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(54) **Adjustable mounting arrangement for a window screening**

Einstellbare Befestigungsanordnung für einen Fensterbehang

Fixation réglable d'un dispositif d'obturation de fenêtre

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The file contains technical information submitted after the application was filed and not included in this specification

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Description

[0001] This invention relates to a screen assembly for a window, and in particular to a screen assembly for a window that can be easily fitted and which can reliably shut out light through the window when the screen is closed.

[0002] Windows are typically provided with screen assemblies fitted to the inside of the frame of the window opening, typically fixed to the upper face of the window opening or between the sides of the window opening adjacent the upper face thereof, for selectively obscuring the window. In the case of a roller blind, such screen assemblies typically have a roller mounted at an upper side of the frame around which a suitable screen is wound. The screen may be lowered and raised by rotating the roller. The lower end of the screen may be provided with a bar such that the screen hangs from the roller under gravity.

[0003] A problem with such known screen assemblies is that the width of the roller must be accurately matched to the width of the window opening to enable the screen assembly to be mounted within the window opening. Furthermore, gaps between the sides of the screen and the sides of the window opening prevent the screen from completely shutting out light when the screen is closed.

[0004] WO 2012/080189 discloses an improved screen assembly wherein a screen is supported by an elongate support member adapted to be mounted in an upper region of the window opening, a pair of mounting brackets being provided for attachment to respective sides of the window opening adjacent the top face of the window opening, each end of the elongate support member having means for engaging a respective mounting bracket, whereby the mounting brackets may be attached the sides of a window opening such that the support member may be engaged onto the mounting brackets to mount the support member in the window opening.

[0005] The engaging means on each end of the elongate support member comprises a recess for receiving a body portion of a respective bracket such that the elongate support member may be engaged over the mounting brackets to retain the support member between the sides of the window opening. This simplifies installation of the screen assembly.

[0006] A problem with is arrangement is that the length of the elongate support member must be closely matched to the width of the window opening so that the recess on each end of the elongate support member can fit over the respective mounting bracket. If the elongate support member is too short, an end thereof may fall off the adjacent mounting bracket. An object of the present invention is to mitigate this problem. GB 2 339 820 discloses a spring biased end plug assembly for use in a roller of a blind or shade.

[0007] According to the present invention there is provided a screen assembly for a window as claimed in claim 1.

[0008] Each elongate finger may be integrally formed on said base portion of the respective recess A front face of the elongate support member may define a substantially planar member adapted to extend between the sides of the window opening within which the elongate support member is mounted. Preferably side portions of said front face comprise laterally, preferably telescopically, extendable portions adapted to be extendable to cover any gaps between the elongate support member and the sides of the window opening.

[0009] An upper side of the front face of the elongate support member may be provided with a flange adapted to be located against an outer face of an upper side of the window opening to obscure any gap existing between the support member and the window opening.

[0010] Preferably each mounting bracket is formed from a first part adapted to be mounted onto a side of the window opening and a second part, incorporating said body portion of the mounting bracket adapted to engage the recess of the adjacent end of the elongate support member, said second part being mountable on said first part in a plurality of different positions to enable adjustment of the position of the body portion and thus adjustment of the position of the elongate support member within the window opening.

[0011] An embodiment of the present invention will now be described, by way of example only, with reference to the accompanying drawings, in which :-

Figure 1 is a perspective view of a window provided with a screen assembly according to an embodiment of the present invention;

Figure 2 is a perspective view of an end fitting of the screen assembly of Figure 1;

Figure 3 is a further perspective view of an end fitting of the screen assembly of Figure 1;

Figure 4 is a perspective view of a mounting bracket of the screen assembly of Figure 1;

Figure 5 is an exploded view of the mounting bracket of Figure 6;

Figure 6 is a detailed rear view of one side of the screen assembly of Figure 1;

Figure 7 is a further detailed rear view of one side of the screen assembly of Figure 1;

Figure 8 is a perspective view of an end fitting of the screen assembly of Figure 1; and

Figure 9 is a further perspective view of an end fitting of the screen assembly of Figure 1.

[0012] As shown in Figure 1, a screen assembly for a

window comprises a spring tensioned roller mounted within a support member defining an elongate hollow cassette 2 secured in an upper side of the window opening, around which roller a screen (not shown) is wound.

[0013] The cassette 4 is mounted between the sides of the window opening adjacent the upper face of the window opening 4 by means of a pair of mounting brackets 20 (hidden in Figure 1), as will be described below in more detail.

[0014] The front face 6 of the cassette is provided with an integrally formed upper flange 8 arranged to overlap the wall adjacent the upper face of the window opening 4 such that the cassette 2 fits against the window opening substantially flush with the wall, the flange 8 covering any gap between the cassette 2 and the upper side of the window opening 4.

[0015] Similarly, end fittings 10,12 of the cassette are provided with laterally extending flanges 13,14 arranged to abut the sides of the window opening 4 to cover any gaps between the sides of the cassette 2 and the sides of the window opening 4.

[0016] As shown in Figures 2 and 3, each end fitting 10,12 of the cassette 2 is provided with a slot like recess 16 adapted to receive a body portion 18 of a respective mounting bracket 20, in a similar manner to the arrangement discloses in WO 2012/080189. A resilient finger 22 extends outwardly from a base region of the recess 16 of each end fitting 10,12, away from an open side of the respective recess 16, to act against an outer face of the body portion 18 of a respective mounting bracket 20 when the end fittings 10,12 of the cassette 2 are mounted over the mounting brackets 20. The resilient finger 22 of each recess 16 biases the end fittings 10,12 away from the mounting brackets 20, thus centralising the cassette 2 within the window opening. This ensures that any discrepancy between the length of the cassette 2 and the width of the window opening, leading to a gap between the sides of the cassette 2 and the window opening 4, is divided substantially equally on either side of the cassette 2, minimising the chance of the cassette 2 falling off the mounting brackets. The resilient fingers 22 also serve to retain the end fittings 10,12 of the cassette in place over the mounting brackets 20 until they are secured to the mounting brackets 20 via the insertion of screws. Each resilient finger 22 is integrally formed on the body of the respective end fitting 10,12, extending outwardly from the base of the recess 16 and inwardly away from an open side of the recess 16 so that the resilient arm 22 presents a ramped restriction to the insertion of the body portion 18 of the respective mounting bracket 20 as the cassette 2 is mounted into the window opening, the resilient finger 22 being displaceable inwardly to permit insertion of the body portion 18 of the respective mounting bracket 20 into the recess 16.

[0017] Each laterally extending flange portion 12,13 of each end fitting 10,12 of the cassette is laterally slidable with respect to the body of the respective end fitting 10,12 such that the respective flange portion can be slid outwardly with respect to the front face 6 of the cassette 2 to fill any gap between the respective end fitting 10,12 and the adjacent side of the window opening 4, as can be seen from Figure 3.

[0018] In use, the mounting brackets 20 are secured to the sides of the window opening and the cassette 2 is located over the mounting brackets 20 such that the respective body portions 18 of the mounting brackets 20 slide into the corresponding recesses 16 in the end fittings 10,12 of the cassette 2. The cassette 2 is pushed over the brackets 20 until the flange 8 on the front face 6 of the cassette 2 abuts the front face of the head of the window opening 4. The resilient arm 22 on each recess 16 acts against the adjacent face of the respective mounting bracket 20 to centralise the cassette 2 between the sides of the window opening and to temporarily retain the cassette within the window opening. Formations 24 formed on the distal end of each resilient arm 22 enhance the retention of the cassette 2 in place in the window opening.

[0019] The end fittings 10,12 are provided with apertures 26 in the lower face of the support beam in the region of each recess 50 through which fasteners, such as self tapping screws, can be inserted to extend into the body portion 18 of each mounting bracket 20 to secure the cassette 2 to the mounting brackets 20. The apertures 26 are inclined to the vertical to assist insertion of the screws into the brackets 20 by providing better access for a screwdriver. Receiving apertures 28 may be provided in the mounting brackets 20 for receiving the screws.

[0020] Where the length of the cassette 2 is substantially equal to the width of the window opening 4, the body portion 18 of each mounting bracket 20 will be fully inserted into the corresponding recess 16 of the respective end fitting 10,12 of the cassette 2, as shown in Figures 6 and 8. In such case, the resilient fingers 22 of each end fitting 10,12 will be pushed back to a flattened or fully retracted configuration.

[0021] However, where the cassette 2 is slightly narrower than the window opening 4, possibly due to a mistake made in measurement of the width of the window opening 4, gaps may exist between the outer face of the body portion 18 of each mounting bracket 20 and the inner face of the corresponding recess 16 in the respective end fitting 10,12 of the cassette 2. In such situation, the resilient fingers 22 of the recesses 16 provide inwardly directed biasing forces against the cooperating faces of the body portions 18 of the mounting brackets, as shown in Figure 7 and 9, to centralise the cassette 2 within the window opening 4, dividing the difference between the length of the cassette 2 and the width of the window opening equally on either side of the cassette, thus minimising the risk of one end of the cassette falling off a respective mounting bracket.

[0022] Where such gaps may exist between the ends of the cassette and the sides of the window opening, the slidable flange portions 13,14 of the end fittings 10,12 of

the cassette may be extended to fill any such gaps.

[0023] As shown in Figures 4 and 5, each mounting bracket 20 is formed from two parts, a first part 20A being mountable on a respective side of the window opening and a second part 20B, mountable upon the first part 20A, the second part 20B incorporating the body portion 18 upon which a respective end fitting 6,10 of the cassette 4 can be mounted via the corresponding recess 16 formed therein. The first and second part 20A,20B of each mounting bracket are adapted to be vertically adjustable with respect to one another to allow the position of the body portion 18 of the mounting bracket 20 to be adjusted to take account of any misalignment of the brackets, for example due to the window opening not being completely square or due to incorrect mounting of the brackets 20 on the sides of the window opening.

[0024] The first part 20A of each mounting bracket 20 comprises a relatively thin planar base part 30 having an upper tab or wing 32 arranged to abut an upper corner of the window opening to locate the first part 20A of the mounting bracket against the window opening. A pair of substantially rectangular mounting blocks 34,26 project from the base part 161 upon which can be mounted second part 20B of the respective mounting bracket. Each mounting block 34,36 includes substantially vertically arranged sides having serrated or tooth like formations 38 formed thereon. Mounting apertures 39 are provided in each mounting block 34,36 through which screws or nails can be inserted to secure the mounting brackets to the sides of the window opening. The second part 20B of each mounting bracket includes substantially rectangular recesses 40,42 for receiving the mounting blocks 34,26 of the first part 20A of the respective mounting bracket. The sides of the recesses 40,42 are provided with serrated or tooth like formations 44 adapted to engage the corresponding formations 38 on the sides of the mounting blocks 34,36. As can be seen from Figure 4, the height of the mounting blocks 34,36 of the first part 20A of each mounting bracket is less than the height of the cooperating recesses 40,42 of the respective second part 20B so that the second part 20B of each mounting bracket can be mounted on the respective first part 20A in a number of different vertically spaced locations. The cooperating serrated or toothed formations 38,44 on the sides of the mounting blocks 34,36 and recesses 40,42 secure the two parts 20A,20B in the selected position.

Claims

1. A screen assembly for a window comprising a screen supported by an elongate support member (2) adapted to be mounted in an upper region of the window opening, a pair of mounting brackets (20) being provided for attachment to respective sides of the window opening (4) adjacent the top face of the window opening, each end of the elongate support member (2) being provided with a recess (16) adapted to receive a body portion (18) of a respective mounting bracket (20) such that the elongate support member (2) may be engaged over the mounting brackets (20) to retain the support member (2) between the sides of the window opening (4), a respective biasing means (22) being associated with each recess (16) and/or body portion (18) acting to provide a biasing force to urge the respective mounting bracket (20) away from the respective recess (16) in the adjacent end of the elongate support member (2), such biasing forces acting to centralise the elongate support member (2) within the window opening (4), **characterised in that** each respective biasing means comprises a resilient elongate finger (22) extending outwardly from a base of the recess (16) of a respective end of the elongate support member (2) and away from an open side of the recess (16) via which the cooperating body portion (18) of the respective mounting bracket (20) is inserted into the recess such that the elongate finger (22) defines a ramped formation within the respective recess (16).

2. A screen assembly as claimed in any preceding claim, wherein each elongate finger (22) is integrally formed on said base portion of the respective recess (16).

3. A screen assembly as claimed in any preceding claim, wherein one or more projections (24) or similar formations are provided on an outer end of each elongate finger (22).

4. A screen assembly as claimed in any preceding claim, wherein a front face (6) of the elongate support member (2) defines a substantially planar member adapted to extend between the sides of the window opening within which the elongate support member is mounted.

5. A screen assembly as claimed in claim 4, wherein side portions (10,12) of said front face (6) comprise laterally extendable portions adapted to be extendable to cover any gaps between the elongate support member (2) and the sides of the window opening (4).

6. A screen assembly as claimed in any preceding claim, wherein an upper side of the front face of the elongate support member (2) is provided with a flange (8) adapted to be located against an outer face of an upper side of the window opening (4) to obscure any gap existing between the support member (2) and the window opening (4).

7. A screen assembly as claimed in any preceding claim, wherein each mounting bracket (20) is formed from a first part (20A) adapted to be mounted onto a side of the window opening (4) and a second part (20B), incorporating said body portion (18) of the

mounting bracket (20) adapted to engage the recess (16) of the adjacent end of the elongate support member (2), said second part (20B) being mountable on said first part (20A) in a plurality of different positions to enable adjustment of the position of the body portion (18) and thus adjustment of the position of the elongate support member (2) within the window opening (4).

Patentansprüche

1. Abschirmungsanordnung für ein Fenster, umfassend eine Abschirmung, die von einem langgestreckten Tragelement (2) getragen wird, das dazu angepasst ist, in einer oberen Region der Fensteröffnung angebracht zu werden, wobei ein Paar Halterungen (20) zum Befestigen an jeweiligen Seiten der Fensteröffnung (4) der oberen Oberfläche der Fensteröffnung benachbart bereitgestellt sind, wobei jedes Ende des langgestreckten Tragelements (2) mit einer Aussparung (16) versehen ist, die dazu angepasst ist, einen Körperabschnitt (18) einer jeweiligen Halterung (20) aufzunehmen, sodass das langgestreckte Tragelement (2) über den Halterungen (20) in Eingriff gebracht werden kann, um das Tragelement (2) zwischen den Seiten der Fensteröffnung (4) zu halten, wobei ein jeweiliges Vorspannmittel (22) mit jeder Aussparung (16) und/oder jedem Körperabschnitt (18) assoziiert ist, das wirkt, um eine Vorspannkraft bereitzustellen, um die jeweilige Halterung (20) von der jeweiligen Aussparung (16) in dem benachbarten Ende des langgestreckten Tragelements (2) weg zu drücken, wobei diese Vorspannkräfte wirken, um das langgestreckte Tragelement (2) in der Fensteröffnung (4) zu zentrieren, **dadurch gekennzeichnet, dass** jedes jeweilige Vorspannmittel einen elastischen langgestreckten Finger (22) umfasst, der sich von einer Basis der Aussparung (16) eines jeweiligen Endes des langgestreckten Tragelements (2) nach außen und weg von einer offenen Seite der Aussparung (16), durch die der zusammenwirkende Körperabschnitt (18) der jeweiligen Halterung (20) in die Aussparung eingesteckt ist, erstreckt, sodass der langgestreckte Finger (22) ein rampenförmiges Gebilde in der jeweiligen Aussparung (16) definiert.

2. Abschirmungsanordnung nach dem vorangehenden Anspruch, wobei die langgestreckten Finger (22) jeweils an den Basisabschnitt der jeweiligen Aussparung (16) angeformt sind.

3. Abschirmungsanordnung nach einem der vorangehenden Ansprüche, wobei ein oder mehrere Vorsprünge (24) oder ähnliche Gebilde an einem äußeren Ende jedes langgestreckten Fingers (22) bereitgestellt sind.

4. Abschirmungsanordnung nach einem der vorangehenden Ansprüche, wobei eine vordere Oberfläche (6) des langgestreckten Tragelements (2) ein im Wesentlichen ebenes Element definiert, das dazu angepasst ist, sich zwischen den Seiten der Fensteröffnung zu erstrecken, in der das langgestreckte Tragelement angebracht ist.

5. Abschirmungsanordnung nach Anspruch 4, wobei Seitenabschnitte (10, 12) der vorderen Oberfläche (6) seitlich ausziehbare Abschnitte umfassen, die dazu angepasst sind, ausziehbar zu sein, um etwaige Spalte zwischen dem langgestreckten Tragelement (2) und den Seiten der Fensteröffnung (4) abzudecken.

6. Abschirmungsanordnung nach einem der vorangehenden Ansprüche, wobei eine Oberseite der vorderen Oberfläche des langgestreckten Tragelements (2) mit einem Flansch (8) versehen ist, der dazu angepasst ist, an einer äußeren Oberfläche einer Oberseite der Fensteröffnung (4) anliegend positioniert zu werden, um einen etwaigen, zwischen dem Tragelement (2) und der Fensteröffnung (4) bestehenden Spalt zu verdecken.

7. Abschirmungsanordnung nach einem der vorangehenden Ansprüche, wobei jede Halterung (20) aus einem ersten Teil (20A), der dazu angepasst ist, an einer Seite der Fensteröffnung (4) angebracht zu werden, und einem zweiten Teil (20B), der den Körperabschnitt (18) der Halterung (20) enthält, der dazu angepasst ist, mit der Aussparung (16) des benachbarten Endes des langgestreckten Tragelements (2) in Eingriff zu treten, gebildet ist, wobei der zweite Teil (20B) in einer Vielzahl von verschiedenen Stellungen an dem ersten Teil (20A) angebracht werden kann, um das Verstellen der Stellung des Körperabschnitts (18) und somit das Verstellen der Stellung des langgestreckten Tragelements (2) in der Fensteröffnung (4) zu ermöglichen.

Revendications

1. Ensemble formant écran pour une fenêtre comportant un écran supporté par un élément de support allongé (2) adapté pour être monté dans une région supérieure de l'ouverture de fenêtre, une paire de supports de montage (20) mis en œuvre à des fins de fixation sur des côtés respectifs de l'ouverture de fenêtre (4) de manière adjacente par rapport à la face supérieure de l'ouverture de fenêtre, chaque extrémité de l'élément de support allongé (2) comportant un évidement (16) adapté pour recevoir une partie de corps (18) d'un support de montage respectif (20) de telle sorte que l'élément de support allongé (2) peut être mis en prise sur les supports

de montage (20) pour retenir l'élément de support (2) entre les côtés de l'ouverture de fenêtre (4), un moyen de sollicitation respectif (22) étant associé à chaque évidement (16) et/ou partie de corps (18) agissant pour fournir une force de sollicitation afin de pousser le support de montage respectif (20) à l'opposé de l'évidement respectif (16) dans l'extrémité adjacente de l'élément de support allongé (2), de telles forces de sollicitation agissant pour centrer l'élément de support allongé (2) à l'intérieur de l'ouverture de fenêtre (4), **caractérisé en ce que** chaque moyen de sollicitation respectif comporte un doigt allongé élastique (22) s'étendant vers l'extérieur depuis une base de l'évidement (16) d'une extrémité respective de l'élément de support allongé (2) et à l'opposé d'un côté ouvert de l'évidement (16) par le biais duquel la partie de corps coopérante (18) du support de montage respectif (20) est insérée dans l'évidement de telle sorte que le doigt allongé (22) définit une formation inclinée à l'intérieur de l'évidement respectif (16).

2. Ensemble formant écran selon la revendication précédente, dans lequel chaque doigt allongé (22) est formé d'un seul tenant sur ladite partie de base de l'évidement respectif (16).

3. Ensemble formant écran selon l'une quelconque des revendications précédentes, dans lequel une ou plusieurs parties saillantes (24) ou formations similaires sont mises en œuvre sur une extrémité extérieure de chaque doigt allongé (22).

4. Ensemble formant écran selon l'une quelconque des revendications précédentes, dans lequel une face avant (6) de l'élément de support allongé (2) définit un élément sensiblement planaire adapté pour s'étendre entre les côtés de l'ouverture de fenêtre à l'intérieur de laquelle l'élément de support allongé est monté.

5. Ensemble formant écran selon la revendication 4, dans lequel des parties latérales (10, 12) de ladite face avant (6) comportent des parties en mesure de s'étendre dans le sens latéral adaptées à des fins d'extension pour recouvrir des vides quelconques entre l'élément de support allongé (2) et les côtés de l'ouverture de fenêtre (4).

6. Ensemble formant écran selon l'une quelconque des revendications précédentes, dans lequel un côté supérieur de la face avant de l'élément de support allongé (2) comporte une bride (8) adaptée pour être située contre une face extérieure d'un côté supérieur de l'ouverture de fenêtre (4) pour obscurcir tout vide existant entre l'élément de support (2) et l'ouverture de fenêtre (4).

7. Ensemble formant écran selon l'une quelconque des revendications précédentes, dans lequel chaque support de montage (20) est formé à partir d'une première partie (20A) adaptée pour être montée sur un côté de l'ouverture de fenêtre (4) et d'une deuxième partie (20B), incorporant ladite partie de corps (18) du support de montage (20) adapté pour mettre en prise l'évidement (16) de l'extrémité adjacente de l'élément de support allongé (2), ladite deuxième partie (20B) étant en mesure d'être montée sur ladite première partie (20A) dans une pluralité de différentes positions pour permettre un ajustement de la position de la partie de corps (18) et ainsi l'ajustement de la position de l'élément de support allongé (2) à l'intérieur de l'ouverture de fenêtre (4).

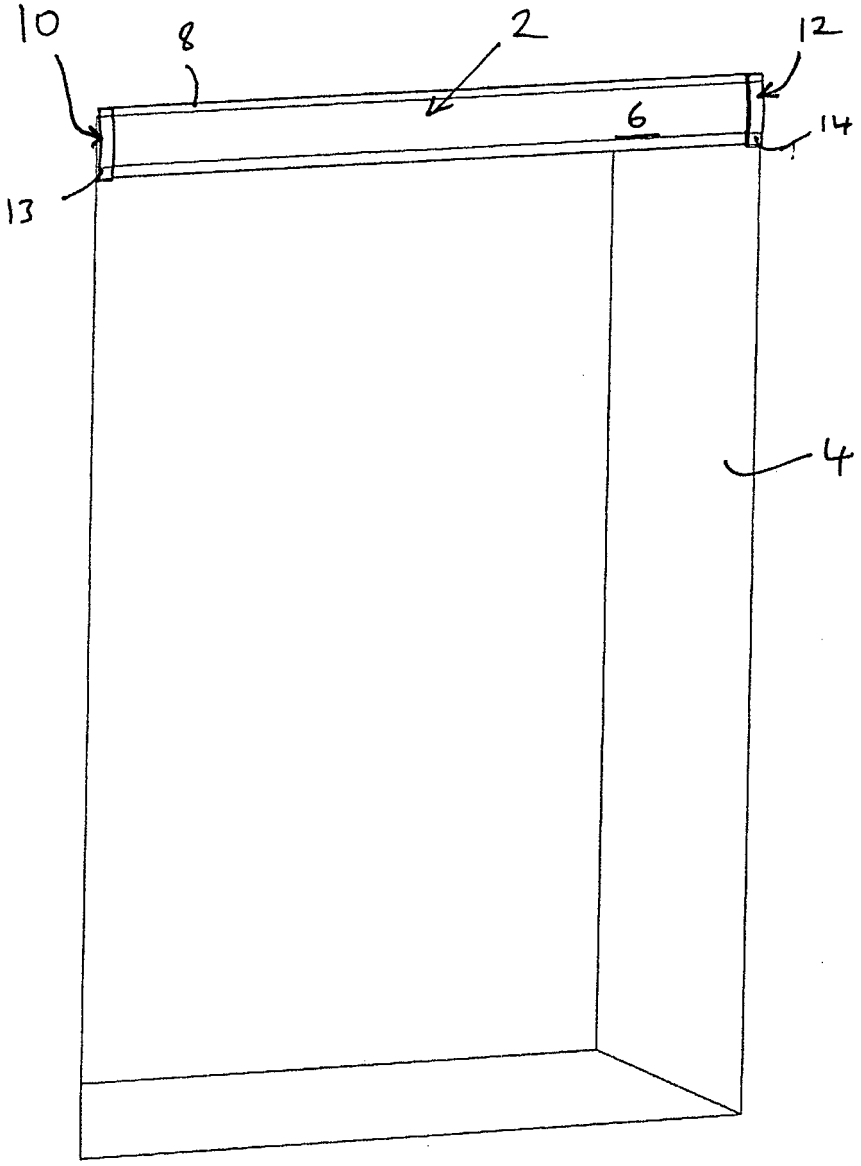

Figure 1

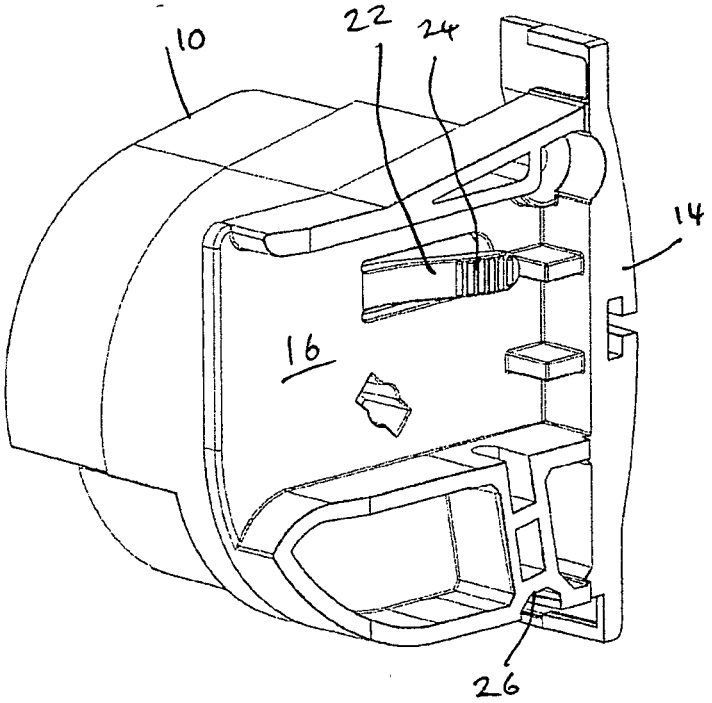

Figure 2

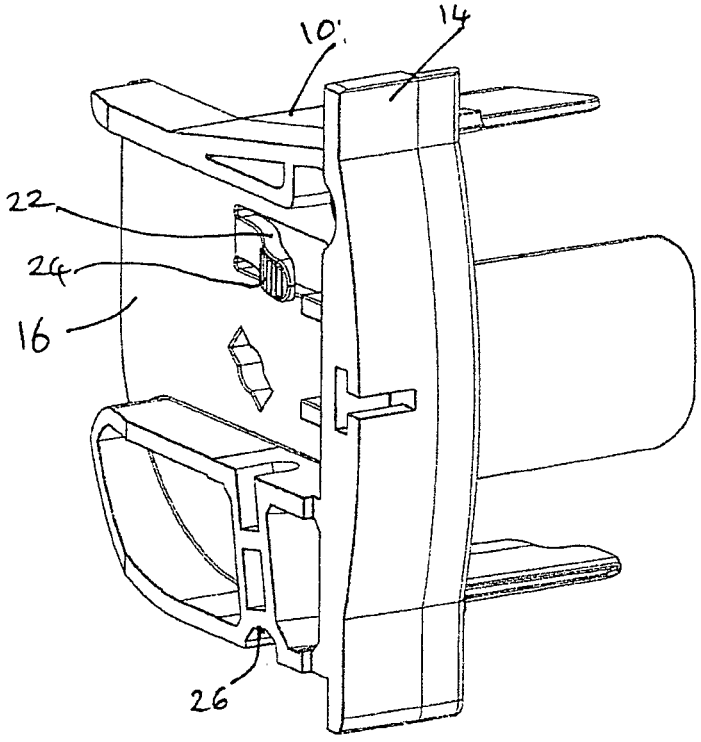

Figure 3

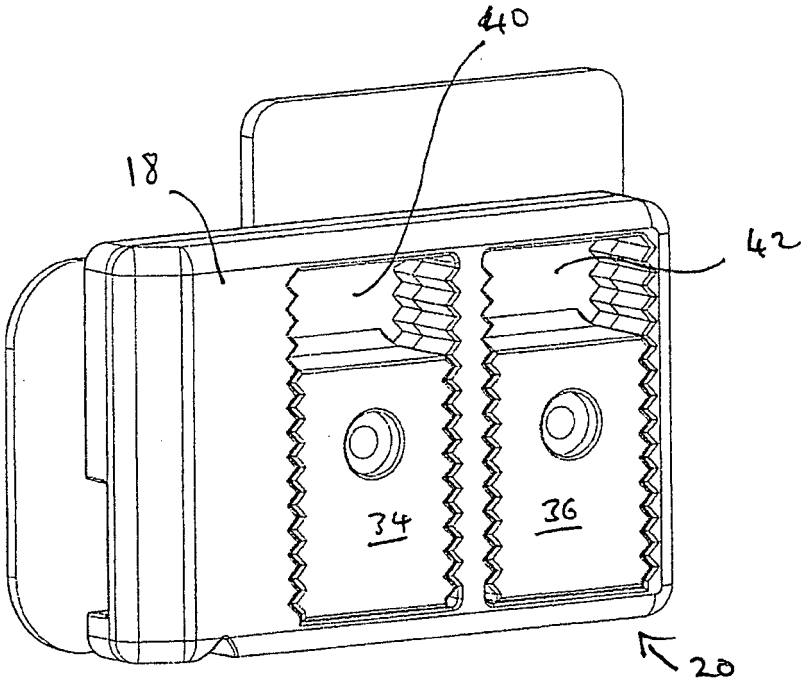

Figure 4

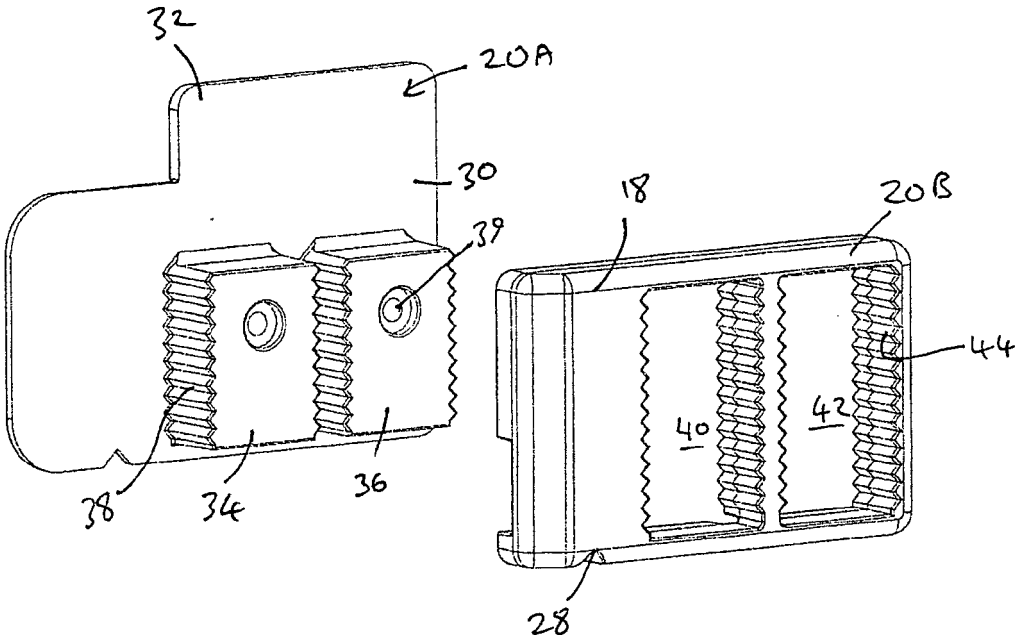

Figure 5

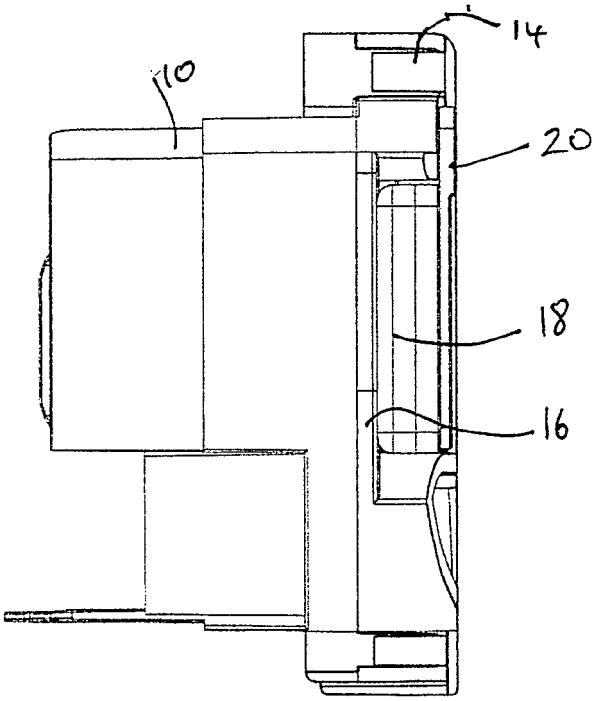

Figure 6

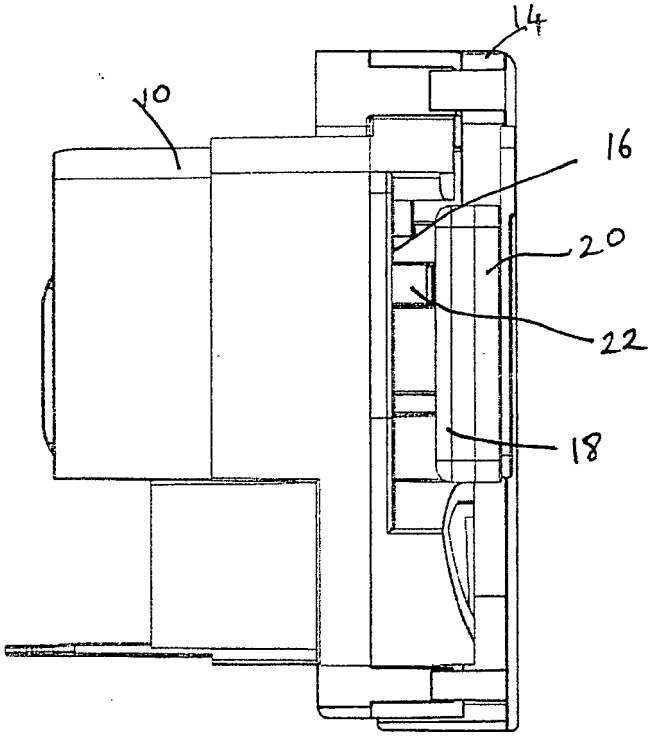

Figure 7

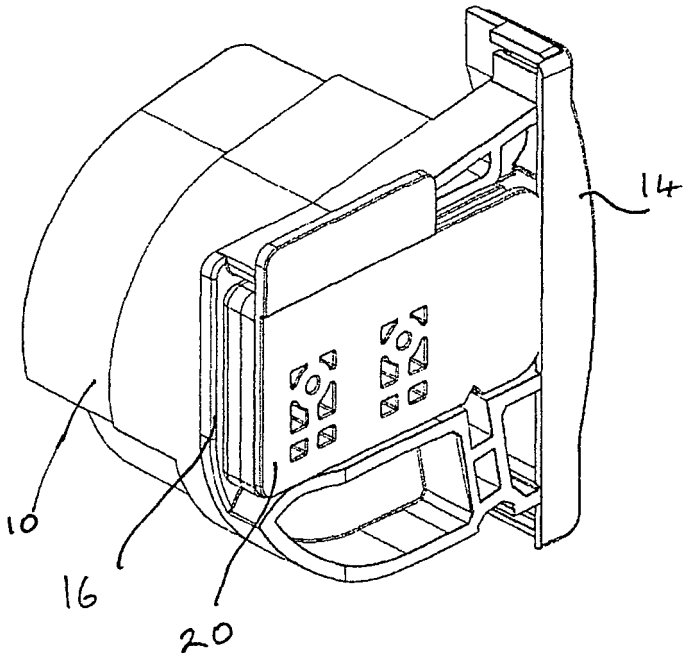

Figure 8

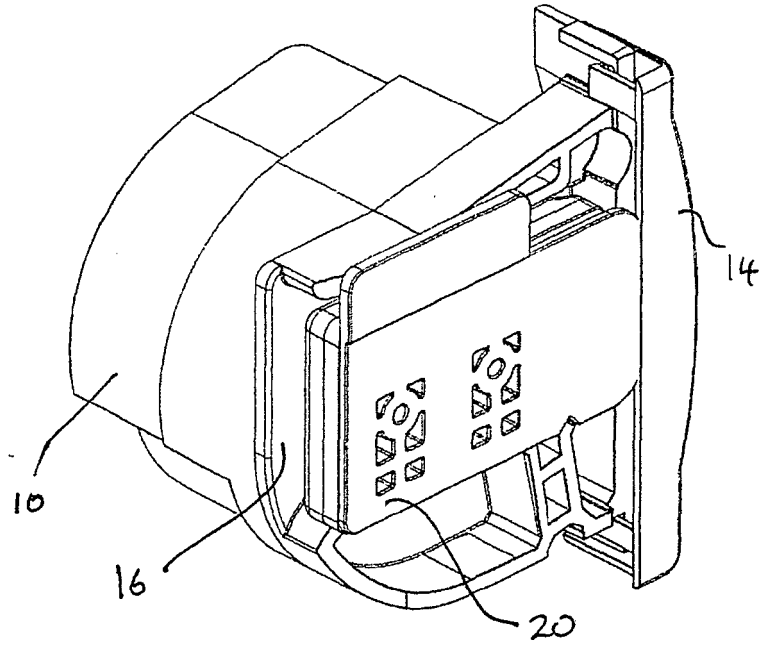

Figure 9

REFERENCES CITED IN THE DESCRIPTION

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