

L. N. KAWCZYNSKI

## PLEATED DRAPERY CONSTRUCTION

Fig. 1.

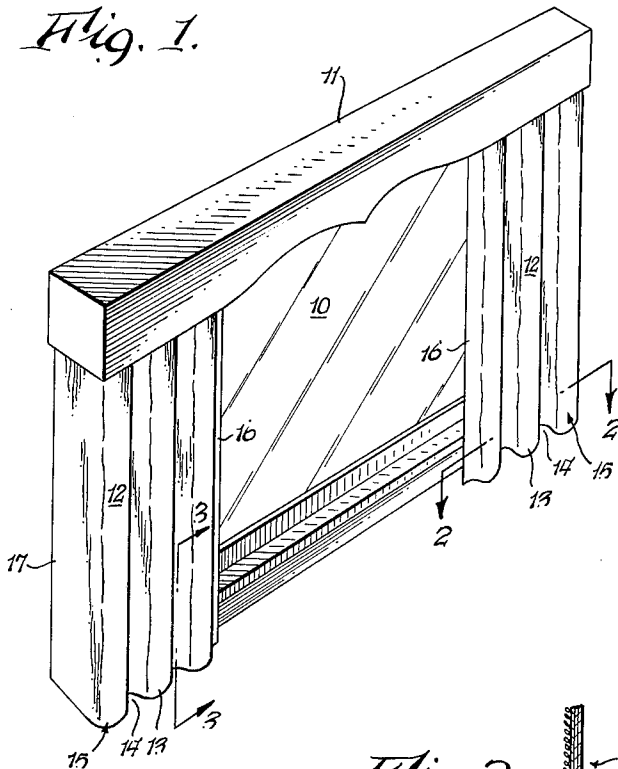


Fig. 3.

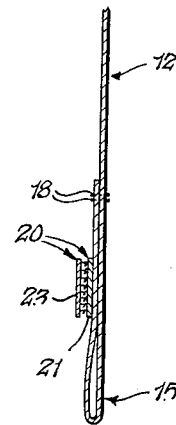


Fig. 2.

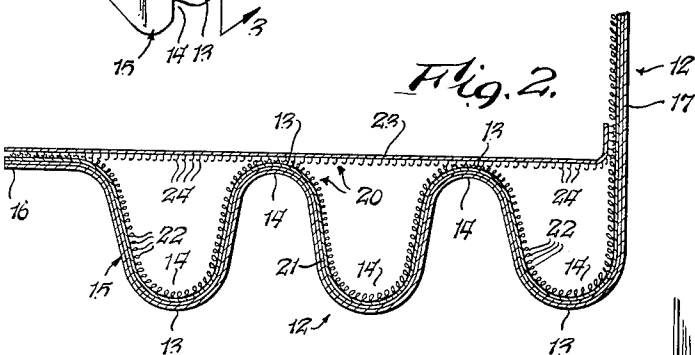
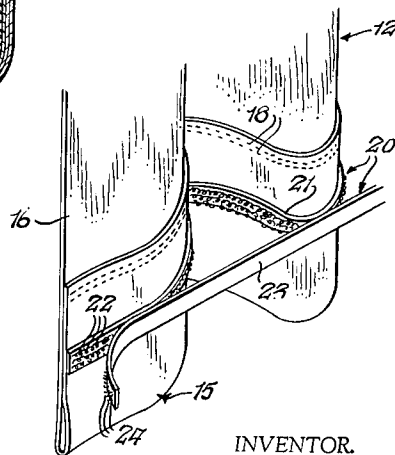


Fig. 5.



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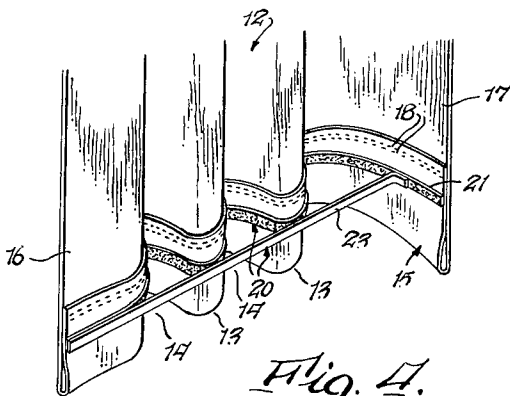
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Fig. 4.



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3,255,809

## PLEATED DRAPERY CONSTRUCTION

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This invention relates to improvements in pleated drapery construction, and more particularly to a new and improved separable fastener for holding the pleats of a drape in place.

In hanging drapes or curtains, it is customary to fold or gather a flexible drape or panel to form pleats composed of alternating crests and valleys and extending from the upper marginal end portion to the lower marginal end portion of the panel between its lateral marginal end portion. In some instances, the material is gathered and sewn at the upper marginal end portion and then fastened by clips to a rod or bracket with a predetermined spacing between the crests of the pleats. In other instances, the upper marginal end portion of the drape is first slidably mounted on the rod or bracket and then gathered to form the pleats.

In either instance, the principal problem encountered is the tendency of the pleats to spread or flatten out as they approach the lower marginal end portion of the drape. This problem is intensified when panels woven of especially resilient material, such as glass fibers, are used, because the pleats tend to spread out toward the bottom in a disorganized manner. Thus, unsightly pins and clips often are required to hold the pleats and lateral marginal end portions in place.

Accordingly, a primary object of the present invention is to provide a new and improved separable fastener so constructed and designed as to securely hold the pleats and lateral marginal end portions in place, in order to produce natural looking, properly spaced pleats from the upper to lower marginal end portions of a drape, without the use of unsightly pins or clips.

Other objects are to provide a new and improved separable fastener so constructed and designed as to have one portion which can be permanently secured to the drape without interfering with laundering or dry cleaning thereof, and to have another portion which can be readily engaged with and disengaged from the aforesaid one portion to facilitate fixing and adjusting the position, shape and spacing of the pleats.

Further objects are to provide a new and improved separable fastener so constructed and designed as to be useable with either stationary or draw drapes, as well as readily securable to the wall facing side of a drape and thereby remain out of sight from the front of the drape.

Still other objects and advantages of the invention will become apparent upon consideration of the following detailed description and accompanying drawings, wherein:

FIG. 1 is a perspective view of a pair of pleated drapes hung on a window wall and incorporating inventive separable fasteners which are not visible from the front of the drapes;

FIG. 2 is an enlarged horizontal sectional view taken on line 2—2 of the right hand drape of FIG. 1, and illustrates a separable fastener constituting a preferred embodiment of the invention, as well as the interengagement between the separable strips of the fastener at the crests of the pleats and at the lateral marginal end portions of the drape;

FIG. 3 is an enlarged fragmentary vertical sectional view taken on line 3—3 of the left hand drape of FIG. 1, and illustrates a preferred location of the fastener adjacent the lower marginal end portion of the drape;

FIG. 4 is an enlarged fragmentary lower elevational view taken from the rear or wall facing side of the left

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hand drape, and also illustrates the interengagement between the separable strips of the fastener, and

FIG. 5 is a further enlargement of the left end portion of FIG. 4, and illustrates how one strip of the fastener is secured to and separated from the other strip.

Referring to the drawings, and particularly FIG. 1, a window wall is generally indicated at 10 and is provided at its upper end with the usual valance box or enclosure 11 covering the bracket or rod supports (not shown) on which the upper marginal end portions (not shown) of a pair of drapes 12 are hung. As noted above, the drapes 12 may be folded first and then sewn to form the pleats after which they are hung with a predetermined spacing between the pleats, or the drapes 12 may be hung first and then gathered or folded to form the pleats.

As best seen in FIGS. 2—5, the flexible drapes or panels 12 are folded or gathered to form preferably undulating arcuate pleats composed of alternating crests 13 and valleys 14 on both the wall facing and front sides of the drapes. The pleats extend from the upper marginal end portions (not shown) to the lower marginal end portions 15 (FIGS. 3—5) between opposite lateral or side marginal end portions 16 and 17. As best seen in FIG. 3, the lower marginal end portion 15 of each drape is folded or doubled over to form a hem held in place by stitching 18.

Regardless of the manner in which the drapes 12 are hung, the problem of spreading out of the pleats toward the lower ends of the drapes is present. In order to overcome this problem, the inventive separable fastener is employed, and a preferred embodiment of this fastener is generally indicated at 20 in FIGS. 2—5. This fastener is preferably composed of two strips 21, 23, each provided with a plurality of interengageable hooking elements continuously secured to and projecting laterally from one side thereof. These hooking elements are, like each of strips 21, 23, made of flexible resilient material, such as woven nylon, in the form of loops such as 22 on strip 21. The loops on strip 23 are cut to form hooks 24.

The preferred construction of strips 21, 23 and loops 22 and hooks 24 is described in detail in U.S. Patent 3,009,235, it being noted that each strip is preferably woven as a terry or velvet-type fabric provided with supplementary warp threads forming the laterally projecting loops such as 22. Moreover, in accordance with this patent, it is preferred that the number of loops 22 per unit area of strip 21 be substantially greater than the number of hooks 24 on strip 23, in order to increase resistance to separation following interengagement between these loops and hooks.

Alternatively, the hooking element on strips 21 and 23 could all be cut to form hooks, as taught in U.S. Patent 2,717,437. However, since the number of hooks per unit area on each strip would be approximately the same, the resistance to separation of the interengageable hooking elements would not be as great as for the preferred combined hook and loop construction referred to above.

Continuing with FIGS. 2—5, the loop strip 21 has its plain side secured continuously to the wall facing side of each drape or panel 12 from one lateral marginal end portion 16 to the other lateral marginal end portion 17 across the alternating crests 13 and valleys 14 of the pleats. As will be evident, the loop strip 21 may be so secured to the drape 12 in any suitable manner, such as by sewing, heat sealing or pressure sealing. As best shown in FIG. 2, the loops 22 on strip 21 project laterally from the wall facing side thereof at the crests 13 of the pleats and at the marginal end portions 16 and 17.

The preferred embodiment of the inventive fastener 20 is completed by the hook strip 23 which has its hook containing side facing the loop containing side of loop strip 21 and spanning the crests 13 and valleys 14 of the

pleats from one to the other of the lateral marginal end portions 16, 17, of drape or panel 12. Moreover, as taught in the aforesaid patents, the hooking elements 24 on strip 23 are pressed into face to face interengagement with the hooking elements 22 on strip 21 at crests 13 and at the lateral marginal end portions 16 and 17. Thus, the pleats and marginal end portions are mechanically tied together to hold the pleats and lateral marginal end portions in place.

The preferred location of fastener 20 is adjacent the lower marginal end portion 15 of each drape or panel 12, with the loop strip 21 being secured to the wall facing side of the panel 12 so that the fastener will be out of sight from the front of the drapes. Of course, the loop strip 21 is secured to the drape or panel 12 prior to hanging of the drapes, and may be left permanently in place without interfering in any way with the dry cleaning or washing of the drapes.

In practicing the invention, the user hangs the drapes 12 and forms the pleats in the usual manner with the pleats preferably spaced at their upper marginal end portions. Next, the user takes the hook strip 23 and presses its hooking elements 24 into face to face interengagement with the hooking elements 22 on the loop strip 21. Once the pleats have been formed as desired, the inventive fastener securely holds the pleats in place until purposely changed by removing the hook strip 23. While the interengagement between the hooking elements of each of strips 21 and 23 is secure, these strips may be readily separated, as shown in FIG. 5, merely by stripping or peeling the hook strip 23 off the loop strip 21.

While the preferred construction of the inventive fastener involves the use of the hook strip 23 and loop strip 21, it is also within the scope of the invention to provide the back or wall facing side of the drape 12 with hooking elements such as loops 22 or hooks 23 or a combination thereof, by weaving these hooking elements into the drape. Moreover, the hooking elements on the back or wall facing side of the drape need not be continuous from one lateral marginal end portion to the other, but could be arranged in clumps or bunches where the size, shape and spacing of the pleats are definitely fixed, so that the hooking elements would only project laterally from the crests or the pleats on the wall facing side of the drape.

Likewise, the hook strip 23 could be modified to complement the hooking elements on the drape. For example, the strip 23 could be provided with loops instead of hooks should the hooking elements on the back of the drape be cut to form hooks. Likewise, should the size, shape and spacing of the pleats be fixed, the hooking elements on strip 23 could also be arranged in clumps or bunches for engagement with the clumps or bunches of the hooking elements on the back of the drape at the crests and marginal end portions thereof.

While the inventive fastener is best suited for stationary drapes, it may also be used to hold the pleats on opened draw drapes. When closing the draw drapes, the user merely peels off strip 23 before closing the drapes.

As noted above, the preferred location of the inventive fastener such as 20 is adjacent the lower marginal end portion 15 of each drape 12, because this is the area where the pleats have the greatest tendency to spread or flatten out in disarray. However, if it becomes necessary to locate an additional fastener across the back of the upper marginal end portions of the drapes, this can be readily done. Also, the fastener may be located anywhere between the upper and lower marginal end portions of the drapes, as desired.

It will now be seen how the invention accomplishes its various objects, such as (1) producing natural looking, properly spaced pleats without any need for the unsightly pins or clips formerly required; (2) permitting permanent securement of one fastener portion to the drape without interfering with the laundering or dry cleaning thereof; (3) permitting ready engagement with and disengagement

between the two fastener portions to facilitate fixing and adjusting the position, shape and spacing of the pleats; (4) permitting use of the inventive fastener with either stationary or draw drapes, and (5) permitting securement of the fastener to the back or wall facing side of the drape out of sight from the front of the drape.

While the invention has been described and illustrated herein by reference to a preferred embodiment and certain alternative embodiments thereof, it is to be understood that various changes in and modifications of the invention may be made by those skilled in the art without departing from the scope of the invention, as determined by the appended claims.

What is claimed is:

1. In drapery construction including a flexible panel folded to form pleats composed of alternating crests and valleys between marginal end portions, the combination therewith of a separable fastener for holding said pleats and marginal end portions in place, said fastener comprising two strips each provided with a plurality of interengageable hooking elements made of flexible resilient material, secured continuously to and projecting laterally from one side thereof, one of said strips having its other side secured continuously to one side of said panel from one to the other of said marginal end portions across said crests and valleys and its hooking elements projecting laterally from said crests, valleys and marginal end portions, and the other of said strips having its one side facing said one side of said one strip and spanning said crests and valleys from said one to said other marginal end portion and its hooking elements pressed into face to face interengagement with the hooking elements on said one side of said one strip at said crests and marginal end portions, whereby said pleats and marginal end portions are tied together.

2. In drapery construction including a flexible panel hung at its upper marginal end portion and folded to form pleats composed of alternating crests and valleys extending to its lower marginal end portion between lateral marginal end portions, the combination therewith of a separable fastener for holding said pleats in place, said fastener comprising two strips each provided with a plurality of interengageable hooking elements secured continuously to and projecting laterally from one side thereof, said hooking elements being made of flexible resilient material in the form of loops, at least some of which are cut to form hooks, one of said strips having its other side secured continuously to one side of said panel from one to the other of said lateral marginal end portions across said crests and valleys adjacent said lower marginal end portion and its hooking elements projecting laterally from said crests, valleys and lateral marginal end portions, and the other of said strips having its one side facing said one side of said one strip and spanning said crests and valleys from said one to said other lateral marginal end portion and its hooking elements pressed into face to face interengagement with the hooking elements on said one side of said one strip at said crests and lateral marginal end portions, whereby said pleats and lateral marginal end portions are tied together.

#### References Cited by the Examiner

##### UNITED STATES PATENTS

|           |         |            |         |
|-----------|---------|------------|---------|
| 2,717,437 | 9/1955  | De Mestral | 161—65  |
| 3,116,784 | 1/1964  | Dwyer      | 160—349 |
| 3,130,111 | 4/1964  | Izumi      | 161—48  |
| 3,155,150 | 11/1964 | Silvestre  | 160—348 |

##### OTHER REFERENCES

Velcro fasteners pamphlet, leaflet V, distributed by The American Thread Company, New York, N.Y.

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