

# PATENT SPECIFICATION (11)

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- (72) Inventor CHRISTOPHER STEVEN PALMER



## (54) CURTAIN OR DRAPE SUSPENSION ARRANGEMENTS

(71) We, SWISH PRODUCTS LIMITED, of Lichfield Road Industrial Trading Estate, Tamworth in the County of Stafford, a British company, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to curtain or drape suspension arrangements and parts thereof.

Plastics materials have become widely used for such arrangements in recent years and this use, while providing many improvements over old arrangements, has also brought about a radical change in the design and appearance from those old arrangements which have been and still are valued for their character and ornateness. One such old arrangement comprised a rail in the form of a tube having a fluted wall. The curtain or drape was secured to rings slidable along the rail and the rail was supported at its ends by ornamental brackets, often shaped like an acorn or fir cone. The rail, rings and brackets were usually made of polished brass.

In one aspect the present invention consists in a rail for a curtain or drape suspension arrangement and comprising an elongate element defining a runway for curtain gliders and having a generally oblong rectangular cross-sectional shape thus having two narrow faces and one and another wide faces, and an elongate member having a generally semi-cylindrical outer surface and formations by means of which the member is detachably secured to the element and located over said another wide face of the element.

The present invention provides a curtain suspension arrangement which can be made of plastics material and which provides all the advantages inherent in the use of that material, and yet having an appearance similar to that of an old arrangement.

The present invention in another aspect consists in an elongate member of a rail of a curtain or drape suspension arrangement comprising a generally semi-tubular shaped portion along the longitudinal edges of which

extend formations in the form of surfaces adapted to lie against and grip narrow faces of an elongate element of oblong rectangular cross-sectional shape, the member being made from a resiliently flexible material and thus being enabled to be arranged to urge resiliently the surfaces of the formations towards each other so as to grip the narrow faces of the element the member having in one formation a lip portion disposed to engage one wide face of the element and having in the other formation of a rib portion disposed to engage the other wide face of the element.

The present invention also consists in a curtain suspension arrangement including a rail according to the present invention and including a curtain suspension glider having a component engaged in the one slot of T-shaped cross-section in the rail and shaped to engage the slot so as to restrict pivoting movement of that component relative to the rail, the glider including a link connected at its one end to the component by means permitting the link to pivot relative to the component in a plane parallel to the one wide face of the element of the rail, the link having at its other end means for the connection of a curtain.

In a curtain suspension arrangement including a rail according to the present invention and in which the formation having a surface lying against the upper narrow face of the element includes a portion engaging the one wide face of the element a support bracket connected to the rail may have a face towards which the one face of the element of the rail is resiliently urged to lie, the portion of the formation being engaged by that face of the bracket and being gripped between that face and the one face of the element of the rail.

Embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:—

Figure 1 is a cross-sectional view of a curtain suspension arrangement according to the present invention; and

Figure 2 is a part-sectional perspective view of a "broken-away" part of the curtain suspension arrangement illustrated in Figure 1 of the drawings.

Referring to the accompanying drawings, a curtain rail 10 of the curtain suspension arrangement has an element 11 which is of greatly oblong rectangular cross-sectional shape and which is disposed substantially upright in use as illustrated in Figure 1. In one wide face 12 of the element 11 a pair of superposed slots 13, 14 of T-shaped cross-section is provided. Curtain supporting gliders 15 are received in and supported for sliding movement along the slot 13 constituting a runway for the gliders 15 and in the other slot 14 ends 16 of support brackets 17 for the rail are engaged, this latter slot 14 defining a locating formation for the ends 16 of the support brackets 17.

As illustrated in Figure 1, when the rail is secured in place for use, the one wide face 12 of the element 11 faces towards a surface to which the support brackets 17 are secured and over which the curtain or drape is to hang, and this face 12 can be considered as the rear face of the element 11 or rail as it is not normally seen, whereas the other wide face 18 of the element 11 faces away from that surface and towards the interior of a room in which the rail is employed and is considered as the front face of the element 11.

A member 19 of the rail has a portion 20 of generally semi-tubular shape and thus the outer surface of the portion 20 is generally semi-cylindrical but is fluted. The member 19 has, extending along each of its longitudinal edges, plate shaped formations 21, 22 having surfaces arranged to lie against and to grip resiliently across the narrow faces of the element 11, so securing the member 19 with its portion 20 extending over and covering the front face 18 of the element 11. The surfaces of the formations 21, 22 grip the narrow faces of the element 11 because the member is made from a resiliently flexible material and the distance between those surfaces when the member is free of the element is smaller than the distance between the narrow faces. Thus the member is clipped onto the element. The surface of formation 21 is relieved to facilitate the surfaces of formation 21 to lie in contact with the narrow face of the element 11. The fluted surface of the member 20 faces into the interior of the room and gives the rail 10 the appearance of an old arrangement.

The member 19 is further located on the element 11 by means of portions in the form of two locating ribs 23, one at each junction between the portion 20 and one of the plate portions 21, 22 and by means of a portion formed by a lip 24 at the free edge of the plate portion 21. The ribs 23 engage the

other face, the front face of the element 11 and the lip 24 engages the one face of the element 11.

As illustrated in Figure 1 the lip 24 and rib 23 on plate portion 21 locate the upper end of the member relative to the upper end of the element 11 and the lip 24 and the rib 23 at plate portion 22 resist any tendency for the member 19 to topple off the element 11.

The end 16 of bracket 17 has a part of crescent-shaped cross-section which is elastically deformable and is deformed to permit the lip 24 to be disposed between the rear face 12 of the element 11 and an adjacent face of bracket 17 where it is thus resiliently gripped and the member 19 consequently is even more firmly secured to the element 11.

The curtain supporting glider 15 has a component 25 engaged in the slot 13 of T-shaped cross-section in the element 11 of the rail 10. The component includes a head portion 26 engaged in the wider part of the slot 13 to retain the glider 15 on the rail and a neck portion 27 engaged in the narrow part of the slot 13. The neck portion 27 has a generally elongate cylindrical shape so that it makes linear contact with the lower face of the slot at the narrow part of the slot so as to minimise friction. The neck portion 27 being elongate restricts pivotal movement of the component 25 relative to the rail 10 about any axis normal to the rear face 12 of the element 11. The component includes a portion 28 which is plate-like adjacent to the neck portion to which it is connected and lies adjacent the rear face 12 of the element 11. The portion 28 of the component 25 extends in the shape of a "C" around the front of the rail 10 to simulate the curtain rings of an old curtain suspension arrangement. When the component is moved along the rail it is retained substantially upright due to the engagement of the elongate neck portion 27 in the narrow part of the slot 13.

The glider includes a link 29 connected at its upper end to the component 25. At its upper end the link has an aperture 30 engaged on a stem 31 projecting from the portion 28 of the component 25 and the stem 31 has a head 32 to retain the link 29 on the component 25. At its lower end the link 29 has a hole 33 to receive a curtain hook (not shown). Thus the link 29 is permitted to pivot relative to the component 25 in a plane parallel to the rear face 12 of the element 11 so that the pulling of curtains does not tilt the component and thus cause jamming of the neck portion or head portion 26 in the slot 13.

The link 29 is disconnectible from the component 25. The aperture 30 is non circular in shape being generally oblong and the head 32 is of generally complementary shape. Normally the link depends vertically from the component, as illustrated in Figure

2 of the drawings, and the aperture 30 is perpendicularly out of register with the head 32 and the link 29 is retained on the component 25, but when the link 29 is pivoted to a horizontal position the aperture 30 is in register with the head 32 and the link 29 can then be disconnected from the component 25.

The member 19 may be used in circumstances in which two lengths of such member require to be joined together. One suitable connector element (not illustrated) for such joining comprises two part-cylindrical portions so arranged relative to one another and of such dimensions that one lies against the convex surface of the member 19 while the other lies against the convex surface of the member 19. The two portions are joined together by a circumferentially disposed web midway along their lengths so that the end of one length of member 19 is engaged by one end of the connector element while the end of the other length of member 19 is engaged by the other end of the element. The cylindrical outer surface of the large part cylindrical portion can be formed with fluting in a similar manner to that of the lengths of member 19 it joins.

A different embodiment (not illustrated) differs from that described above only by the form of the member employed. The member in this different embodiment is of semi-cylindrical recess in the flat face to provide a substantially half-tubular configuration. The internal margins of its longitudinal edges are recessed to provide inwardly directed surfaces arranged to grip resiliently across the narrow faces of the element 11 so securing the member to the element 11 to cover its front face.

#### WHAT WE CLAIM IS:—

1. A rail for a curtain or drape suspension arrangement and comprising an elongate element defining a runway for curtain gliders and having a generally oblong rectangular cross-sectional shape thus having two narrow faces and one and another wide faces, and an elongate member having a generally semi-cylindrical outer surface and formations by means of which the member is detachably secured to the element and located over said another wide face of the element.

2. The rail according to claim 1 wherein the element is formed in its one wide face with a pair of superposed slots of T-shaped cross-section one of which forms the runway and is capable of receiving and supporting the curtain gliders and the other of which is capable of connection to support brackets.

3. The rail according to either claim 1 or claim 2 wherein the formations of the member comprise surfaces lying against and gripping the narrow faces of the element.

4. A rail according to claim 3 wherein

the formation having a surface lying against one of the narrow faces of the element includes a portion engaging the one wide face of the element.

5. A rail according to claim 4 wherein the formation having a surface engaging the other narrow face of the element has a portion engaging said another wide face of the element.

6. A rail according to claim 4 or claim 5 wherein the formation having a surface engaging the one narrow face has a portion engaging said another wide face of the element.

7. A rail according to any one of claims 3 to 6 wherein the member has a generally semi-tubular shaped portion the formations extending along the longitudinal edges of that portion, the member being made from a resiliently flexible material and being arranged to urge resiliently the surfaces of the formations towards each other so as to grip the narrow faces of the element.

8. A curtain suspension arrangement including a rail according to claim 2 or to any one of claims 3 to 7 dependant on claim 2 and including a curtain suspension glider having a component engaged in the one slot of T-shaped cross-section in the rail and shaped to engage the slot so as to restrict pivoting movement of that component relative to the rail, the glider including a link connected at its one end to the component by means permitting the link to pivot relative to the component in a plane parallel to the one wide face of the element of the rail, the link having at its other end means for the connection of a curtain.

9. A curtain suspension arrangement according to claim 8 wherein the means for the connection of a curtain comprises a hole to receive a curtain hook.

10. A curtain suspension arrangement according to either claim 8 or claim 9 wherein the means by which the link is connected to the component comprises an aperture in the link which is engaged on a stem projecting from the component of the glider, the stem having a head to retain the link on the stem.

11. A curtain suspension arrangement according to claim 10 wherein the aperture is non-circular in shape and the shape of the head is complementary to that of the aperture in the link, the arrangement being such that the link is normally retained on the stem by the head but is pivotable to a position in which its aperture registers with the head of the stem and the link can then be disconnected from the component.

12. A curtain suspension arrangement according to any one of claims 8 to 11 and including a rail according to claim 4 or having a rail according to claim 4 or any one of claims 5 to 7 dependant on claim 4 wherein the formation having a surface lying against

2 of the drawings, and the aperture 30 is perpendicularly out of register with the head 32 and the link 29 is retained on the component 25, but when the link 29 is pivoted to a horizontal position the aperture 30 is in register with the head 32 and the link 29 can then be disconnected from the component 25.

The member 19 may be used in circumstances in which two lengths of such member require to be joined together. One suitable connector element (not illustrated) for such joining comprises two part-cylindrical portions so arranged relative to one another and of such dimensions that one lies against the convex surface of the member 19 while the other lies against the convex surface of the member 19. The two portions are joined together by a circumferentially disposed web midway along their lengths so that the end of one length of member 19 is engaged by one end of the connector element while the end of the other length of member 19 is engaged by the other end of the element. The cylindrical outer surface of the large part cylindrical portion can be formed with fluting in a similar manner to that of the lengths of member 19 it joins.

A different embodiment (not illustrated) differs from that described above only by the form of the member employed. The member in this different embodiment is of semi-cylindrical recess in the flat face to provide a substantially half-tubular configuration. The internal margins of its longitudinal edges are recessed to provide inwardly directed surfaces arranged to grip resiliently across the narrow faces of the element 11 so securing the member to the element 11 to cover its front face.

#### WHAT WE CLAIM IS:—

1. A rail for a curtain or drape suspension arrangement and comprising an elongate element defining a runway for curtain gliders and having a generally oblong rectangular cross-sectional shape thus having two narrow faces and one and another wide faces, and an elongate member having a generally semi-cylindrical outer surface and formations by means of which the member is detachably secured to the element and located over said another wide face of the element.

2. The rail according to claim 1 wherein the element is formed in its one wide face with a pair of superposed slots of T-shaped cross-section one of which forms the runway and is capable of receiving and supporting the curtain gliders and the other of which is capable of connection to support brackets.

3. The rail according to either claim 1 or claim 2 wherein the formations of the member comprise surfaces lying against and gripping the narrow faces of the element.

4. A rail according to claim 3 wherein

the formation having a surface lying against one of the narrow faces of the element includes a portion engaging the one wide face of the element.

5. A rail according to claim 4 wherein the formation having a surface engaging the other narrow face of the element has a portion engaging said another wide face of the element.

6. A rail according to claim 4 or claim 5 wherein the formation having a surface engaging the one narrow face has a portion engaging said another wide face of the element.

7. A rail according to any one of claims 3 to 6 wherein the member has a generally semi-tubular shaped portion the formations extending along the longitudinal edges of that portion, the member being made from a resiliently flexible material and being arranged to urge resiliently the surfaces of the formations towards each other so as to grip the narrow faces of the element.

8. A curtain suspension arrangement including a rail according to claim 2 or to any one of claims 3 to 7 dependant on claim 2 and including a curtain suspension glider having a component engaged in the one slot of T-shaped cross-section in the rail and shaped to engage the slot so as to restrict pivoting movement of that component relative to the rail, the glider including a link connected at its one end to the component by means permitting the link to pivot relative to the component in a plane parallel to the one wide face of the element of the rail, the link having at its other end means for the connection of a curtain.

9. A curtain suspension arrangement according to claim 8 wherein the means for the connection of a curtain comprises a hole to receive a curtain hook.

10. A curtain suspension arrangement according to either claim 8 or claim 9 wherein the means by which the link is connected to the component comprises an aperture in the link which is engaged on a stem projecting from the component of the glider, the stem having a head to retain the link on the stem.

11. A curtain suspension arrangement according to claim 10 wherein the aperture is non-circular in shape and the shape of the head is complementary to that of the aperture in the link, the arrangement being such that the link is normally retained on the stem by the head but is pivotable to a position in which its aperture registers with the head of the stem and the link can then be disconnected from the component.

12. A curtain suspension arrangement according to any one of claims 8 to 11 and including a rail according to claim 4 or having a rail according to claim 4 or any one of claims 5 to 7 dependant on claim 4 wherein the formation having a surface lying against



the one narrow face of the element includes a portion engaging the one wide face of the element and wherein a support bracket is connected to the rail and has a face towards which the one face of the element of the rail is resiliently urged to lie, the portion of the formation being engaged by that face of the bracket and being gripped between that face and the one face of the element of the rail.

13. An elongate member of a rail of a curtain or drape suspension arrangement comprising a generally semi-tubular shaped portion along the longitudinal edges of which extend formations in the form of surfaces adapted to lie against and grip narrow faces of an elongate element of oblong rectangular cross-sectional shape, the member being made from a resiliently flexible material and thus being enabled to be arranged to urge resiliently the surfaces of the formations towards each other so as to grip the narrow faces of the element the member having in

one formation a lip portion disposed to engage one wide face of the element and having in the other formation a rib portion disposed to engage the other wide face of the element.

14. A member of a rail for a curtain or drape suspension arrangement and substantially as described herein with reference to and as illustrated in the accompanying drawings.

15. A rail substantially as described herein with reference to and as illustrated in the accompanying drawings.

16. A curtain or drape suspension arrangement substantially as described herein with reference to and as illustrated by the accompanying drawings.

BROOKES, MARTIN & WILSON,  
Chartered Patent Agents,  
Prudential Buildings,  
5 St. Philip's Place,  
Birmingham, B3 2AF.  
Agents for the Applicants.

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