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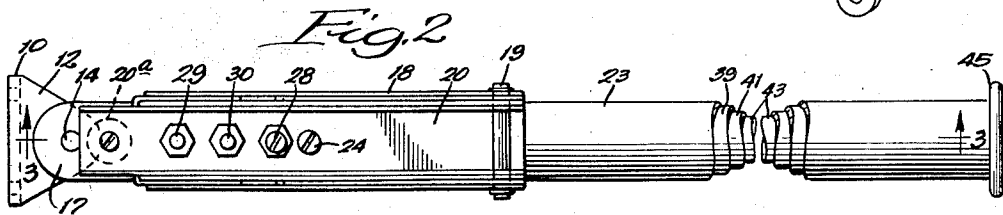
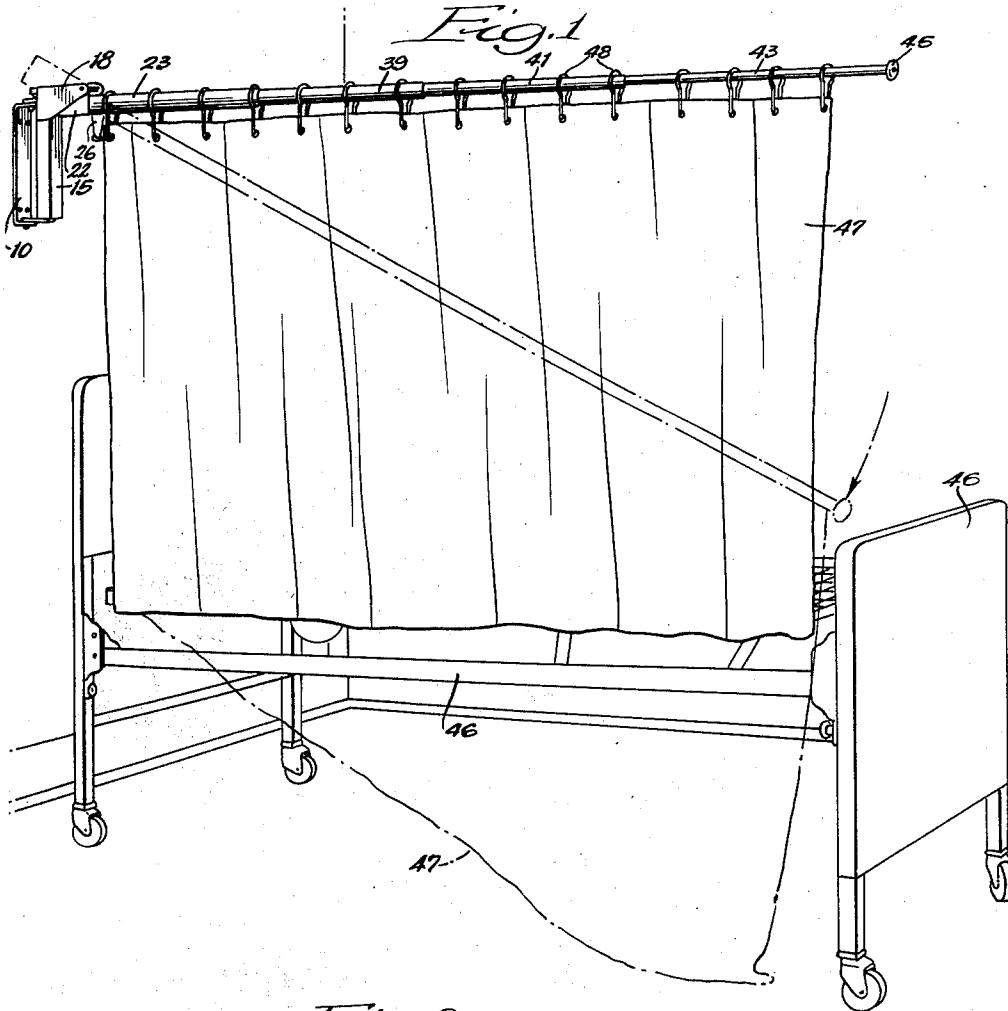
F. A. BLASHFIELD ET AL

2,855,041

CURTAIN ARM STRUCTURE

Filed Nov. 20, 1953

3 Sheets-Sheet 1



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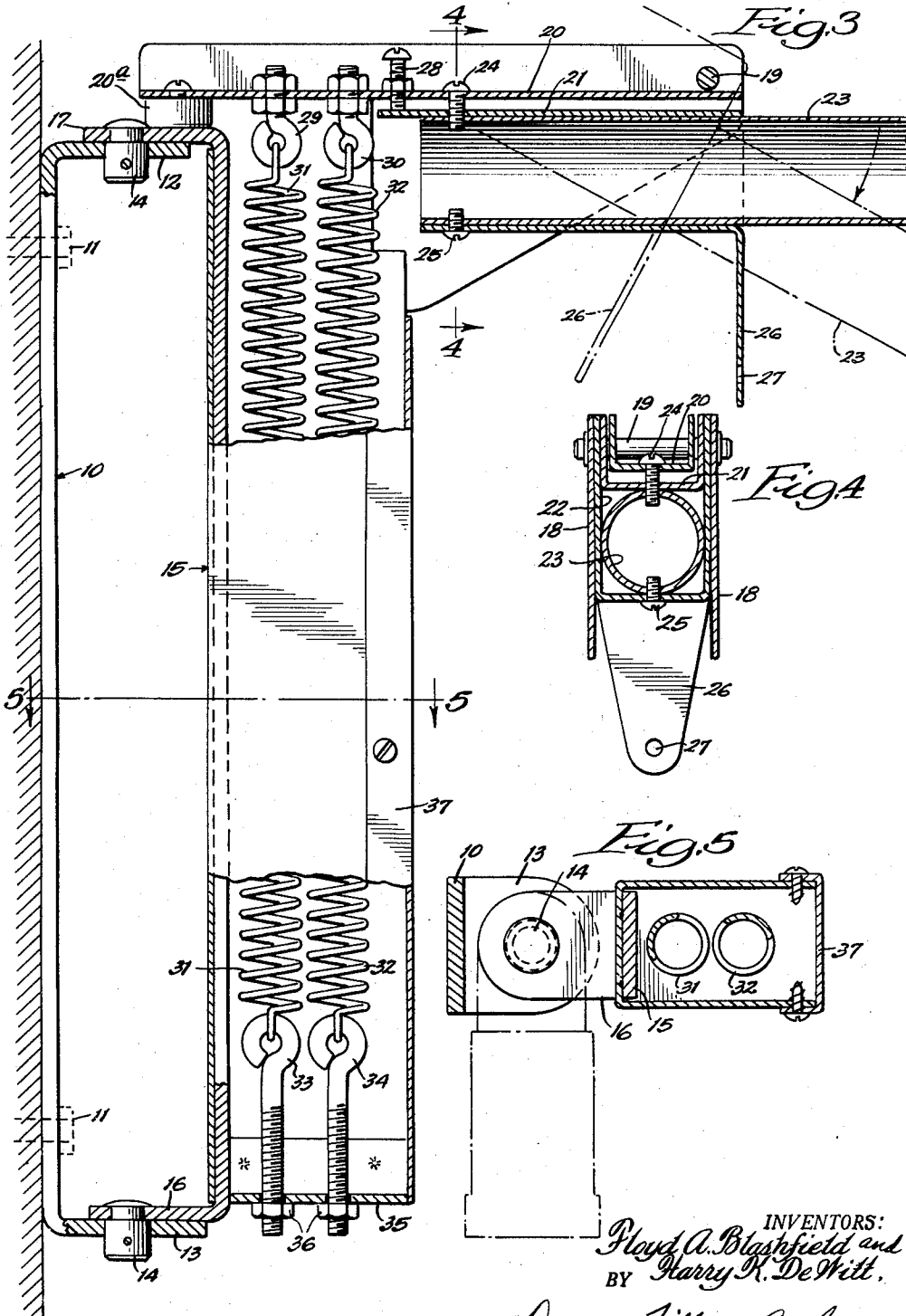
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3 Sheets-Sheet 2



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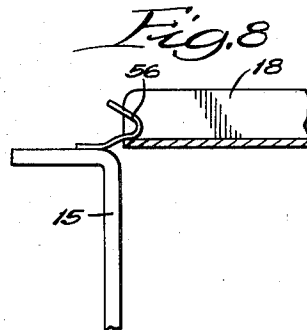
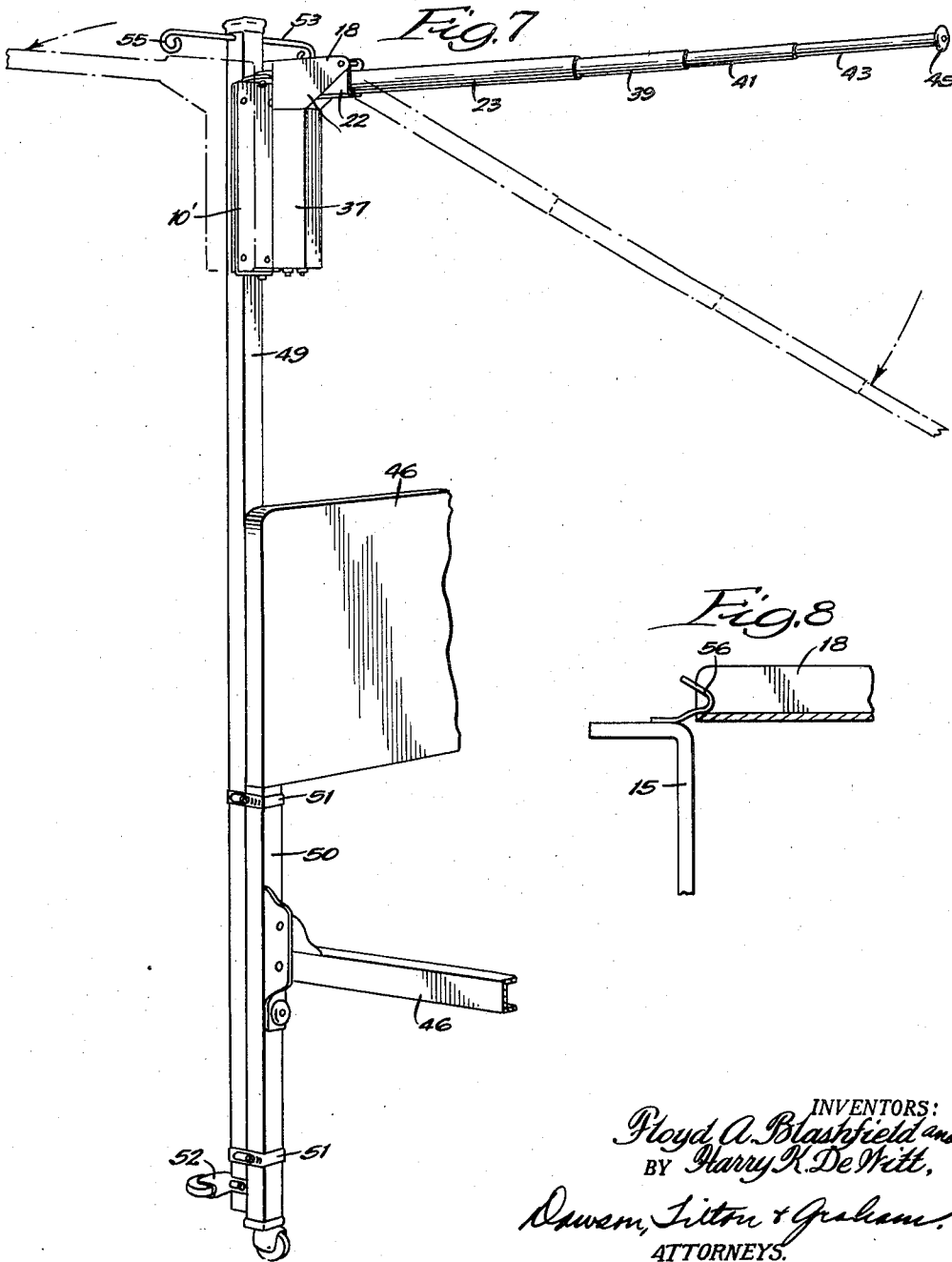
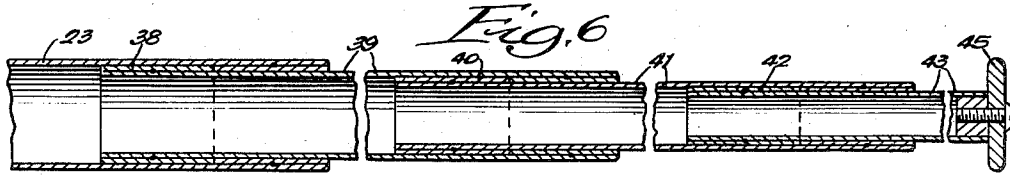
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CURTAIN ARM STRUCTURE

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3 Sheets-Sheet 3



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CURTAIN ARM STRUCTURE

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4 Claims. (Cl. 160—336)

This invention relates to a curtain arm structure. The invention is particularly useful in the providing of curtain supports for use about beds, as, for example, in hospitals, and for forming partitions in various other enclosures.

One great difficulty having to do with the supporting of curtains in any compartment is the danger of breaking off the curtain rod or support as persons move about the room. There is also presented the difficulty of handling the curtain rods for the placing of the curtains thereon and of moving the curtain rods and curtains to an unobstructing position when the curtains are not desired. Fixed track curtains suspended from the ceiling do not allow the position of furniture, particularly beds, to be changed in the room and also require more curtain material. As a result of the problems involved and with the cumbersome structure heretofore believed necessary, curtains have not been provided to any substantial extent in hospital rooms and other rooms where the need for them has long existed.

An object of the present invention is to provide a curtain arm support structure which overcomes the above described disadvantages and difficulties while at the same time permitting the curtain and curtain supporting structure to be moved quickly to an unobstructing position when the curtain is no longer needed. A further object is to provide a curtain arm supporting structure which is normally supported adjacent a wall of the room where it occupies a minimum of space, while at the same time permitting an extensible curtain arm to be brought alongside a bed or part way across a room for the supporting of a curtain thereon, means being provided also for permitting movement of the curtain arm in a variety of directions adapting it to different positions while also providing a structure which will prevent accidental breakage or injury to the arm through contact with persons moving in the room. A still further object is to provide such a structure which may form a part of the bed frame for supporting the curtain alongside the bed. Yet another object is to provide in such a structure resilient means for mounting the curtain arm in an operative position while at the same time permitting the arm to yield under blows or to be drawn downwardly for the convenient insertion of curtains, etc. thereon. Other specific objects and advantages will appear as the specification proceeds.

The invention is shown, in an illustrative embodiment, by the accompanying drawings, in which—

Figure 1 is a perspective view of a curtain supporting structure embodying our invention and showing the use thereof alongside a hospital bed; Fig. 2, a broken top plan view of the curtain supporting structure shown in Fig. 1; Fig. 3, a broken, enlarged vertical sectional view,

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the section being taken as indicated at line 3—3 of Fig. 2; Fig. 4, a vertical sectional view, the section being taken as indicated at line 4—4 of Fig. 3; Fig. 5, a transverse sectional view, the section being taken as indicated at line 5—5 of Fig. 3; Fig. 6, a broken longitudinal sectional view of the extensible curtain arm; Fig. 7, a broken perspective view of a modified form of the invention in which the curtain supporting arm is carried upon the frame of the bed itself; and Fig. 8, a broken sectional detail view showing a spring catch for retaining the pivotally mounted curtain arm.

In the illustration given in Figs. 1 to 6, inclusive, 10 designates a wall support provided by a strap of metal adapted to lie against the wall and secured thereto by bolts 11. The strap is provided with forwardly-extending arms 12 and 13, apertured to receive the pivot members 14, as shows more clearly in Fig. 3.

Upon the support 10 is pivotally mounted a bracket member 15. The bracket member 15 has rearwardly-extending arms 16 and 17 which rest upon the support arms 13 and 12, respectively, of the support 10 and carry the pivot members 14 received within the apertures of the arms 12 and 13.

The bracket 15 carries at its top the spaced angularly-shaped plates 18 as a fixed part of the bracket frame, and between the plates 18 extends a pivot pin 19 near the forward end thereof. The purpose of the pivot pin 19 and the side plates 18 is to pivotally support the extensible curtain arm which will be later described.

Between the plates 18, as shown more clearly in Figs. 3 and 4, there is mounted centrally thereof a U-shaped channel 20 pivotally mounted upon the pin 19. A second channel 21 larger than the channel 20 is also pivotally mounted upon the pin 19 and is suspended below channel 20. A third channel 22 which is larger than channel 21 is also suspended upon pin 19. The U-shaped channel 22 extends a very substantial distance below the channel 21 so as to receive between the two a cylindrical curtain rod support 23. The tube 23 is secured in position, as illustrated in Fig. 4, by the screws 24 and 25. At its forward end, the channel 22 is provided with a depending lip or flange 26, apertured at 27 to receive a lug which secures the curtain thereto.

In the foregoing structure, it will be noted that the channels 20, 21 and 22 are united and are all pivotally supported upon the pin 19 carried in the fixed plates 18 of bracket 15. A bolt and nut 28 may be provided, as shown in Fig. 3, for exerting pressure between the channels 20 and 21, thus preventing looseness or play between the parts.

We will now describe spring compensating means which maintain the curtain support or cylinder 23 normally in a vertical position. At the rear portion of the channel 20 are secured the hooks 29 and 30, to which are secured tension springs 31 and 32. The lower ends of the springs 31 and 32 are secured to hooks 33 and 34, each of the hooks having lower threaded ends extending through the base wall 35 carried by the bracket 15. Nuts 36 provide means for adjusting the tension upon springs 31 and 32. We prefer to provide a casing 37 substantially enclosing the springs 31 and 32, as shown more clearly in Figs. 3 and 5.

To limit downward movement of the rear portion of the channel member 20, we provide a stop 20a, as shown best in Fig. 3, which engages the top of the flange 17.

The extensible arm may be of any suitable construction. In the specific structure shown, the inner cylinder

23 carries in nested relation therein a short sleeve 38, a telescoping arm segment 39, and the arm 39 carries a similar sleeve 40 in which is mounted a second arm segment 41. The arm segment 41 carries an inner sleeve 42 in which is mounted an inner arm segment 43. Arm segment 43 is preferably provided at its outer end with a plug 44 and a button 45. With the parts welded in the position shown, it will be noted that the inner arm segments are slidably extensible outwardly to a limited extent, forming the continuous extensible rod as illustrated in Fig. 1. Any suitable extensible arm may be employed in the practice of the invention.

In the illustration given in Fig. 1, a hospital bed 46 is illustrated adjacent the extensible arm, showing the application of the rod and curtain in providing a partition about the bed.

In the operation of the structure shown in Figs. 1 to 6, inclusive, the curtain arm may be moved to a completely telescoped position, as shown in Fig. 2, where it will occupy a minimum of space and, if desired, the entire bracket member may be swung inwardly so as to lie flat against the wall of the room. When it is desired to set up a curtain, the bracket may be swung to the position illustrated in Figs. 1 and 2 and the rod then drawn outwardly to its fully extended position. A curtain may be placed upon the rod, and in this operation the forward end of the rod may be grasped and pulled downwardly to render it readily accessible. In this operation, the arm support members 20, 21 and 22 tilt freely upon the pivot 19 against the tension of springs 31 and 32, and after the curtain has been placed in position, the arm will swing upwardly to the horizontal position shown in Figs. 1 and 3, thus holding the curtain 47 which is suspended upon the curtain rod by the hook elements 48 in the vertical position shown best in Fig. 1.

If desired, the curtain 47 may be left upon the rod structure and collapsed inwardly when the rod segments are telescoped within each other and then when the rods are extended again to the position shown in Fig. 1, the curtain is carried forwardly to open it.

If access is desired to the bed, as when a doctor visits the room, the curtain may be swung laterally to any desired angle. Injury to the rod is prevented by reason of its free-swinging movement in downward and lateral directions.

While we have shown two springs employed for maintaining the curtain arm in horizontal position, it will be understood that any number of springs may be used or other means for counterbalancing the arm employed, and further, the details of construction in the supporting structure may be varied as desired.

In the modification shown in Fig. 7, the wall support 10' is carried upon a bed frame extension 49. The frame member 49 may be releasably secured to the bed frame standard 50 of the bed between releasable clamps 51, and may be provided with rollers 52, as shown more clearly in Fig. 7. If desired, the top of the shaft 49 may be provided with the rod member 53 forming inwardly-turned bail supports 55 adapted to receive the bails of solution bottles for supporting them above the patient. The bracket 15 mounted on the support 10' and the curtain rod structure are substantially the same as that shown in Figs. 1-6, inclusive, and, therefore, need not be described in further detail.

While we prefer to employ an extensible rod, it will be understood that the rod may be a straight rigid rod which is not formed of collapsible segments, and the rod may be of such length that it may be swung downwardly, as illustrated in Figs. 1 and 7, and preferably the rod is of such length that it may be swung into a vertical position adjacent the leg of the bed, where it occupies an unobstructing position. If desired, the spring may be entirely omitted from the structure to permit the free swinging of the curtain rod to the vertical position referred to; or, if desired, a releasable spring catch may

be substituted for the springs illustrated, for releasably retaining the curtain arm in the horizontal position illustrated in full lines in Figs. 1 and 7, but permitting, upon release of the spring catch, the rod to be swung downwardly to a vertical position alongside the bed leg.

A releasable spring catch 55 carried by the member 15 is illustrated in Fig. 8.

Many changes may be made in the mechanical structure shown. For example, it may be more convenient and satisfactory to employ tubular members instead of the panel members 20, 21 and 22. Further, referring to Fig. 7, it will be understood that any type of vertical standard which may extend between the floor and the ceiling may be employed for supporting the curtain arm, including tie elements or supporting strips between the top of the standard and the curtain arm, whereby the curtain arm may be held firmly or releasably in a horizontal position.

While, in the foregoing specification, we have set forth specific structures in considerable detail for the purpose of illustrating the invention, it will be understood that such details of structure may be varied widely by those skilled in the art without departing from the spirit of our invention.

We claim:

1. A curtain supporting structure comprising a fixed support, a bracket secured to said support having a pair of horizontally-spaced vertical plates, a curtain arm formed of extensible telescoping segments, a curtain arm supporting member secured to the innermost of said segments and pivotally mounted upon said bracket between said plates for pivotal movement of said arm along a vertical plane between a horizontal position and a downwardly inclined position, spring means provided by said bracket and cooperating with said curtain arm supporting member for urging said arm into its horizontal position, stop means provided by said member and engageable with said bracket for preventing upward swinging movement of said arm beyond said horizontal position, a curtain equipped with a series of spaced hook elements slidably suspending the curtain from said arm said curtain having an upper inner corner thereof secured to said curtain arm supporting member, and a curtain retainer provided by the outermost segment of said arm, said retainer being effective in urging said hook elements towards said bracket and in folding said curtain when said telescoping segments are pushed into nested telescoping relation, said curtain being unfolded when said arm is extended and is swung downwardly so that said hook elements slide downwardly along said arm towards said retainer.

2. The structure of claim 1 in which said bracket is pivotally mounted upon said fixed support for pivotal movement in a horizontal plane.

3. A curtain supporting structure comprising a curtain rod formed of a plurality of telescoping segments, fixed supporting means pivotally supporting said rod at an intermediate point along the innermost segment thereof for swinging movement of said rod along a vertical plane, between a horizontal position and a downwardly inclined position, counterbalancing means cooperating with said fixed supporting means and said rod for urging said rod into said horizontal position, stop means carried by said rod and cooperating with said fixed supporting means for preventing swinging movement of said rod above a horizontal position, a curtain equipped with a series of spaced hook elements slidable along said rod, said curtain being secured adjacent the upper inner corner thereof to a portion of said rod adjacent said supporting means, and a retainer element provided at the outermost end of said rod for retaining said hook elements thereon, whereby, when said rod is extended and lowered into a downwardly inclined position, said hook elements slide freely downwardly along the inclined rod for automatically unfolding said curtain.

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4. The structure of claim 3 in which said curtain rod is pivotally mounted upon said fixed supporting means for swinging movement along a horizontal plane.

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