

Jan. 25, 1966

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3,231,007

SUPPORT FOR MESH TYPE CURTAIN SCREEN

Filed May 13, 1964

2 Sheets-Sheet 1

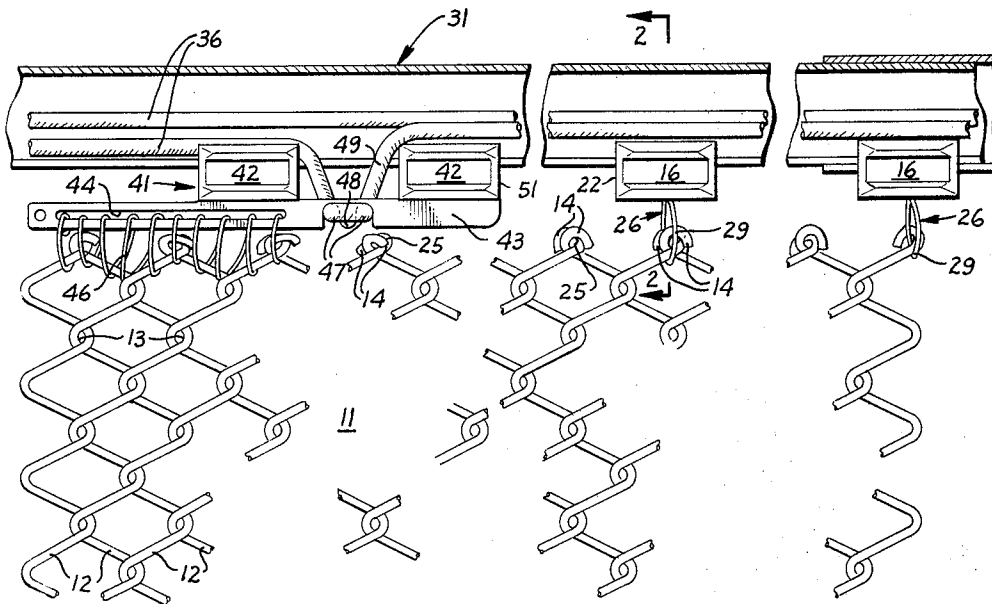


FIG. 1.

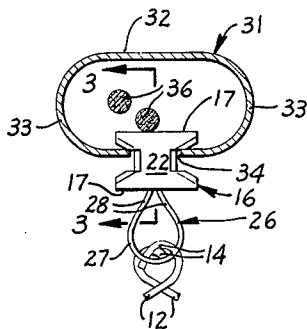


FIG. 2.

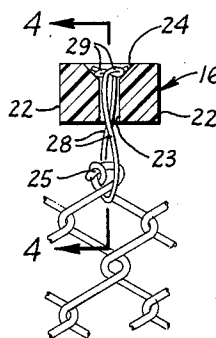


FIG. 3.

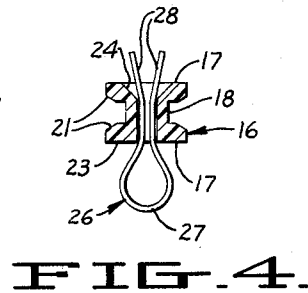


FIG. 4.

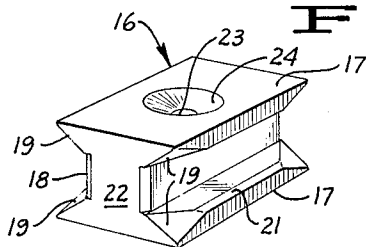


FIG. 5.

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2 Sheets-Sheet 2

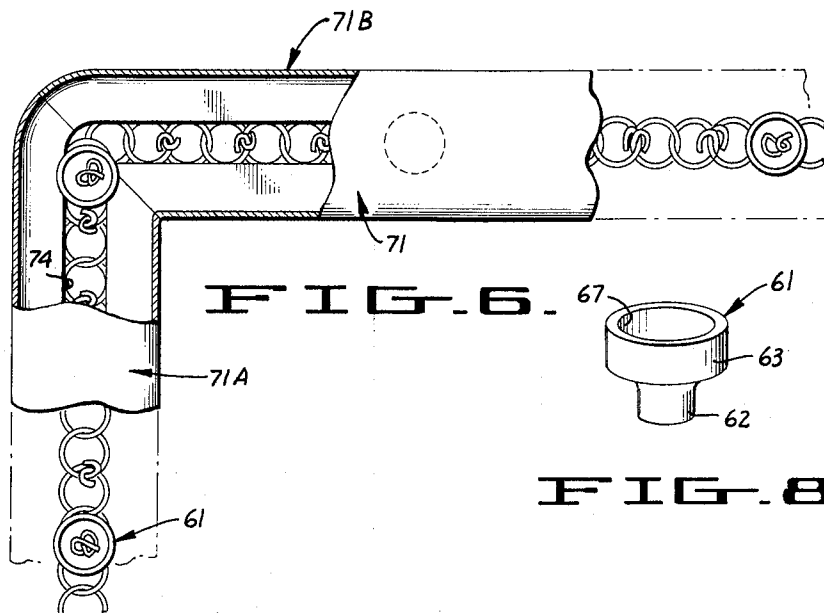


FIG. 6.

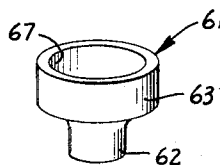


FIG. 8.

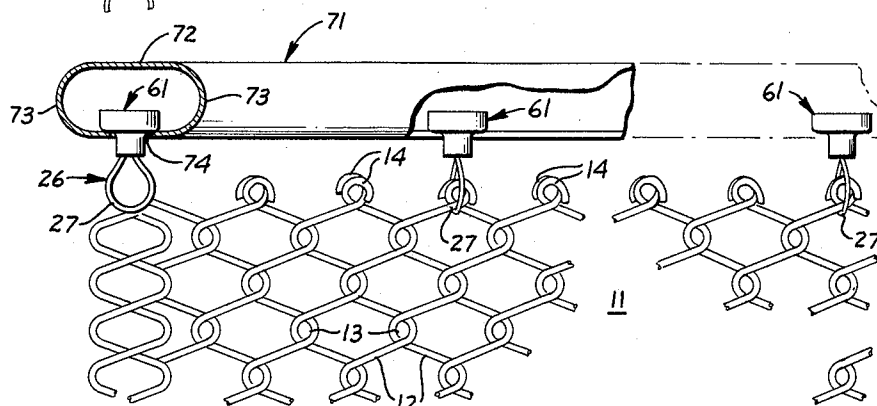


FIG. 7.

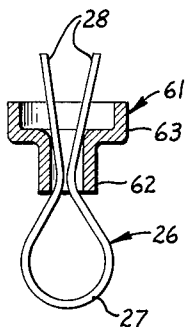


FIG. 9.

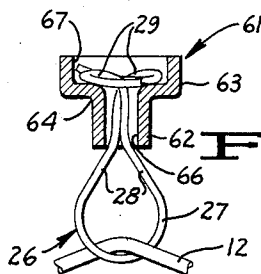


FIG. 10.

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SUPPORT FOR MESH TYPE CURTAIN SCREEN
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 Filed May 13, 1964, Ser. No. 367,114
 1 Claim. (Cl. 160—332)

This application is a continuation-in-part of copending application S.N. 199,791, now abandoned.

This invention relates to a new and improved support for mesh type curtain and screen. The invention has particular utility in the support from an overhead track of mesh panels formed of a plurality of helically wound wires disposed with their helix axes vertical and with adjacent wires interlocked. Glides are provided sliding in the track and fasteners connect the glides with the top edge of the mesh at spaced intervals. When the glides are separated from each other the mesh is extended along the length of the track. When the glides are compacted together the mesh is folded to open the curtain or screen.

A particular feature and advantage of the invention is the fact that the mesh may be opened and closed with traverse cord. Thus, by pulling one of the glides by means of a conventional drapery traverse cord or chain, consecutive glides abut each other and are compacted together thereby opening the curtain or screen.

Another feature of the invention is the provision of means whereby the mesh may be supported from tracks which are formed in curves or even at right angles. Heretofore it has not been possible to move close-coupled supports for mesh curtains around right angles.

Another feature of the invention is the provision of a fastener which connects the upper edge of the mesh with the glide, said fastener consisting of an eye which receives the joint between adjacent helical wires and has a pair of legs which extend up through the glide and are secured thereto. Such fastener and the glide with which it is associated provide a permanent attachment of the glide to the mesh. A particular feature and advantage of the means of connection is the fact that the legs of the fastener are secured by coiling of the individual legs within a countersunk depression in the top surface of the glide. This means of connection eliminates the possibility of entanglement of the fastener with adjacent fasteners. Further, this means of attachment eliminates the possibility of the fastener obstructing the movement of the glide in the track, particularly eliminating any interference with the traverse cord or chain. This coiling of the individual legs draws the eye of the fastener firmly against the lower edge of the glide, providing adequate support for mesh panels up to sixteen feet high.

Another feature of the construction of the glide is the fact that friction between the glide and the track is largely eliminated or reduced.

Still another feature of the invention is the elimination of the possibility of unintentional opening of the fastener, a common defect in prior fasteners.

Another advantage of the present invention is the fact that the glide and the upper end of the mesh are closely coupled together. This eliminates the need of a fascia plate or other means to conceal the gap which exists between conventional track supports and the upper edge of the mesh.

Another advantage of the invention is the fact that close compacting of the curtain or screen with which the invention is to be used may be achieved.

Another advantage of the invention is the simplification of the fastener and glide which results in a low cost of production and of installation.

A principal advantage of the invention is the elimination of secondary rings for attachment of the closed eye to the mesh; nevertheless, a permanent attachment is at-

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tained which cannot be re-opened except by cutting the fastener or mesh. All of these advantages are obtained in a suspension which may be traversed by cords, chains or manually.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings in which similar characters of reference represent corresponding parts in each of the several views.

In the drawings:

FIG. 1 is a fragmentary side elevational view of a mesh curtain and means of support thereof partially broken away in section.

FIG. 2 is a fragmentary sectional view taken substantially along the line 2—2 of FIG. 1.

FIG. 3 is a fragmentary sectional view taken substantially along the line 3—3 of FIG. 2.

FIG. 4 is a sectional view taken substantially along the line 4—4 of FIG. 3, with certain parts eliminated and showing the fastener in position before the enlargements are formed in the legs thereof.

FIG. 5 is a perspective view of a glide.

FIG. 6 is a top plan view partially broken away in section of a modification of the invention.

FIG. 7 is a front elevational view of the structure of FIG. 6.

FIG. 8 is a perspective view of a glide used in connection with the structure of FIG. 6.

FIG. 9 is a vertical sectional view through the glide showing the fastener prior to forming enlargements of the legs thereof.

FIG. 10 is a view similar to FIG. 9, showing the fastener legs enlarged.

The present invention is used particularly with a mesh curtain 11 of the type used in draperies and in screens, particularly fireplace screens. The mesh is formed of a plurality of helically wound round wires 12 disposed with the helix axis thereof vertical. Adjacent wires are interlaced as indicated by reference numeral 13 in FIG. 1. The foregoing construction provides a flexible mesh which may be folded in gentle folds when the mesh is compacted as by moving the end edges toward each other. This construction permits the mesh to be extended into substantially coplanar or closed position and then compacted to open position, all as well understood in the drapery and screen art. The top ends of each wire 12 are formed in eyes 14 and the eyes of adjacent wires are interlocked as best shown in FIG. 1. The formation of the interlocked eyes 14 secures the wires 12 into a permanent structure and also eliminates the presence of the sharp ends of the wires which otherwise would be hazardous.

In the modifications shown in FIGS. 1 to 5 inclusive there is provided a glide 16 which is a modification of the commercially available Kirsch traverse drapery glide. Glide 16 is essentially I-shaped in vertical cross-section in that it has top and bottom flanges 17 and a narrower inter-connecting web 18. Fillets 19 fill the corners at which the flanges 17 and web 18 intersect in angular surfaces. The corners of the flanges as indicated by reference numeral 21 are bevelled. Front and rear surfaces 22 of the web are essentially flat and square. This construction causes the glides to push against each other when they are traversed or pulled. Extending vertically through the middle of glide 16 is a hole 23 and the upper end of hole 23 is formed with a countersink 24 formed in the top surface of upper flange 17.

Fastener 26 is used to connect mesh 11 to glide 16. Fastener 26 is provided with an eye 27 at its lower end and a pair of upwardly extending legs 28. Preferably, fastener 27 is formed of stainless steel wire of high flexibility. The eye 27 surrounds the knuckle 25 at which the eyes 14 of the mesh intersect. The legs 28 extend

up through hole 23. After the fastener 26 has been installed in such position as is shown in FIG. 4, the legs 28 are coiled into enlargements 29 which are concealed within the countersink 24. The uppermost portion of eye 27 is drawn into the narrower lowermost end of hole 23. Hence, the ends of the fastener 26 do not project above the top surface of glide 16 and hence do not interfere with the traverse cord nor are they so disposed as to become entangled with the track or with adjacent fasteners.

A conventional drapery track 31 may be used in the present invention. Such a track 31 has a web 32 at the top and substantially semi-circularly curved flanges 33 along either edge thereof which are parted to provide an opening 34 of a width slightly greater than that of web 18 of glide 16. In other words, the track 31 is in the shape of a C in cross-section with the opening of the C facing downward. The track 31 shown in FIG. 1 is somewhat larger than the corresponding element of FIG. 6 and traverse cords 36 are reeved about pulleys (not shown) so that the user may pull one or the other of the two cords 36 to open or close the curtains or drapes in a manner well understood in the drapery art. It will further be understood that in place of cords 36 chains may be used. To facilitate traverse movement of the drape or curtain a fitting 41 is installed in track 31. Fitting 41 has a pair of glides 42 generally similar in shape to glides 16. Fastened to the bottom edges of glides 42 is a bar 43 extending parallel to track 31. An elongated slot 44 is formed in bar 43 or alternately a series of holes (not shown) may be used instead of the slot. Thin flexible wire 46 is laced through slot 44 and through a portion of the underlying mesh 11 as best shown in FIG. 1 to secure the upper inner corner of mesh 11 in the fitting 41. Bar 43 also is formed with a pair of notches 47 cut in the bottom edge thereof to provide between the notches a tang 48. One of the cords 36 is drawn down in a loop 49 which passes through both of these notches 47 and over the tang 48. This arrangement of parts causes the fitting 41 to move longitudinally of track 31 when one of the cords 36 is pulled and thereby to move the corner of the mesh 11 along with the cords 36. An end 51 of one of the glides 42 as it moves to the right of FIG. 1 abuts the square end 22 of the next glide 16, moving the glide 16 to the right. The righthand end of each glide 16 in turn moves against and pushes the next adjacent glide, causing all of the glides 16 to move to the right, thereby gathering the mesh 11 in folds as the curtain is opened. When the fitting 43 is moved to the left by reverse movement of the cords 36, the mesh 11 is stretched out into a substantially flat position and each of the glides 16 is pulled to the left in turn until the curtain reaches open position.

Directing attention now to the modification shown in FIGS. 6 to 10 inclusive, mesh 11 is substantially the same as the mesh shown in the preceding modification. Fitting 61 is essentially a round button in shape. Fitting 61 has a small diameter shank 62 and a larger diameter top portion 63, interconnected by a fillet or radius 64. Fastener 26 in this modification is identical with the fastener heretofore described. The cylindrical portion 62 is formed with a small diameter hole 66 and above hole 66 is an outwardly tapered bore 67. In effect, fitting 61 may be a thin-walled drawn, cast or machined element of the shape shown. The legs 28 of fastener 26 extend through hole 66 and are formed in enlargements 29 within the bore 67. Thus the enlargements 29 are concealed and are positioned so that they do not cause interference with the track, adjacent fittings of traverse cords.

Track 71 is essentially the same in shape as track 31, but is of somewhat smaller diameter. Track 71, therefore, has a web 72 at the top and semi-circularly curved side edges 73 which terminate space from each other in a gap 74 having a width greater than the diameter of

shank 62 and less than the diameter of cylindrical top portion 63. The fillet 64 on the exterior of glides 16 engages the edges of the track and reduces the area of contact between the button 61 and the edges of the track 71, thereby reducing the amount of friction impeding longitudinal movement of the glides 16 along the track.

As shown in FIG. 6, track 71 may be formed at a right angle—i.e., the openings 74 in the downward extending portion of track 71a being at right angles to the opening in the portion 71b extending to the right as viewed in FIG. 6. The glides 16 will pass around the right angle bend in the track 71 without interference or impedance. It will be understood that, although not shown in the accompanying drawings, a curvature of track 71 however sharp will still be accommodated by the shape of the glides 16 so that movement of the mesh 11 around curves and bends is possible.

It will be noted that the extreme top edge of panel 11 is disposed below the bottom edge of track 71, a distance approximately equal to one-half the thickness of said track, and approximately equal to one-half the spacing between centers of adjacent wires.

Although the foregoing invention has been described in some detail, by way of illustration and example for purposes of clarity of understanding it is understood that certain changes and modifications may be practiced within the spirit of the invention and scope of the appended claim.

What is claimed is:

30 In combination, a track, said track C-shaped in cross-section opening down; a mesh panel below said track formed of vertically disposed wires, the top ends of said wires formed in eyes with the eyes of adjacent pairs of wires interlocked at the extreme top edge of said panel; a plurality of glides each disposed partially in said track, depending through the opening in said track and a short distance below said track, each said glide having an enlarged upper portion held within said track, said upper portion having substantially vertical exterior walls, and a smaller shank projecting down through the opening in said track and formed with a hole extending from top to bottom, said hole having an enlarged portion of substantially greater diameter in said upper portion than in said shank; and a deformable wire fastener for each said glide shaped with an enlarged eye passing under one of said pairs of interlocked eyes of said mesh panel and a pair of legs passing up through said hole, the legs of said fastener formed with enlargements coiled into the enlarged portion of said hole in said glide and restraining downward displacement of said mesh relative to said glide, the extreme top edge of said panel being disposed a distance below the bottom edge of said track approximately equal to one-half the thickness of said track and to one-half the spacing between centers of adjacent wires, and said pairs of interlocked eyes of said mesh panel being almost in contact with the bottom of said glide, both said upper portion of said glide and said shank of said glide being thin-walled and round, the underside of said upper portion surrounding said shank having an annular shoulder lying in a plane substantially transverse to the axis of said shank.

References Cited by the Examiner

UNITED STATES PATENTS

1,175,136	3/1916	Dickey et al.	16—87.4
1,463,598	7/1923	Seaman	160—345
2,136,042	11/1938	Cornell et al.	160—345 X
2,576,086	11/1951	Werner et al.	160—345 X
2,604,157	7/1952	Gaetano	160—126
2,698,455	1/1955	McMurray	
2,713,899	7/1955	Holloway et al.	160—199
2,958,378	11/1960	Rubens	160—345 X

75 HARRISON R. MOSELEY, *Primary Examiner.*