Aug. 26, 1958 H. J. AULT ET AL 2,848,735

DRAPERY CARRIER

Filed March 7, 1955

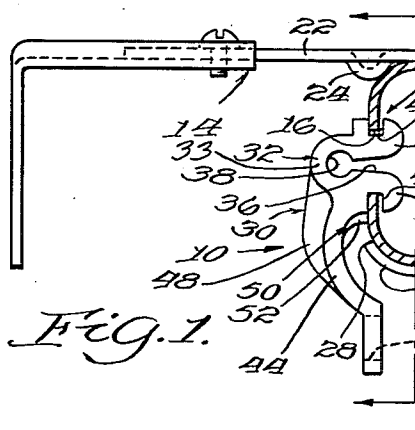


Fig. 1.

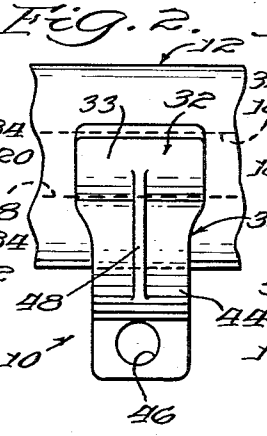


Fig. 2.

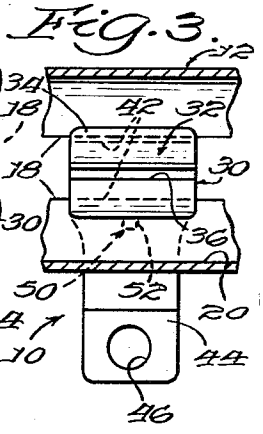


Fig. 3.

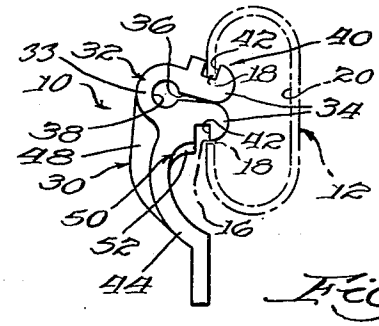


Fig. 4.

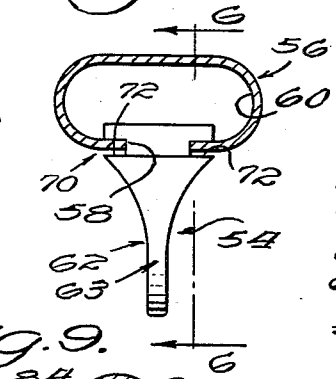


Fig. 5.

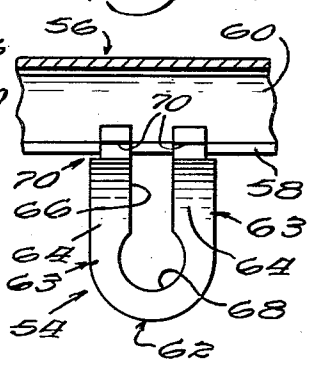


Fig. 6.

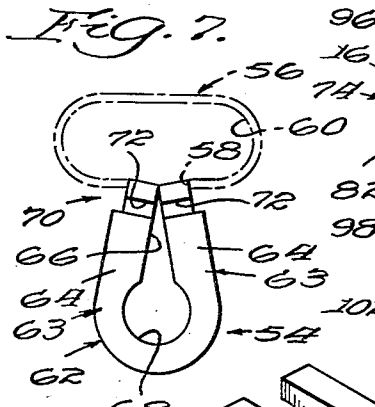


Fig. 7.

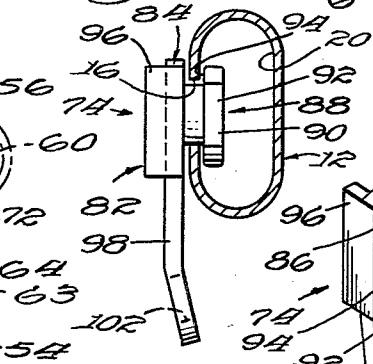


Fig. 9.

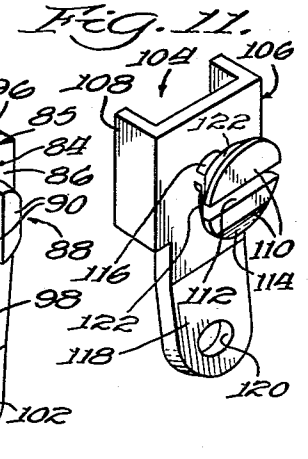


Fig. 11.

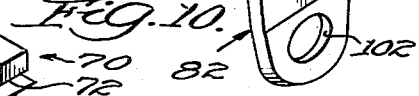


Fig. 10.

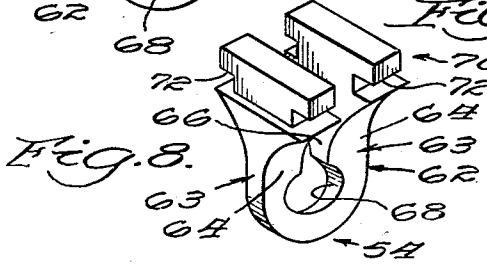


Fig. 8.

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DRAPERY CARRIER

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Application March 7, 1955, Serial No. 492,566

3 Claims. (Cl. 16—93)

This invention relates to a drapery carrier and, more particularly, to a drapery carrier adapted to be utilized in conjunction with an elongated track, commonly known in the trade as a traverse rod, to support a drapery and to permit said drapery to be translated between opened and closed positions on said track by virtue of said carrier's motility in said track and the use of actuating means to cause the movement of said carrier in said track.

The use of traverse rod constituted by elongated tracks to support a plurality of drapery carriers which, in turn, support one or more draperies in operative relationship with said track is commonplace in the home of today. The drapery carriers commonly consist of members having enlarged heads which are adapted to engage opposite edges of a slot in the track and which must be inserted from the ends of the track prior to the suspension of the track from the structure on which it is to be supported. During prolonged usage of the carriers, they tend to wear out or be jammed in the track and the necessity for their removal in order to insert a properly operating carrier arises.

In conventional constructions this entails the removal of all of the carriers from the end of the track to permit the removal of the offending carrier which is both a time-consuming and tedious job when it is considered that the track is frequently suspended in a relatively inaccessible position on the interior of a valance board or other structure.

It is, therefore, an object of our invention to provide a drapery carrier which can be readily inserted at any point along the length of the track which thus obviates the necessity for the insertion of the carrier from the end thereof. Thus, if a carrier should fail or if it be desired to insert a larger number of carriers to support a drapery, or to remove a surplusage of carriers after the track has been installed, the carriers can be inserted or removed at the desired points along the length of the track without the removal of the previously installed carriers.

Another object of our invention is the provision of a drapery carrier which includes a body formed from "nylon" or similar plastic material having resilient and self-lubricating properties and which includes a pair of jaws resiliently biased into engagement with the opposite edges of the slot in the track to maintain the carrier in operative engagement with the track.

Another object of our invention is the provision of a carrier of the aforementioned character wherein the upper jaw may be deflected by contact with the opposite adjacent edge of the slot in the track to facilitate the insertion of the carrier in the track. Correlatively, the upper jaw of the carrier may be deflected toward the lower jaw to facilitate the removal of the carrier from the track when such removal becomes necessary.

One of the most annoying aspects of conventional carriers is the fact that they tend to cock or jam in the track when the drapery is moved from one position to another. This cocking or jamming is attributable to two factors, namely: the fact that the head of the carrier engageable

with the opposite edges of the slot can rotate in the slot and thus swing in pendulum fashion with reference to the track, permitting it to become cocked in the track and wedged against adjacent carriers. The other factor is the tendency of conventional carriers to swing bodily inwardly toward the exterior surface of the track so that the pendant provided thereupon for supporting the drapery engages the periphery of the track or the supports for mounting the track, thereby wedging the carrier against movement or rendering the movement of the carrier difficult and annoying.

A further object of our invention is the provision of a drapery carrier of the aforementioned character which includes detent means for engagement with the opposite edges of the slot in the track, said detent means being provided on the jaws on the carrier and being biased into operative engagement with the opposite edges of the slot in the track to maintain optimum bearing contact therewith and prevent the pendulum-like movement of the carrier characteristic of conventional carriers.

Another object of our invention is the provision of a carrier which has stabilizing means incorporated therein and engageable with the exterior of the body of the track, said stabilizing means being adapted to maintain the carrier in vertical orientation with respect to the exterior of the track to prevent the pendant supported on the carrier from frictionally engaging the exterior surface of the track or impinging upon and being blocked against the brackets or supports for the track.

Another object of our invention is the provision of a carrier of the aforementioned character which is of unitary construction and which includes the aforementioned jaws, detent means, and pendant formed integrally with each other.

Other objects and advantages of our invention will be apparent from the following specification and accompanying drawing which is for the purpose of illustration only and in which:

Fig. 1 is a vertical, sectional view showing the operative relationship between one embodiment of the carrier of our invention and a traverse rod or track;

Fig. 2 is a rear elevational view of the embodiment of Fig. 1;

Fig. 3 is a partly sectional view presenting a partial front elevation of the embodiment of Fig. 1;

Fig. 4 shows the manner in which the embodiment of Figs. 1–3 is inserted into operative relationship with the track;

Fig. 5 is a partly sectional view showing a carrier constructed in accordance with our invention and adapted for utilization in conjunction with a horizontally oriented track;

Fig. 6 is a partly sectional view presenting a side elevation of the embodiment of Fig. 5;

Fig. 7 is a view showing the manner of installation of or removal of the embodiment of Figs. 5 and 6;

Fig. 8 is a perspective showing of the carrier shown in Figs. 5, 6, and 7;

Fig. 9 is a vertical, partly sectional view showing an alternative embodiment of the invention in side elevation;

Fig. 10 is a perspective view of the embodiment of Fig. 9; and

Fig. 11 is a perspective view of another embodiment of the carrier of our invention.

Referring to the drawing and particularly to Figs. 1–4 thereof, we show one embodiment **10** of the carrier of our invention, said carrier being of the vertical type and adapted for use in conjunction with a vertically oriented traverse rod or track **12** which is supported upon an adjacent supporting surface, not shown, by means of an adjustable bracket **14**.

The track **12**, as best shown in Figs. 1–4 of the draw-

ing, is substantially elliptical in cross section and incorporates an elongated access slot 16 defined by oppositely disposed edges 18, said slot communicating with an elongated recess 20 in the interior of the track. The adjustable bracket 14 includes, as best shown in Fig. 1 of the drawing, a bracket arm 22 provided with an integral boss 24 and an arcuately oriented, upwardly extending lower portion 26. The track 12 is snugly inserted in the bracket arm 22 between the boss 24 and the lower portion 26 thereof and is retained therein by the inherent resilience and spring-back of the metal from which said arm is formed.

It will be noted, however, that the uppermost end 28 of the arcuately formed lower portion 26 of the bracket arm 22 extends into the path of movement of the carrier 10 and is located in such a position as to constitute an impediment to the movement of a conventional carrier, in a manner to be described in greater detail below.

The carrier 10 includes a unitary body 30 which may be formed from any one of the series of polyamide resins sold generally under the generic name "nylon" and characterized by high tensile strength, low coefficient of friction, and inherent resiliency. The unitary body 30 of the carrier 10 includes a head portion 32, said head portion being provided with a web member 33 interconnecting a pair of oppositely oriented jaw members 34 which are defined by an inwardly extending opening 36 which terminates in an enlarged, transverse bore 38. Because of the inherent resilience of the material from which the body 30 is formed, the jaw members 34 are normally biased, as best shown in Fig. 1 of the drawing, in a direction away from each other. As a matter of fact, the upper of the two jaws is far more resilient than the lower and serves to maintain both of said jaw members in operative engagement with the opposite edges 18 of the slot 16.

The outermost ends of the jaw members 34 are provided with pronounced radii to facilitate the insertion of the jaw members through the slot 16 in the track 12, in a manner to be described in greater detail below. Detent means 40 constituted by elongated grooves 42 are provided on the jaw members 34, said grooves being adapted to receive the opposite edges 18 of the slot 16, as best shown in Figs. 1–3 of the drawing.

A pendant portion 44 is provided on the head portion 32 and has an opening 46 in the lower extremity thereof for the reception of a pin or other fastener to secure the drapery to the carrier. A stiffening rib 48 structurally integrates the head and pendant portions of the carrier 10 and insures substantial rigidity of the entire body 30. Moreover, the fact that the pendant portion 44 is formed integrally with the head portion 32 serves to rigidify the lower jaw 34.

In order to prevent the inward cocking of the body 30 and, more particularly, the pendant portion 44 of said body into engagement with the periphery of the track 12 or the end 28 of the lower portion 26 of the bracket arm 22, stabilizing means 50 is provided on the underside of the head portion 32 of the body 30, said stabilizing means being constituted by an integral boss 52 which, as best shown in Fig. 1 of the drawing, engages the exterior of the track 12 to maintain the body 30 and, more particularly, the pendant portion 44 thereof, in a substantially vertical position.

The utilization and operation of the carrier 10 is as follows:

When the carrier 10 is to be inserted through the slot 16, the upper groove 42 is fitted over the upper edge 18 of the slot 16 and the carrier can be pivoted around the fulcrum constituted thereby to bring the radius of the outer extremity of the lower jaw 34 of the carrier into operative relationship with the lower edge 18 of the slot 16. Continued inward rotation of the carrier 10 will cause the lower jaw 34 to be cammed upwardly as the upper jaw 34 is deflected toward the lower jaw.

The significance of the enlarged bore 38 at the inner end of the opening 36 becomes apparent when it is considered that the enlarged bore 38 permits and facilitates the inward deflection of the upper jaw member 34 toward the lower jaw member.

When the lower jaw 34 reaches a position in which the lower edge 18 of the slot 16 enters the groove 42 in the lower jaw, the jaw members 34 are biased outwardly by the inherent resilience of the material from which the carrier 10 is formed into the positions shown in Fig. 1 of the drawing and are retained in operative relationship with the opposite edges 18 of the slot 16. When located in operative relationship with said edges, the carrier 10 is restrained against pivotal movement in a direction parallel to the face of the track 12 because of the elongated bearing surfaces provided by the elongated grooves 42 in the jaw members 34 which prevent the carriers from piling up on one another and becoming wedged against free movement in the track 12.

If, for any reason, a carrier 10 must be removed from operative relationship with the track 12, the body portion thereof is urged upwardly to cause downward deflection of the upper jaw member 34, as best shown in Fig. 4 of the drawing, to permit the lower groove 42 in the lower jaw member 34 to be released from operative relationship with the edge 18 of the slot 16 and thus facilitate outward pivotal movement of the carrier 10 and the ultimate release of the upper groove 42 from operative relationship with the upper edge 18 of the slot 16 in the track 12.

As previously indicated, there is a tendency for conventional carriers to pivot inwardly into positions in which the pendants thereupon frictionally engage the exterior surface of the track 12 or impinge upon the upper ends of the lower portions 26 of the bracket arms 22 to wedge the carriers against free movement or to lock them against the bracket arms to such an extent that they must be manually released. In order to prevent such inward pivotal movement of the carrier 10, the stabilizing means 50 is provided and the integral protuberance 52 constituting the same is best shown in Fig. 1 of the drawing and is constantly engaged with the surface of the track 12 to maintain the carrier 10 in a substantially vertical orientation wherein the pendant portion 44 thereof will clear the upper end 28 of the lower portion 26 of the bracket arm 22 and will be free of frictional drag on the exterior surface of the track 12.

A carrier 54 which constitutes an alternative embodiment of my invention is shown in Figs. 5–8 of the drawing. The carrier 54 is of the horizontal type and is designed for utilization in conjunction with a horizontally oriented track 56 which has a downwardly opening slot 58 formed therein and communicating with an elongated recess 60 on the interior thereof.

The horizontal carrier 54 includes a body 62 formed from "nylon" or similar material and having a pair of integral resilient jaw members 63 thereupon. The body 62 is of substantially U-shaped configuration and the jaw members 63 are constituted, in part, by the upwardly directed legs 64 thereof. An elongated opening 66 formed in the body 62 separates the jaw members 63 and terminates in an enlarged bore 68 which facilitates the inward deflection of the legs 64 toward each other.

Formed integrally upon the upper extremities of the legs 64 are detent means 70, said detent means being constituted by oppositely oriented grooves 72. Each of the legs is provided with a groove 72 at the opposite side thereof and aligned grooves 72 in each of the legs are adapted to receive the adjacent edge of the slot 58 formed in the track 56, as best shown in Figs. 5–6 of the drawing.

The insertion of the carrier 54 in the track 56 is accom-

plished by deflecting the legs **64** constituting the jaw members of the carrier **54** toward each other, as best shown in Fig. 7 of the drawing, whereby the detent means **70** are moved inwardly to pass through the slot **58** in the track **56**. When the carrier **54** is pushed up inwardly into the recess **60** in the track **56** a sufficient distance to accomplish the registration of the grooves **72** in the carrier **54** with the opposite edges of the slot **58**, the carrier **54** is rotated 90° to engage the grooves **72** upon the opposite edges of the slot **58**, as best shown in Fig. 5 of the drawing. When so located, the spaced grooves **72** in the oppositely disposed legs **64** provide a solid bearing surface which prevents cocking or twisting of the carrier **54** in the track **56**, If release of the carrier **54** from the track **56** is desired, it is merely necessary to rotate the carrier **54** to remove the grooves **72** from operative relationship with the opposite edges of the slot **58**.

The rotation of the carrier **54** approximately 90° automatically causes inward deflection of the legs **64** constituting the jaw members of the carrier **54** toward each other and permits the carrier **54** to be removed from operative relationship with the track **56**. It will be noted that the lower portion of the U-shaped body **62** of the carrier **54** serves as a pendant for the securement of drapery thereto.

A vertical carrier **74** constituting an alternative embodiment of my invention is best shown in Figs. 9 and 10 of the drawing as including an integral body **82** formed from "nylon" or similar plastic material and having a head portion **84**. The head portion **84** is bisected by an elongated opening **85** defining oppositely disposed resilient jaw members **86**. Formed upon the resilient jaw members **86** are right-angularly oriented detent means **88** constituted by spaced protuberances **90**.

The spaced protuberances **90** have flattened sides **92** thereupon and are provided with grooves **94** adapted to engage the opposite edges of a slot **16** formed in a vertically oriented track **12**, as best shown in Fig. 9 of the drawing. Normally projecting flanges **96** are provided on the head portion **84** of the vertical carrier **74** and serve to facilitate the inward deflection of the resilient jaw members **86** toward each other.

A pendant portion **98** is formed integrally with the head portion **84** and has a drapery suspending opening **102** formed therein. The insertion of the carrier **74** in the track **12** can be accomplished by locating the pendant portion **98** with its axis disposed horizontally so that the flattened sides **92** of the protuberances **90** will fit through the slot **16** in the track **12**. The pendant portion **98** is then rotated to the vertical position shown in Fig. 9 of the drawing and the oppositely disposed grooves **94** engage the opposite edges of the slot **16** to retain the carrier **74** in operative relationship with the track **12**.

The removal of the carrier **74** is accomplished by merely rotating the pendant portion **98** into a horizontal position and pulling outwardly upon said pendant portion while rotating said pendant portion about its axis a sufficient extent to deflect the jaw members toward each other and to disengage the opposite edges of the slot **16**.

A vertical carrier **104** constituting another embodiment of our invention is shown in Fig. 11 of the drawing as including a head portion **106** upon which are formed integral flanges **108** which facilitate the insertion and removal of the vertical carrier **104** from a track with which it is associated.

A pair of oppositely oriented jaw members **110** is integrally formed with the head portion **106** and defined by a transversely oriented slot **112** therebetween. The lower jaw member **110** is provided with a bevel **114** on its lower edge of facilitate the insertion of the carrier **104** into a track and oppositely oriented grooves **116** are provided in the jaw members **110** to serve as detent means for engaging the opposite edges of the slot in a track in which the carrier **104** is inserted.

A pendant portion **118** is formed integrally with the head portion **106** and is provided with a drapery supporting opening **120**. Insertion of the carrier **104** in a track is accomplished by merely registering the upper groove **116** with the upper edge of the slot in the track and pressing inwardly on the back of the carrier **104** to engage the bevel **114** on the lower jaw **110** and cause the lower jaw **110** to snap over the lower edge of the slot in the track and register the lower groove **116** in said lower jaw with the lower edge of the slot in the track.

Release of the carrier **104** is accomplished by the simple expedient of rotating the pendant portion **118** outwardly away from the track to engage cam surfaces **122** on the jaws **110** with the edges of the slot in the track and bias the jaws **110** toward each other to release the carrier **104**.

We thus provide by our invention drapery carriers which may be readily inserted in and removed from the tracks with which they are associated, which have a secure bearing on the opposite edges of the slot in the track to prevent cocking in a vertical plane, and which include stabilizing means to prevent cocking toward the exterior surface of the track.

We claim as our invention:

1. In a drapery carrier which is intended to be disposed in operative relationship with an elongated track having a guide slot communicating with an elongated recess whose width is greater than the width of the slot; a unitary body of resilient material including a head portion and a pendant portion, said head portion having an elongated slot lying in a plane generally perpendicular to said pendant portion and defining a pair of opposed jaws lying generally to one side of said pendant portion and a web member interconnecting said jaws, each of said jaws having a groove extending across the width of a surface of said jaw remote from the other of said pair of jaws, and a stiffening rib extending from said pendant portion to said web member, the one of said pair of jaws remote from said pendant portion being resiliently deflectable into engagement with the other of said pair of jaws.

2. The combination in accordance with claim 1, further comprising a stabilizing protuberance adjacent the intersection of said head portion and said pendant portion and engageable with the exterior of said track to maintain said pendant portion in operative position during movement of said carrier.

3. The combination in accordance with claim 1, wherein said elongated slot terminates in an enlarged, transverse bore adjacent said web member.

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