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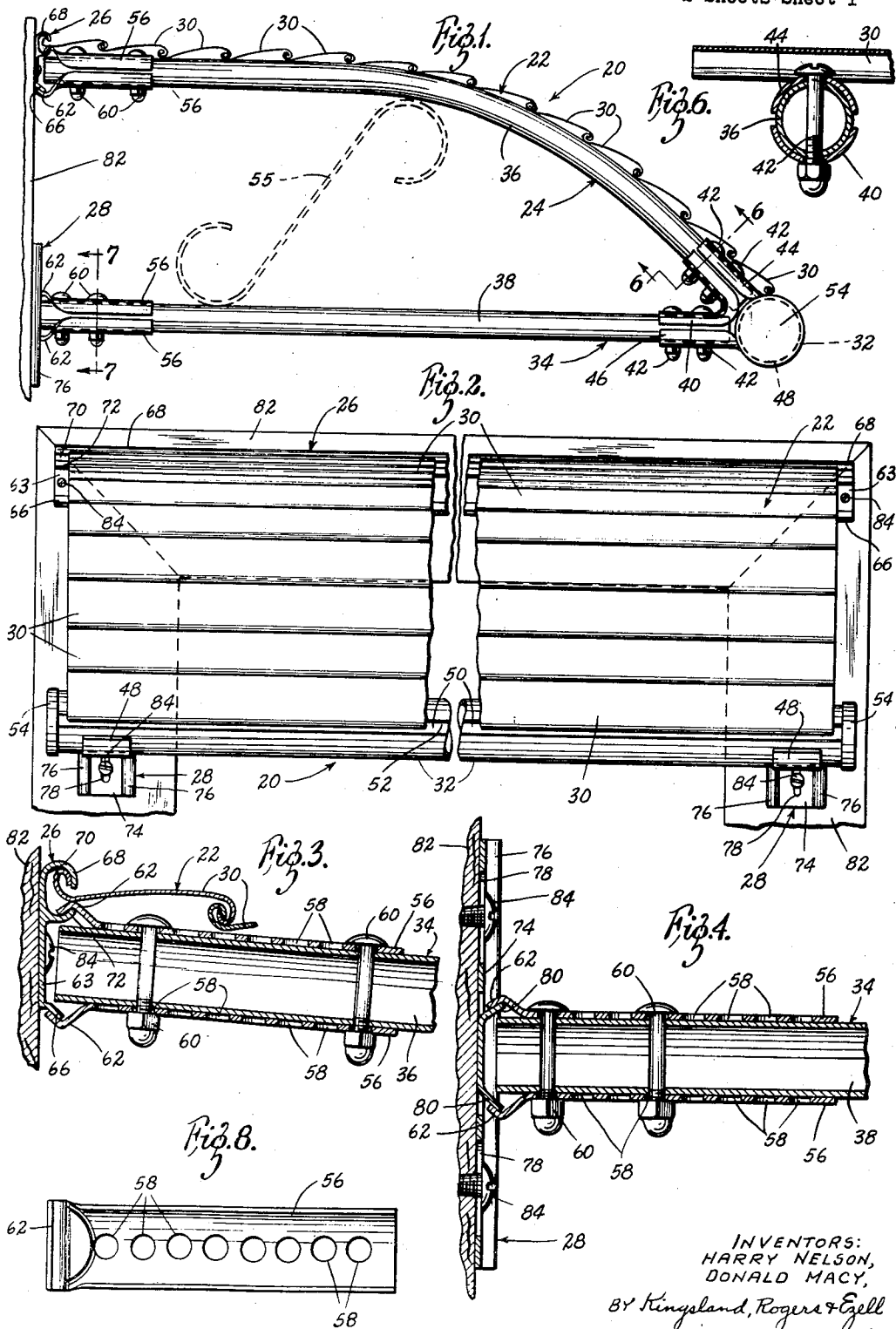
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2,949,649

CANOPY

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2 Sheets-Sheet 1



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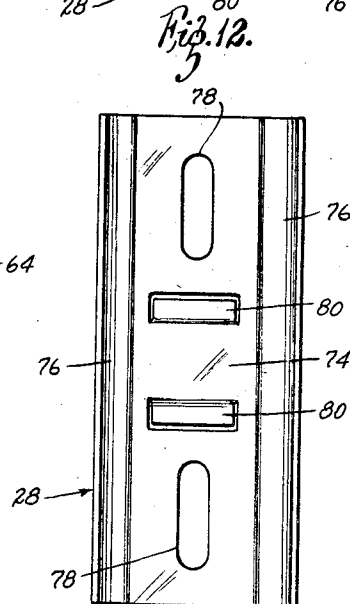
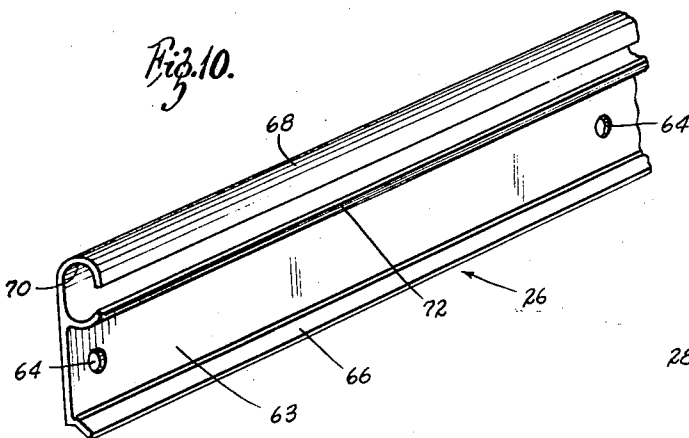
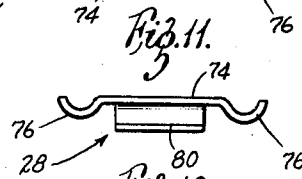
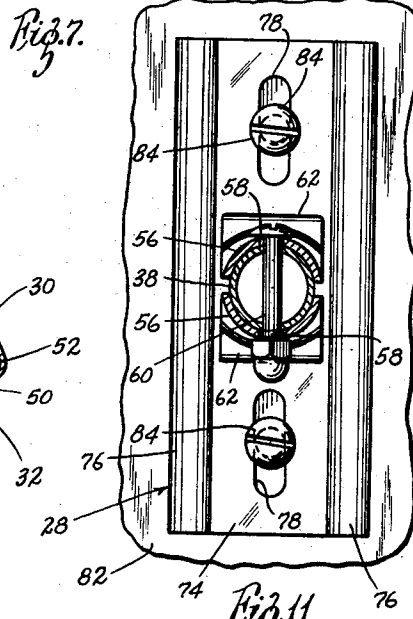
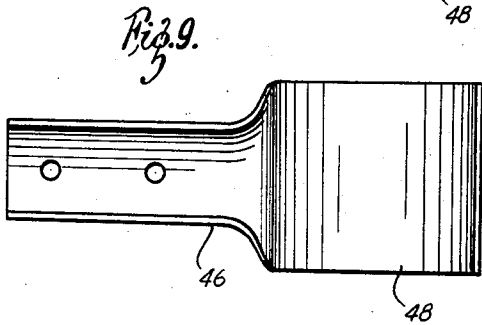
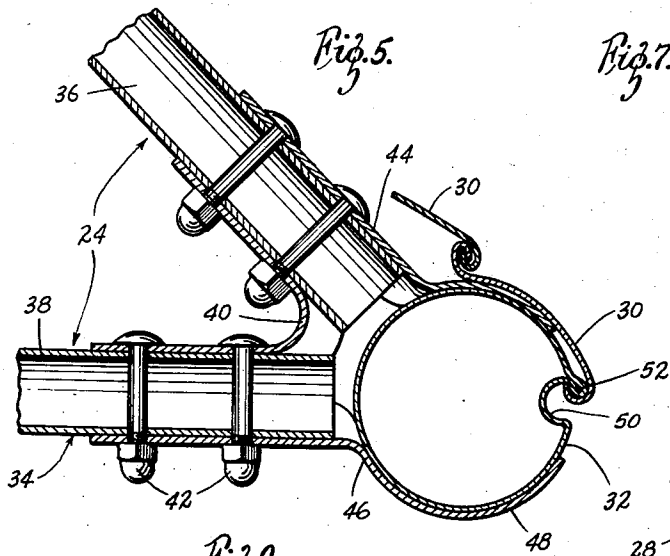
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2 Sheets-Sheet 2



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2,949,649

CANOPY

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10 Claims. (Cl. 20—57.5)

The present invention relates generally to overhead shelters, and more particularly to a novel canopy incorporating a flexible covering supported by adjustable brackets adapted for demountable attachment to a substantially vertical wall.

It is an object of the invention to provide a novel canopy construction which lends itself readily to the fabrication of canopies of various sizes and shapes from available stock.

It is another object of the invention to provide a novel canopy construction which incorporates means for adjustably tensioning a flexible covering.

It is another object of the invention to provide a novel canopy bracket construction which incorporates standard parts assembled in a selected arrangement to provide a desired shape of canopy.

It is another object of the invention to provide novel means including an extruded mounting strip for demountably attaching a canopy to a substantially vertical wall.

The foregoing, along with additional objects and advantages, will be apparent from the following description of a preferred embodiment of the invention as illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of a canopy constructed in conformance with the invention, an ornamental brace being shown in dotted outline;

Figure 2 is a front elevation thereof, a central portion of the canopy being broken out in order to save space on the drawing;

Figure 3 is an enlarged fragmentary sectional view showing the attachment of an upper bracket arm and a canopy covering to a vertical wall;

Figure 4 is an enlarged sectional view similar to Figure 3, but showing the attachment of a lower bracket arm to the vertical wall;

Figure 5 is an enlarged fragmentary sectional view showing the interconnection of the upper and lower bracket arms and the securement of the extended end of the canopy covering;

Figure 6 is an enlarged fragmentary sectional view taken generally along the line 6—6 of Figure 1;

Figure 7 is an enlarged fragmentary sectional view taken generally along the line 7—7 of Figure 1;

Figure 8 is a plan view of a mounting clip;

Figure 9 is a plan view of a cylinder supporting clip;

Figure 10 is an isometric view of a mounting strip, a portion of the strip being broken away to conserve space on the drawing;

Figure 11 is an end view of a mounting plate; and

Figure 12 is a plan view thereof.

In its depicted embodiment, the canopy, designated generally by the reference numeral 20, comprises a flexible covering 22 supported by a frame 24. A mounting strip 26 and a plurality of mounting plates 28 are provided for attaching the frame 24 to a vertical wall, the mounting strip 26 being further adapted to retain one edge of the covering 22, as will appear.

The flexible covering 22 is made up of a series of slats

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30, preferably of metal, the edges of which are oppositely rolled and the middle portions of which are given a somewhat reversed curve. Thus formed, the slats 30 engage in a swivelling manner which is readily discernible from the illustrations of Figures 3 and 5. These rolled interlocks are such as to prevent disengagement of adjacent slats, but to permit a free articulation which will enable the covering 22 to adapt itself to various contours according to the particular shape of an underlying support.

A flexible covering of the foregoing type is fully disclosed in an application of Harry Nelson bearing Serial No. 561,900, filed January 27, 1956, now Patent No. 2,894,572, issued July 14, 1959.

As is clear from Figures 1 and 2, the frame 24 of the canopy 20 includes an elongated cylinder 32 supported at spaced points by means of brackets 34, each bracket 34 comprising an upper bracket arm 36 and a lower bracket arm 38 joined together by means of an angle clip 40. This joint is illustrated in section in Figure 5, and it will be observed that bolt assemblies 42, which serve to secure the angle clip 40 to the arms 36 and 38, serve also to secure upper and lower support clips 44 and 46 to the respective arms 36 and 38. The portions of the clips 40, 44, and 46 which embrace the arms 36 and 38 are preferably curved to fit the latter as illustrated in the cross sectional view of Figure 6. Figure 9 shows a removed support clip 46 and illustrates the manner in which a free end portion 48 is formed to fit around the cylinder 32. It will be understood, of course, that the support clip 44 is similar to the clip 46, but has a somewhat shortened free arcuate portion so that, when the two clips 44 and 46 are assembled in the manner of Figure 5, there will be a substantial gap between their free ends.

The cylinder 32 can be formed of sheet metal, one edge of the sheet being formed to a groove 50 that extends the full length of the cylinder. The edge of the metal forming the groove 50 is then brought outwardly at something of an angle to a radius of the cylinder, and the opposite edge of the sheet forming the cylinder is crimped over it as illustrated in Figure 5. This construction provides the groove 50 with a rigid lip 52 which projects angularly across the opening of the groove. The ends of the cylinder 32 are provided with any type of suitable end cap 54.

The upper bracket arm 36 of the bracket 34 is preferably bent to an arcuate shape so as to provide a continuous slope from its secured end down to the end adjacent the cylinder 32. The exact shape, however, can be varied widely to suit the convenience of individual installations and to provide an aesthetic appearance. The lower bracket arm 38, while preferably straight, may take various bent forms as will be apparent. The arms 36 and 38 may be of metal tubing, either seamed or seamless. If desired, an ornamental brace such as that shown in broken lines and designated 55 in Figure 1 may be formed from strip stock and mounted between the arms 36 and 38 by means of sheet metal screws or the like.

The ends of the upper and lower bracket arms 36 and 38 to be secured against a vertical wall are provided with bracket clips 56, one of which is shown removed in Figure 8. These bracket clips 56 are employed in pairs to embrace the tubular arm 36 or 38, as the case may be, as clearly shown in the cross sectional view of Figure 7. Figures 3, 4 and 8 show the semicircular portion of the clip 56 to be provided with a plurality of spaced holes 58 by means of which the clips may be secured to the bracket arms in an adjusted position and retained by means of bolt assemblies 60. Each of the clips 56 has a free end which is bent to hook form as clearly illustrated in Figures 3, 4, 7 and 8. These hooks are designated by the numeral 62 in the drawings.

The mounting strip 26, shown in isometric view in

Figure 10, is preferably formed as an extrusion, but may be otherwise shaped or molded if desired. It comprises a back plate 63 provided with spaced holes 64. The lower edge of the back plate 63 is provided with a flange-like extension 66 which projects forwardly and downwardly therefrom, as clearly illustrated in Figures 3 and 10 of the drawings. At its upper edge, the back plate 62 is provided with an arcuate extension which curves forwardly and then downwardly to provide an upper arcuate flange 68 which forms an inside recess or groove 70. Intermediate the flanges 66 and 68 aforementioned, an intermediate flange 72 is provided. This latter flange has an upward curve which approaches, but does not meet the free edge of the flange 68. It will be observed, incidentally, that the free edge of the intermediate flange 72 projects somewhat farther forwardly of the back plate 62 than does the free edge of the lower flange 66.

The mounting plates 28, one being shown removed in Figures 11 and 12, each includes a back plate 74 which may have beaded longitudinal edges 76 for added strength and rigidity and which has slots 78 provided for mounting the plate against a wall surface. Intermediate these mounting slots 78, the back plate 74 has opposed flanges 80 pressed or otherwise extended therefrom as illustrated in Figures 4, 11 and 12.

The manner of erecting the canopy 20 is generally clear from the drawings. The upper and lower bracket arms 36 and 38 are joined together in pairs, along with an angle clip 40 and support clips 44 and 46. The clips 44 and 46 cooperate to support the cylinder 32 which is disposed with the groove 50 in the approximate position illustrated best in Figure 5. This enables the hooked edge of the end slat 30 of the flexible cover 22 to be hooked over the lip 52 for retention. The opposite ends of the bracket arms 36 and 38 carry the mounting clips 56 which engage the appropriate flanges of the mounting strip 26 and mounting plates 28, the strip 26 and plates 28 being, of course, secured to a vertical surface, designated in the drawings by the window frame 28, by means of screws 84.

The free rolled edge of the uppermost slat 30 of the flexible covering 22 is disposed within the recess 70 formed by the upper flange 68 of the mounting strip 26, this engagement being clearly illustrated in Figure 3. It is, of course, obvious that this engagement may be easily effected by sliding the rolled edge of the slat 30 longitudinally with respect to the recess 70, and it may be preferred to engage this upper end of the covering 22 before hooking the lower end to the cylinder 32 as aforementioned. With both ends of the covering 22 retained as described, the bracket frame 34 should be adjusted outwardly with respect to the mounting clips 56 so as to provide an appropriate tensioning of the flexible covering 22 to prevent its fluttering or rattling due to wind gusts and the like. It will be noted that the construction of the covering 22 is such as to provide resiliency which enhances the effectiveness of the tensioning process. With the covering 22 appropriately tensioned, the bolt assemblies 60 are placed through appropriate holes 58 in the tension clips 56 to retain the rigid assembly.

It will be observed from a comparison of Figures 3 and 4 that the upper bracket arm 36 is disposed at a slight inclination to the horizontal due to the greater forward projection of the intermediate flange 72 of the mounting strip 26 as compared to the lower flange 66. This insures that the upper end of the covering 22 will likewise be disposed at a slight inclination which will prevent the accumulation of rain puddles, dirt, etc.

Clearly, there has been provided a canopy which fulfills the objects and advantages sought therefor.

It is to be understood that the foregoing description and the accompanying drawings have been given by way of illustration and example. It is further to be understood that changes in the form of the elements, rear-

angement of the parts, and substitution of equivalent elements, all of which will be apparent to those skilled in the art, are contemplated as being within the scope of the invention, which is limited only by the claims which follow.

What is claimed is:

1. In a canopy, a frame comprising a plurality of laterally spaced brackets and a horizontal longitudinal element supported thereby, each bracket including an elongated upper bracket arm and an elongated lower bracket arm perpendicular to said longitudinal element, an angle clip interconnecting one end of the upper bracket arm with one end of the lower bracket arm, a pair of support clips interconnecting the interconnected ends of the upper and lower bracket arms with the longitudinal element, means for mounting the frame to a vertical wall, and a flexible covering disposed in overlying relation to the frame, said cover having one edge in detachable interlocking connection with the longitudinal element and an opposite edge in detachable interlocking connection with said mounting means.

2. The combination of claim 1 wherein the upper bracket arm provides continuous support for the flexible covering between the detachably connected edges of the latter, and wherein the mounting means includes elements fixed to the vertical wall and elements adjustably interconnecting the bracket arms with the fixed elements, the aforesaid opposite edge of the flexible curtain being connected to an element fixed to the vertical wall.

3. The combination of claim 1 wherein the mounting means includes an elongated mounting strip for fixed attachment to the vertical wall, said strip having a top flange for retention of the aforesaid opposite edge of the flexible covering, said strip also having an intermediate flange and a lower flange for cooperation in retaining the upper bracket arm, and a pair of bracket clips secured to the upper bracket arm and having hook portions for engaging said intermediate and lower flanges for retention thereby.

4. The combination of claim 3 wherein the intermediate flange of the mounting strip extends farther from the vertical wall than does the lower flange, whereby the adjacent end portion of the upper bracket arm is supported at a downward inclination.

5. The combination of claim 1 wherein the mounting means includes an elongated mounting strip and a plurality of mounting plates for fixed attachment to the vertical wall, said mounting strip and plates each having a pair of oppositely directed flanges projecting therefrom, and a pair of bracket clips secured to each upper and lower bracket arm, each of said clips having a hook portion disposed for hooked engagement with one flange of one of the aforesaid pairs thereof.

6. The combination of claim 5 wherein the mounting strip is provided with a third flange for retention of the aforesaid opposite edge of the flexible covering, and wherein the bracket clips are adjustably secured to the bracket arms, so that the covering may be appropriately tensioned.

7. A canopy structure having a plurality of frame members and a covering supported by said frame members and securing means for attaching said canopy structure to a surface; said securing means comprising: a bracket attached to said surface at a position opposite one end of all of said frame members; said bracket including a locking portion composed of a pair of oppositely facing hooks joined at one end and presenting a common opening at the other end of each; each said frame member in conjunction with said canopy including a pair of oppositely facing hooks extending within said common opening; each hook of said last mentioned pair having its hook portion interlockably engaging the adjacent hook of said locking portion; said bracket further including a second locking portion substantially coplanar with the bracket hooks so that one of said bracket hooks

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lies between the other and said second locking portion; said frame member including a second hook oppositely faced from said one bracket hook for locking with said second locking portion.

8. The device of claim 7 wherein said canopy comprises a plurality of articulated interlocking panels extending from the free end of each frame member opposite said one end toward said one end and wherein said frame member hooks are adjustably secured to said frame members for adjusting their distance from said free end according to the length of said canopy.

9. A canopy comprising a frame; a roof structure supported by said frame and surface mounting means for attaching one end of said frame to a surface; said roof structure being comprised of a plurality of articulated panels extending the distance between the other end of said frame and said mounting means and whose number depends upon said distance; said frame including adjustable means interlockable with said mounting means for attaching said frame to said surface; said last-mentioned means being adjustably connected to said frame

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to permit variation of said distance according to the size of said roof structure.

10. The canopy of claim 9 wherein said panel at one end of said roof structure interlocks with said surface mounting means and a panel at the opposite end interlocks with the other end of said frame; said adjustable means varying the distance therebetween.

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