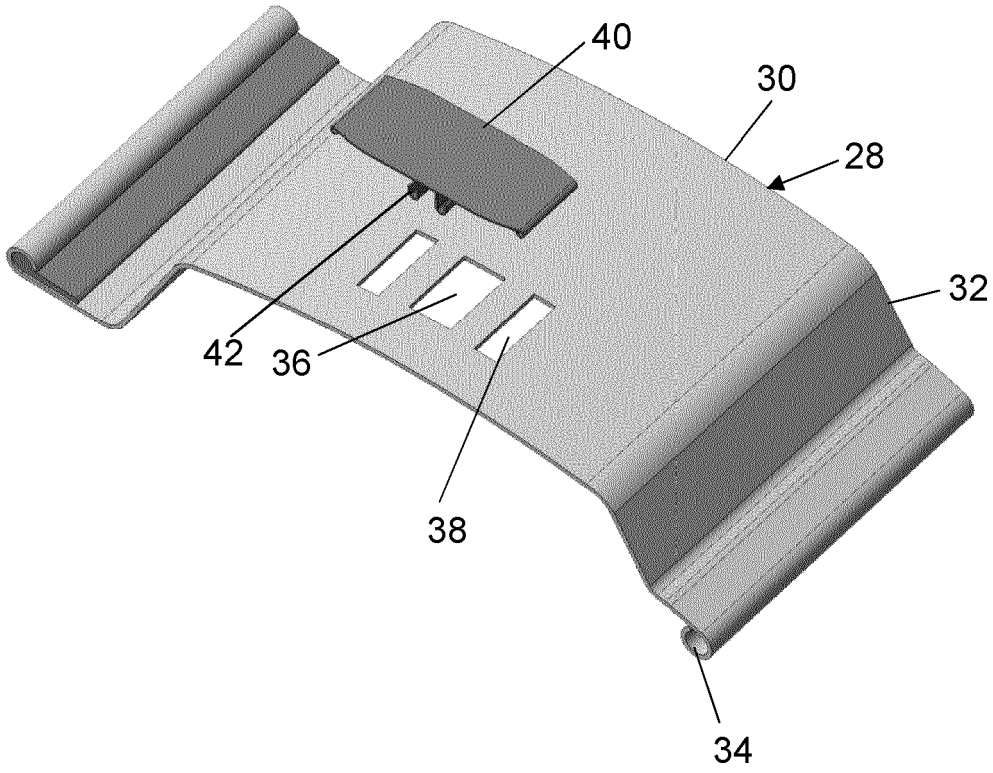
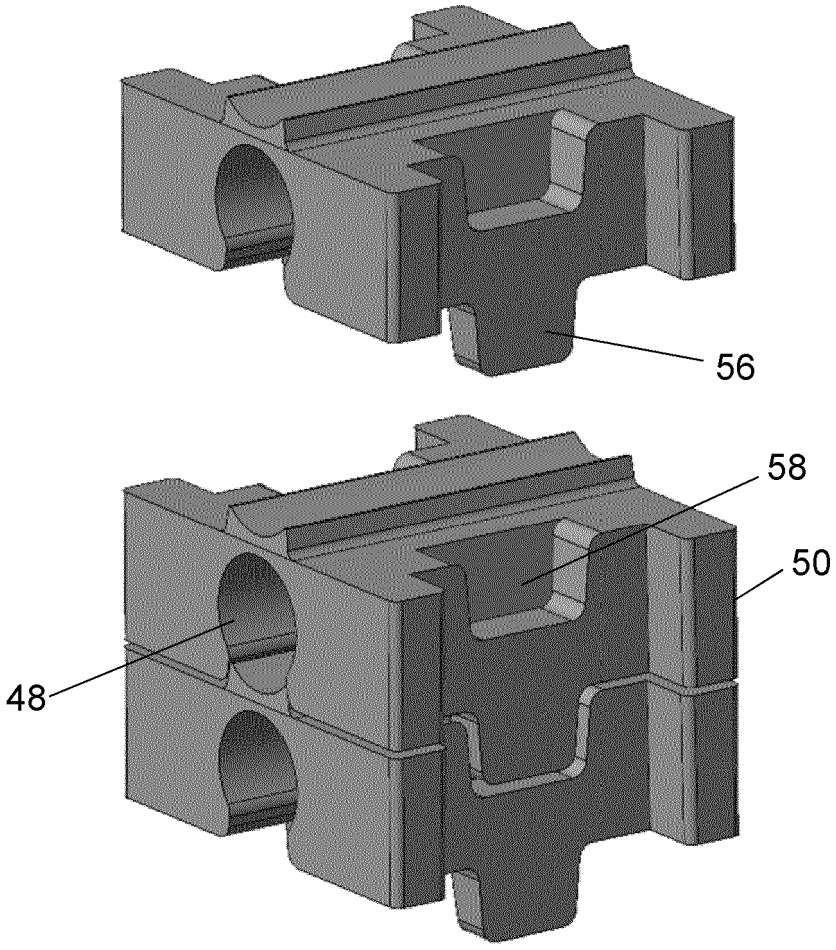


FIG. 8



REFERENCES CITED IN THE DESCRIPTION

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