

Dec. 27, 1932.

W. C. CHAPMAN

1,892,448

CURTAIN AND DRAPE STRUCTURE

Filed May 9, 1932

2 Sheets-Sheet 1

Fig. 1.

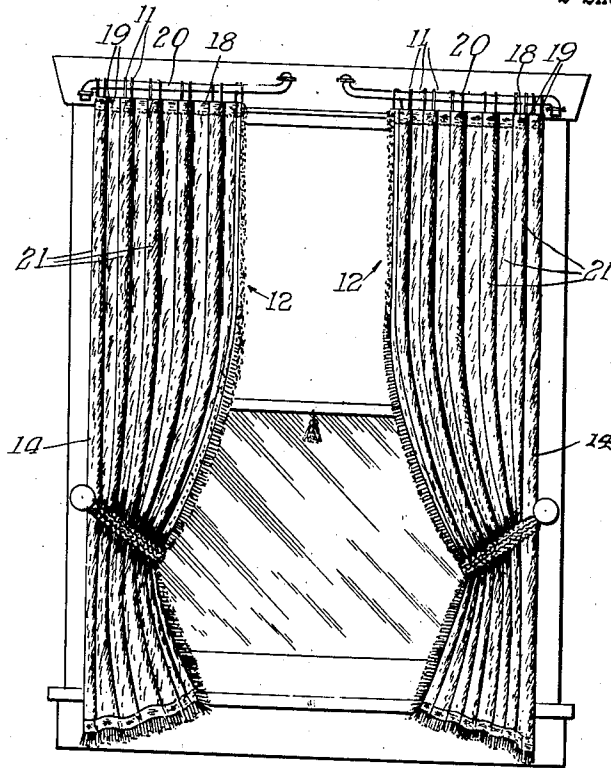


Fig. 2.

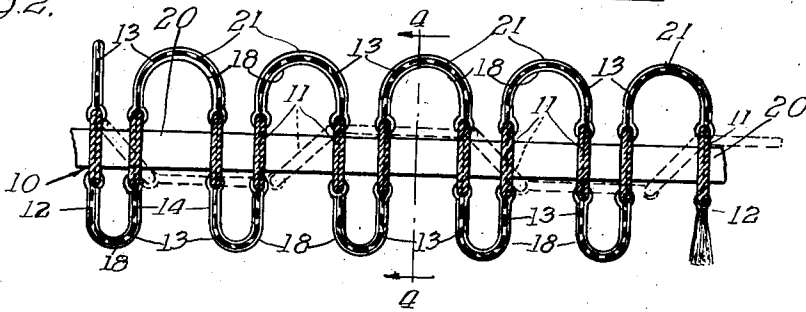
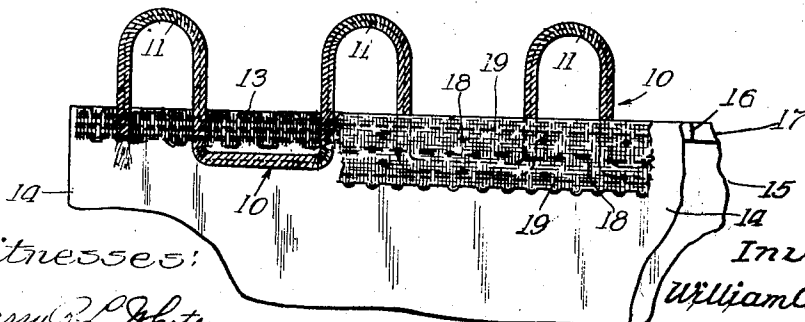


Fig. 3.



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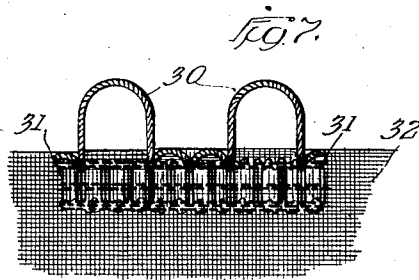
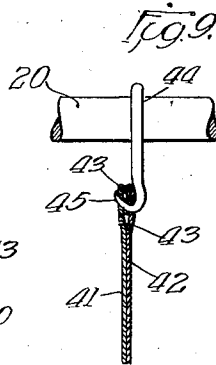
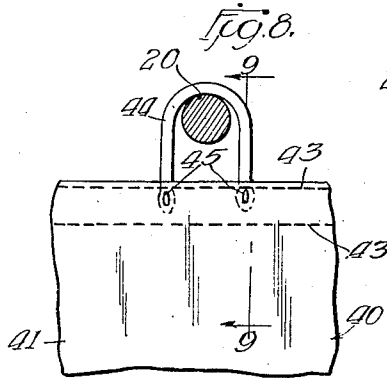
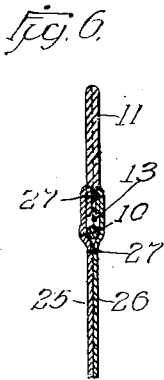
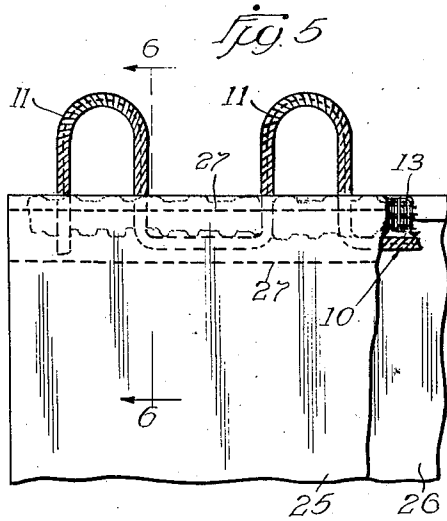
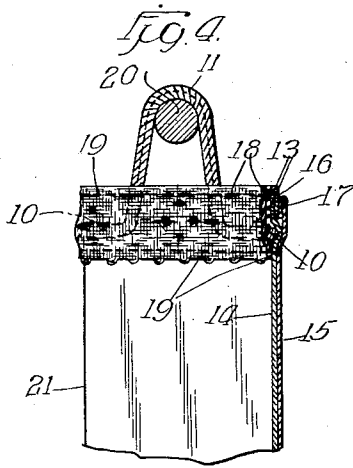
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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CURTAIN AND DRAPE STRUCTURE

Application filed May 9, 1932. Serial No. 609,998.

The invention relates to improvements in curtain and drape structures and the primary object of the invention is to provide new and improved means for supporting curtains and drapes whereby to suspend or hang curtains and drapes of flexible and pliable woven or knitted textile materials whereby the materials of the curtain body will tend to hang in a pleasing and uniformly pleated condition whether the material of the curtain or drape shall be of the heavier character of fabrics or of the sheer materials, thus obviating the labor and expense of pleating and the usual permanent attachment of such pleating by stitching commonly referred to as French pleating.

It is a further object of the invention to provide as an article of manufacture new and improved means for supporting curtains and drapes on the usual drape supporting rods or poles.

Other objects of the invention will appear from the following description with reference to the drawings depicting the invention as applied to the construction and suspension of curtains and drapes, the features of novelty being more particularly set forth in the appended claims.

In the said drawings:

Fig. 1 is an elevation view of a window casing to which curtains embodying the invention are applied.

Fig. 2 is an enlarged fragmentary top plan view of one of the curtains and curtain suspending rods of Fig. 1 with a dotted outline of the curtain and its supporting means shown to indicate the possibilities of curtain adjustment on the supporting rod or pole.

Fig. 3 is a fragmentary view of the upper end of the curtain illustrating the construction of the improved supporting means incorporated into the upper end of the curtain or drape with portions broken away to disclose details of construction.

Fig. 4 is a broken detail section on line 4—4 of Fig. 2 illustrating the manner in which the curtain is suspended on the pole or rod to produce the pleated effect to the curtain without stitching or French pleating.

Fig. 5 is an enlarged fragmentary view similar to Fig. 3 illustrating one mode of attachment of the curtain suspending element shown in Fig. 4 with the same secured in position and permanently attached to the upper end of the curtain between the curtain fabric and its lining, thus obviating the use of the ornamental finishing strip over the looped attaching device of Figs. 3 and 4.

Fig. 6 is an illustrative detail section on line 6—6 of Fig. 5 looking in the direction indicated by the arrows.

Fig. 7 is a fragmentary plan view illustrating a modified form of the invention as applied to the construction and supporting the curtains and drapes of sheer materials as lace, marquisette and the like.

Fig. 8 is a fragmentary view of an upper end of a curtain equipped with a modified form of the invention in which inverted U-shaped suspending devices of a rigid character are used in the place of the cord loops of Figs. 1 to 7 inclusive, and Fig. 9 is a detailed sectional view on line 9—9 of Fig. 8 looking in the direction indicated by the arrows.

In the drawings, Figs. 1 to 6 inclusive, the reference character 10 designates a flexible suspending cord that may be made of any desired woven or knitted character and which will be preferably arranged so as to provide a plurality of U-shaped loops 11 spaced apart as illustrated, for example, in Figs. 3 and 5 in order to insure that the curtain when suspended thereby from its usual rod or pole will be caused to automatically arrange itself into a series of uniform pleats or folds as illustrated most clearly in Figs. 1 and 2, the depth or width of such pleats or folds being obviously determined by predetermined spacing between said loops.

In order to carry out the principles of my invention, it is immaterial how the separated flexible loops 11 be attached to the marginal edge at the upper end of the curtain, it being only requisite that both branches or legs of the loops in definite and predetermined spaced apart relation shall be firmly secured to the marginal edge of the curtain with the projecting loop portions 11 a sufficient dis-

tance above the marginal edge to secure the desired result as depicted, for example, in the proportionate relationship of the parts as illustrated in Fig. 1 in which the body of the curtain material is designated generally by the reference character 12.

However, for convenience in manufacturing and assembling the curtain and its suspending means, I prefer that the flexible loops 11 be formed in extended lengths so that, if desired, such lengths of suspending material may be finished in quantities by the yard and this result may be accomplished by weaving or knitting the flexible cord 10, with the looped portions or sinuses arranged in the manner shown most clearly in Figs. 3 and 5, into the body of the flexible strip 13, the loops 11 of the cord 10 being thus held in their proper spaced-apart relationship in suitable condition for attachment to the upper marginal edge of the curtain body 12, which curtain body in the embodiment of the invention shown in Fig. 3, for example, consists of an outer finishing section 14 of suitable flexible material that may be of any desired weight and if not finished on both sides, it may, on the reverse side, be covered with a lining sheet 15 and the two sheets of the curtain material 14 and 15 sewed for attachment together in the usual or any desired manner. Both the heavier sheet of curtain material 14 and the lining sheet 15 may be reenforced by turning over and inwardly their unfinished edges as illustrated at 16 and 17 respectively in Fig. 4 and stitching them together, the integral strips of suspending elements comprising the body strip 13 and the loops 11 may then be placed on the outer upper marginal edge of the curtain sheet 14 and covered with a suitable, flexible strip 18 and the parts stitched together in a manner indicated by parallel rows of stitching as illustrated at 19 in Figs. 3 and 4 when the curtain, if otherwise finished, will then be ready for hanging in the usual manner illustrated in Figs. 1 and 2, in which view the reference character 20 designates curtain rods or poles of any desired type but of a form and size or diameter in cross section to receive the flexible suspending loops 11 which are then in a condition to be strung upon the rods or poles 20 in the manner shown most clearly in Fig. 2, in order to secure the ultimate draped or suspended effect of pleat-like form as shown by the suspended curtains in Fig. 1.

In order to secure the desired result as illustrated and described, it is essential that the flexible loops 11 be properly spaced along the top marginal edge of the curtain or drape and that the legs of each of the individual U-shaped loops 11 be spaced-apart a predetermined distance approximating the diameter of the supporting rod or pole and their leg portions attached to the top marginal edge of the curtain and from which it will be

seen that with the curtain arranged on the pole in the manner illustrated in Fig. 2, the curtain will have a tendency by reason of the weight of the parts to arrange itself into a succession of uniform pleats or folds of an accordion-like form, particularly when the suspended flexible loops 11 are arranged in reasonably close juxtaposition, to each other along the pole as shown, for example, in Figs. 1 and 2, such pleats or folds being designated generally by the reference character 21 in Figs. 1 and 2, a result which is easily and readily attained and maintained throughout long periods of curtain suspension without tendency for such pleats to unfold and a result which is furthermore continuously attained without any necessity for stitching or otherwise securing the folds of the pleats together as in French pleating of curtains.

Extensive experimentation has shown that my improved type of curtain suspending construction is capable of producing permanent and uniform pleats without stitching in a manner not heretofore attainable in the construction and suspension of curtains and drapes regardless of the character of the material employed in the curtain whether the same be of the heaviest or sheerest of materials.

Furthermore, my improved construction of curtains and suspension means therefor, enables the curtains to be manipulated along the suspension rod or pole in the usual manner for procuring any desired draping effects, which is a result also not heretofore attainable when permanent stitching of the curtain material is employed in French pleating.

In Figs. 5 and 6, I show a slight modification of the curtain embodying the invention in which two sheets of curtain materials, 25, 26, one of which may, if desired, be a lining material, are secured together at their upper marginal edges by having their adjacent edges in-turned upon the flexible strip 13 to which the suspending loops 11 are fixedly attached and the whole secured together by stitching as indicated at 27, Fig. 5, thus utilizing the material of the curtain for producing the finish at the edges since the strip 13 to which the cord loops 11 are anchored will be thus covered, obviating the necessity of the use of the finishing strip 18 of the form shown in Figs. 3 and 4.

My improved method of suspension for curtains and drapes may also be utilized with curtains of the sheerest fabrics, as of lace, marquisette and the like, to secure improved results with respect to pleating under which conditions loops 30 of flexible material comprising cords of less diameter in cross section may be interwoven with lighter flexible woven or knitted strips 31 of an ornamental finishing character as illustrated in Fig. 7 and attached to the upper marginal edge of such curtain bodies as desig-

nated by the reference character 32 and when such curtains are suspended in a suitable manner on the usual poles or rods uniform pleating effects of a character not heretofore attainable are secured regardless of the sheer character of the material.

In Figs. 8 and 9 I show a modified form of the invention in which the reference character 40 designates generally the body of a curtain or drape that in the present instance is shown as comprised of a main body sheet 41 and a lining sheet 42, the upper edges of which are inwardly turned and stitched as at 43 for strengthening purposes and along which strengthened upper edge a plurality of rigid suspending U-shaped loop members 44 are arranged in spaced relation. The members 44 may be of any suitable rigid material as of metal and the like and will be provided at the lower extremities of the spaced-apart legs thereof with integral hooked members 45 that may be passed through eyelets or openings in the re-enforced upper marginal edges of the curtain and when such spaced-apart suspending devices are arranged upon the usual curtain poles or rods 20, the result with respect to the securing of pleats or folds in the curtain or drape will be substantially the same as heretofore described with respect to the form of the invention utilizing the flexible loops and from which it will be seen that the arrangement of the loop portions of the curtain or drape to be suspended upon the pole in the manner described and illustrated, particularly in Fig. 2, is essential and that in order to secure the desired result it is also essential that the legs of the U-shaped portions of the suspending device be firmly secured in the plane of the body of the curtain and in spaced apart relation to each other with such U-shaped suspending devices also arranged in uniform spaced-apart relation if it is desired, as is usually the case, to have the pleats or folds of the curtain or drape uniform in character throughout the suspended curtain.

In order that the invention might be understood, details of the preferred embodiment thereof have been illustrated and particularly described but it is not desired to be limited to such details except as set forth in the claims since it will be apparent that persons skilled in the art may resort to various modifications without departing from the purpose and spirit of my invention.

I claim:

1. The combination in a curtain or drape of a curtain body in the form of a sheet of flexible material having a plurality of inverted U-shaped loops secured in spaced-apart relation along one edge of the curtain body with the depending legs of said inverted U-shaped loops secured in normal spaced-apart relation thereon so that the said loops shall lie substantially wholly within the

adjacent normal plane of the curtain body whereby to cause the latter to tend to assume normally a pleated condition when said U-shaped loops are threaded from alternate sides of the normal planes of said loops upon an elongated curtain support.

2. The combination in a curtain or drape of a curtain body in the form of a sheet of flexible material having a plurality of flexible, inverted U-shaped loops secured in spaced-apart relation along one edge of the curtain body with the depending legs of said inverted U-shaped loops secured in normal spaced-apart relation thereon so that the said loops shall lie substantially wholly within the adjacent normal plane of the curtain body whereby to cause the latter to tend to assume normally a pleated condition when said U-shaped loops are threaded from alternate sides of the normal planes of said loops upon an elongated curtain support.

3. The combination in a curtain or drape of a curtain body in the form of a sheet of flexible material having a plurality of inverted U-shaped loops detachably secured in spaced-apart relation thereon so that the said loops shall lie substantially wholly within the adjacent normal plane of the curtain body whereby to cause the latter to tend to assume normally a pleated condition when said U-shaped loops are threaded from alternate sides of the normal planes of said loops upon an elongated curtain support.

4. The combination in a curtain or drape of a curtain body in the form of a sheet of flexible material having a plurality of spaced-apart inverted U-shaped loops formed by the attachment of a flexible cord along one edge of the curtain body whereby the depending legs of said inverted U-shaped loops are secured in normal spaced-apart relation thereon with the said loops lying substantially wholly within the normal plane of the curtain body whereby to cause the latter to tend to assume normally a pleated condition when said U-shaped loops are threaded from alternate sides of the normal planes of said loops upon a curtain support, the separation of the respective legs of each of the loops at their respective points of attachment to the curtain or drape body being substantially equal to the diameter of the intended curtain support.

5. The combination in a curtain or drape of a curtain body in the form of a sheet of flexible material having a plurality of inverted U-shaped loops secured in spaced apart relation along one edge of the curtain body with the depending legs of each of said inverted U-shaped loops secured in normal spaced-apart relation thereon, the said spacing between the respective depending legs of each of said inverted U-shaped loops being not less than the diameter of the curtain pole or rod upon which the said curtain or drape is

intended to be suspended whereby the said loops shall lie substantially within the adjacent normal plane of the curtain body in order to cause the latter to tend to lie normally in a plane at an angle to the axis of the intended suspending rod or pole and to assume normally a substantially uniform pleated condition when the said U-shaped loops are threaded from alternate sides of their normal planes thereupon.

6. As an article of manufacture, curtain attaching and supporting means comprising a flexible strip of textile fabric having a plurality of U-shaped loops of flexible material secured in spaced-apart relation to one of the lateral edges thereof, the legs in each individual loop being spaced apart in relation to each other a distance not less than the intended diameter of the intended elongated supporting means upon which the loops of the said supporting device are designed to be threaded from alternate sides of their normal planes for supporting the flexible curtains or drapes.

7. As an article of manufacture, a relatively narrow, flexible strip of woven or knitted textile fabric into the body of which a flexible elongated cord is secured by interweaving or knitting to provide a plurality of spaced-apart loops in the plane of the body of the said strip, the legs of each of the respective loops at their points of attachment with the marginal edge of said flexible strip being separated from each other an appreciable distance to correspond substantially to the diameter of the usual supporting rod or pole upon which the said loops are normally designed to be threaded from alternate sides of their respective normal planes.

8. As an article of manufacture, a relatively narrow woven or knitted strip of textile fabric having a flexible supporting cord attached thereto in sinus-like formation to provide a plurality of spaced-apart U-shaped loops projecting from one of the marginal edges thereof, the legs of said U-shaped loops being spaced-apart an appreciable distance with respect to the legs of each individual loop with each of the legs thereof elongated to a length sufficient to adapt the said loops to be conveniently threaded upon a supporting pole or rod, and the said loops being thus arranged to lie normally within the plane of the body portion of said flexible strip.

In testimony whereof I have hereunto subscribed my name this 28th day of April, A. D. 1932.

WILLIAM C. CHAPMAN.