

Sept. 9, 1952

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2,609,873

DRAPERY PLEATING

Filed Jan. 8, 1949

4 Sheets-Sheet 1

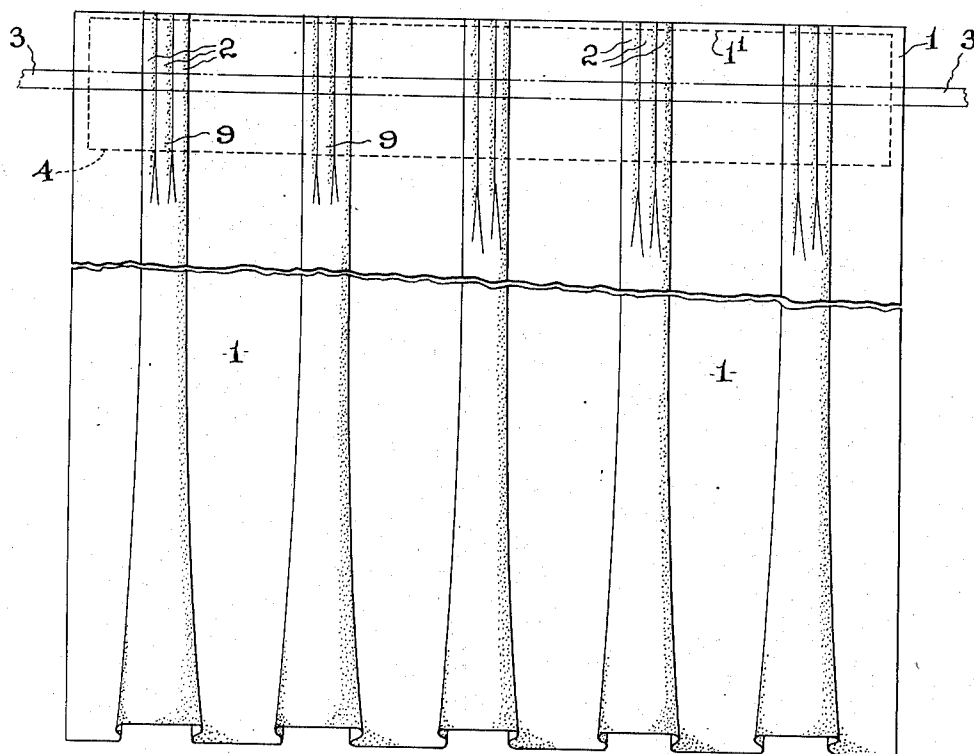


FIG. 1

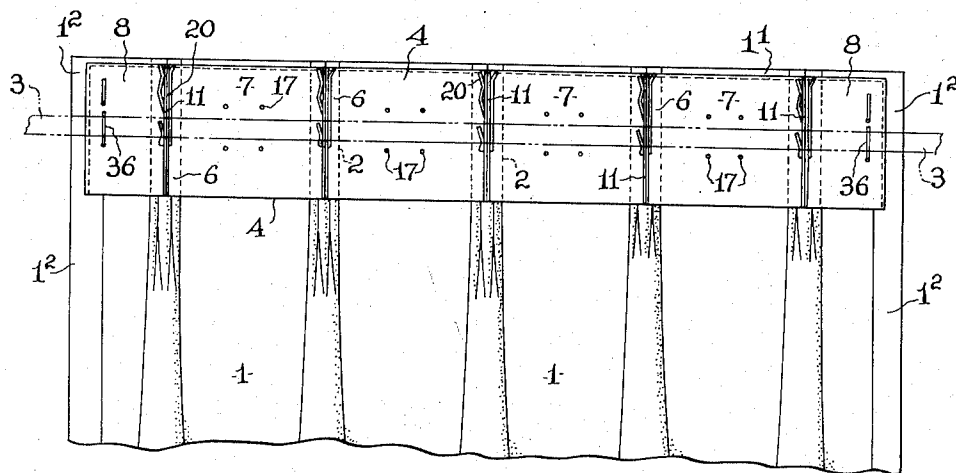


FIG. 2

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4 Sheets-Sheet 2

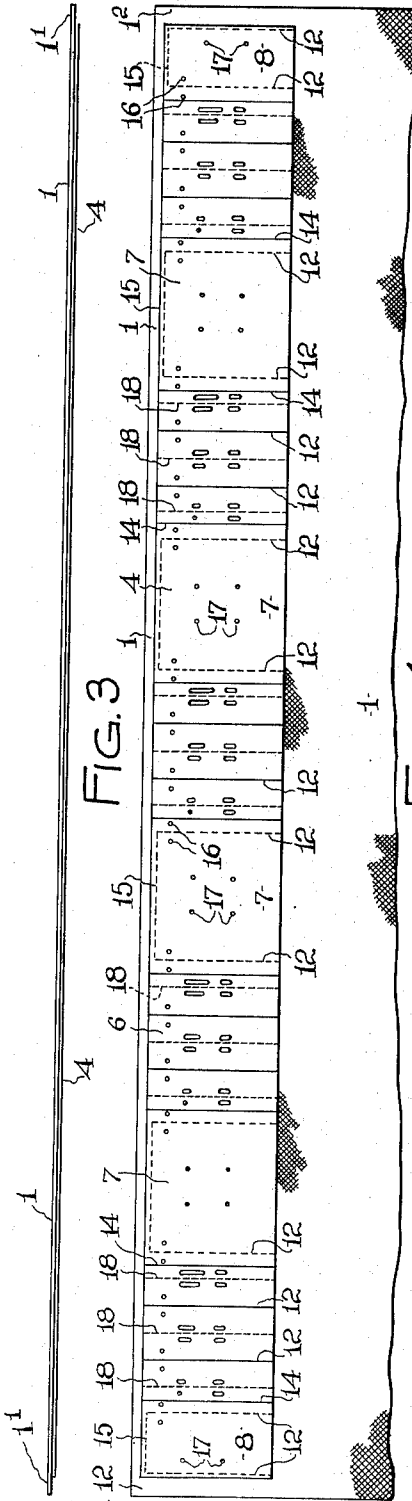
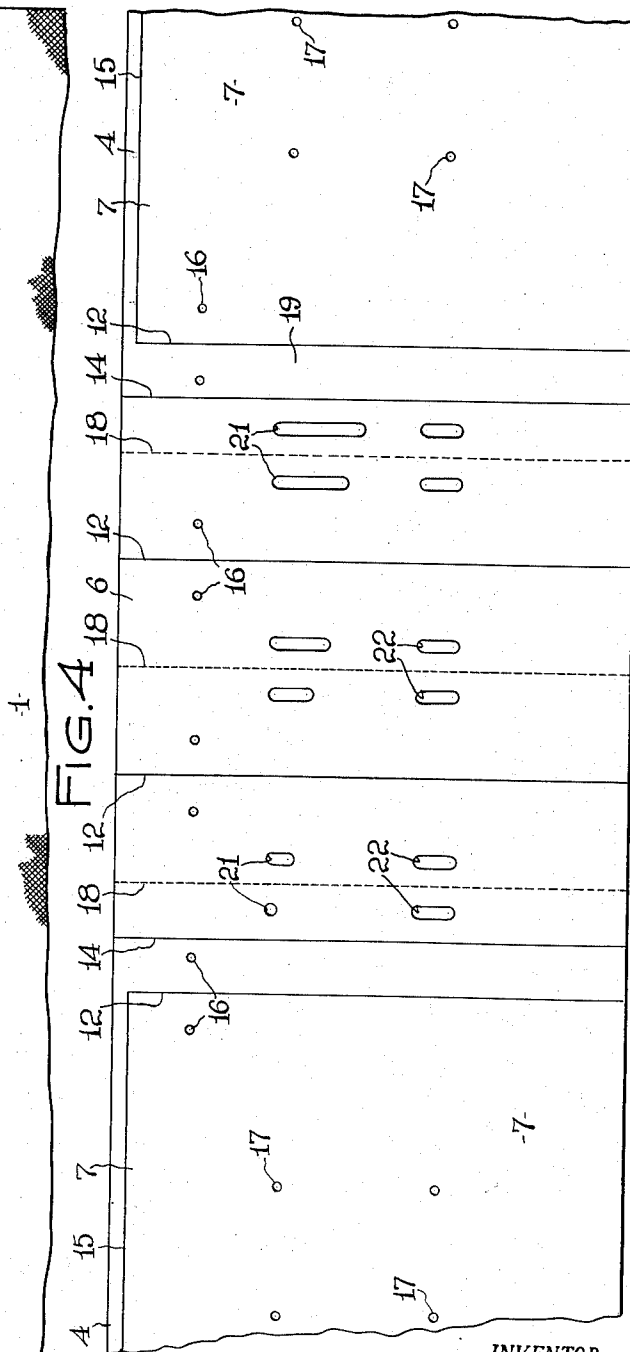


FIG. 5

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4 Sheets-Sheet 3

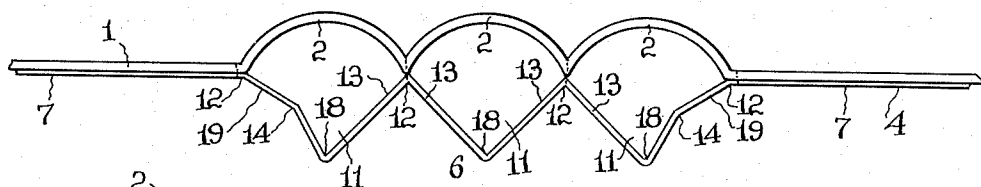


FIG. 6

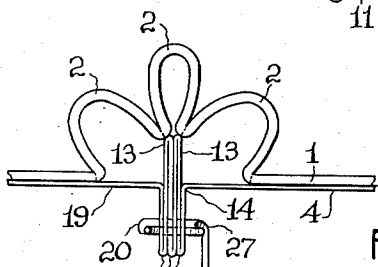


FIG. 7

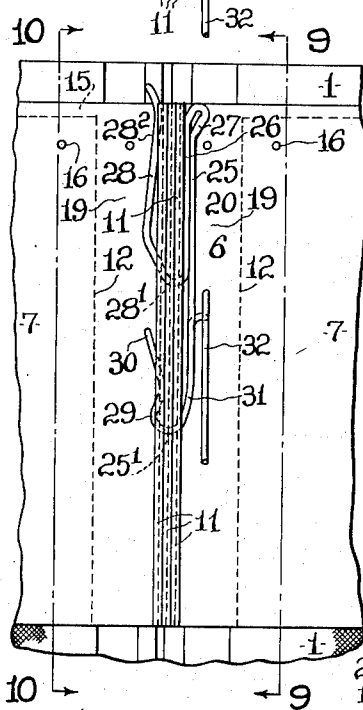


FIG. 8

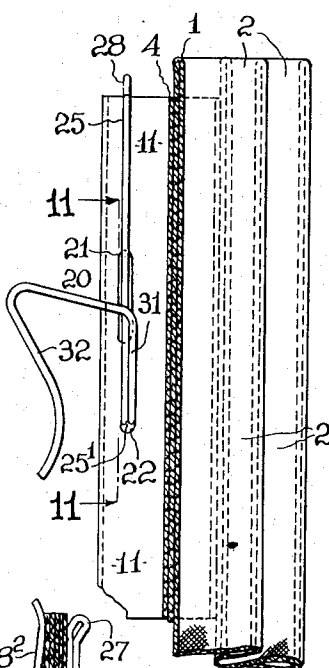


FIG. 9

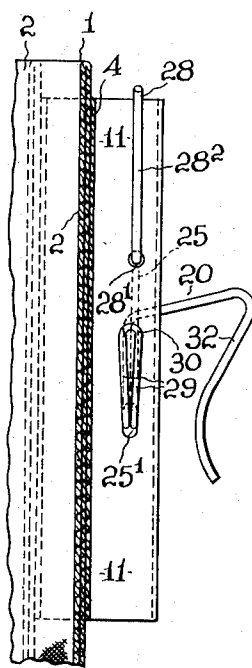


FIG. 10

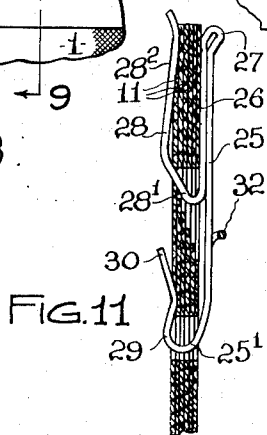


FIG. 11

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4 Sheets-Sheet 4

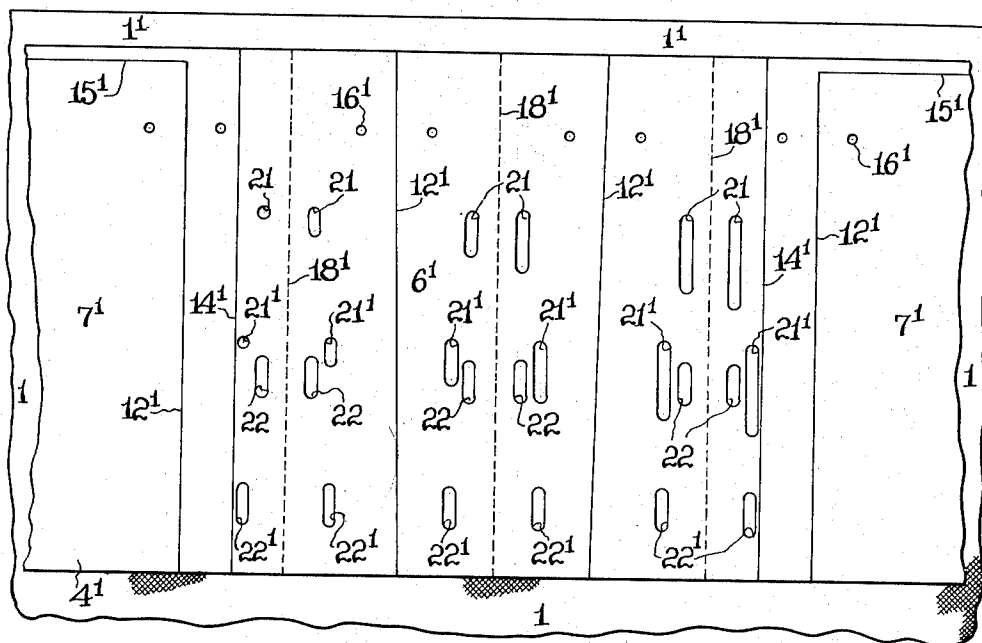


FIG. 14

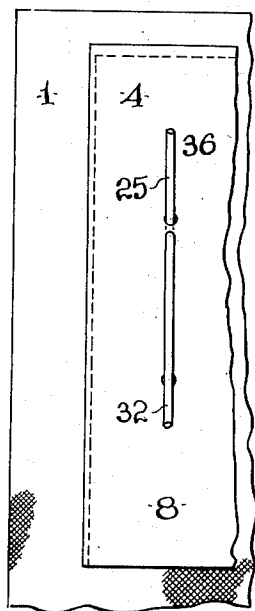


FIG. 12.

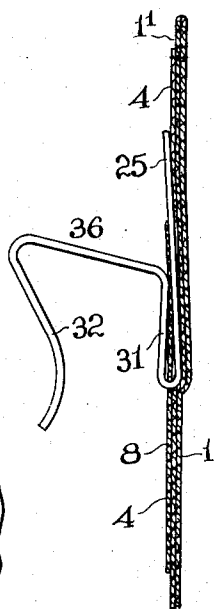


FIG. 13

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DRAPERY PLEATING

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Application January 8, 1949, Serial No. 69,871

9 Claims. (Cl. 160—348)

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The invention relates to pleating, and particularly to means for effecting ornamental pleating of draperies.

The objects of the invention are:

To provide tape means which shall enable the ornamental draping of window coverings and the like to be effected conveniently; which will permit laundering of the drapery without removal of the pleating means; which permit the use of unusually heavy drapery material; and which will dispense with the necessity of threading a curtain pole or other supporting means through the pleating means;

Also, to provide certain one-piece tuck fasteners which will maintain the draping and will also serve as mounting means for the drapery upon a curtain rod; and to dispense with snap fasteners or other holding means liable to mutilate or weaken the tape and drapery material. These fasteners are pin formations which can readily be applied or removed and do not comprise any metal parts which are rigidly secured to the drapery material or the tape and would, in the event of laundering, require temporary removal which might result in fraying or other injury to the material and tape in their removal and replacement.

The claims of this application are limited to the improvements in drapery pleating tapes.

The annexed drawings and the following description set forth in detail certain means illustrating the improvements in drapery pleating, such disclosed means constituting, however, only a few of the various forms in which the principle of the invention may be embodied.

In said annexed drawings:

Figure 1 is a broken front elevation of a drapery ornamentally pleated by the improvements of the invention;

Figure 2 is a fragmentary rear elevation of the pleated drapery shown in Figure 1; also showing the improved pleating tape and the fasteners for maintaining the pleating and supporting the drapery;

Figure 3 is a top plan of the drapery and the pleating means in extended condition;

Figure 4 is a rear elevation of the pleating means shown in Figure 3, and the top portion of the drapery material;

Figure 5 is a fragmentary elevation, upon an enlarged scale, of the rear face of the prescored and premarked pleating tape, which is also preformed with certain holes for alignment pins and fasteners, the view being a showing of the pleating tape before it is secured to the drapery material;

Figure 6 is a plan view, upon an enlarged scale, of one pleating panel of the pleating tape secured to the drapery material, the pleating tape being only partially folded in the process of

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forming the ornamental pleats of the drapery material;

Figure 7 is a plan view of the elements shown in Figure 6 after the pleating tape has been closely folded along its score lines and the fastener applied;

Figure 8 is a rear elevation of the elements shown in Figure 7;

Figure 9 is a vertical section, taken in the plane indicated by the line 9—9, Figure 8;

Figure 10 is a vertical section, taken in the plane indicated by the line 10—10, Figure 8;

Figure 11 is a rear elevation, taken in the plane indicated by the line 11—11, Figure 9;

Figures 12 and 13 are respectively a rear elevation and a vertical section of an end portion of the drapery and the pleating tape, particularly showing the application of an end support; and

Figure 14 is a rear elevation of a modified form of prescored, prepunched, and premarked pleating tape secured to drapery material.

Referring to the annexed drawings in which the same parts are indicated by the same respective numbers in the several views, curtain material 1, Figures 1 and 2, suitable for pleating to form an ornamental drapery has secured to and across its rear surface, and adjacent its top, a tape 4 of buckram, stiff crinoline, or other suitable stiff foldable material. The material 1 has a comparatively deep top hem 1¹ and side hems 1². The tape 4 is stitched to the drapery material 1 and the top and side hems 1¹ and 1², in a manner hereinafter described. The tape 4 is folded into rearwardly-projected tucks 11 which results in the formation of forwardly-projected pleats 2 in the drapery material 1. The tape 4 and hence the drapery material 1 is supported by tuck-maintenance fasteners 20 which are slidably mounted on a rod 3 on which traverse sliding of the curtain is effected.

The invention is particularly directed to the formation and functioning of the tape 4 whereby the ornamental pleating of the drapery material 1 is conveniently and satisfactorily effected.

The invention also includes the novel fastener structure 20 which securely maintains the folded tuck formation, which is easily applied and removed, and which also serves as a mounting for the drapery on the support, such as the rod 3, on which the drapery is transversely slid.

The novel formation of tape 4 is clearly shown in Figures 4 and 5 and comprises a rectangular body having a plurality of creased or scored panel parts 6 alternated with plain panel parts 7. The ends of the tape 4 consist of two plain panel parts 8, Figures 4 and 12, each of about one-half the width of the plain panel parts 7.

In the form of the invention shown, the panel parts 6 are premarked and prescored alternately

on their two faces so as to provide for three rearwardly-directed tucks 11, Figures 6 and 7, and two forwardly-directed tucks 13, Figure 6, when the panel parts 6 are folded.

The stitching of the tape 4 to the drapery material 1 and the rearwardly-directed tucks 11 and the forwardly-directed tucks 13 are provided for by certain prescored and premarked lines as follows:

On the front face of the tape 4 three equally spaced score lines 18 are formed on each panel 6, the two side score lines each being spaced from the adjacent side of the panel 6, and on the rear face of each panel 6 two score lines 14 are preformed, each substantially midway between the adjacent edge of the panel and the adjacent score line 18. On each vertical edge of the panel 6 and also midway between each two adjacent score lines 18, guide lines 12 are marked on the rear face of the panel 6 for the stitching of the panel to the rear face of the drapery material 1. Guide lines 12 are also marked for the end stitching of the end panels 8. The guide lines 12 between adjacent score lines 18 are also scored.

The tape is stitched to the drapery material 1 along the marked vertical lines 12 of the panel parts 6 and 8, and the plain panels 7 and 9 are also stitched to the drapery material 1 somewhat below the top edges of the plain panels along guide lines 15, all the vertical stitching being for the full depth of the tape 4.

In order to hold the tape 4 in proper alignment while it is being stitched to the drapery material 1, a series of crosswise aligned holes 16 are formed in the panel parts 6 and also adjacently laterally thereof, as shown in Figure 5, and also a plurality of crosswise and vertically aligned holes 17 in the panel parts 7 and 9. The holes 16 are somewhat below the desired upper stitch lines 15 and the tape 4 is held in alignment on the drapery material 1 for effecting this upper stitching by means of pins passed temporarily through the holes 16. The vertical stitching of the panels 6 and 8 is effected while the panels are temporarily held in alignment on the drapery material 1 by pins passed through the holes 17.

From the foregoing description it is evident that a finger-pinching into folded formation of the stitched panel 6 between the score lines 14 to form the tucks 11-13 and then aligning the folds will throw the drapery between the stitching 12 of the panel into three forwardly-directed pleats 2, aligned top and bottom, as clearly shown in Figures 7 and 8. By reason of the score lines 14, the end parts 19 of the rearwardly-directed side tucks 11 straighten out in alignment with the adjacent panel parts 7, as clearly shown in Figure 7, and thus spread the two side drapery pleats 2 and cause the central drapery pleat 2 to extend materially forwardly of the side pleats for its whole depth, to effect a disposition of the apices of the three pleats 2 substantially in the circumference of a circle, as also clearly seen in Figure 7. Furthermore, a throwing forward of the central drapery pleat 2 may be effected by so subdividing the scored panel 6 by lines 12 as to create a central rearwardly-projected tuck 11 somewhat wider than the two side tucks 11.

After the tape 4 is pinched into the multiple-formation and the drapery material 1 pleated, as shown in Figure 7, the pleating is maintained by a novel form of one-piece fastener and supporting member 20 shown in Figures 7, 8, 9, and 10. The fastener 20 is a double-engaging pin formation made of spring wire and has an elongated

body portion 25 which at one end is bent downwardly and back upon itself and closely aligned with the body 25 for a substantial part of the length of the latter, as indicated by "26," the upper joint at the connecting ends of the parts 25 and 26 being an upwardly and outwardly-directed nose formation 27. The downwardly-projected part 28 merges into an upwardly-directed spaced part 23 at a bend 28¹, the part 23 forming one terminal of the entire fastener 20 and being of bowed formation 23² adjacent its end, which bowed formation is biased toward the adjacent members 25 and 26 so as to tightly confine the upper parts of the folded tucks of the tape 4 between the members 23² and 26, as shown in Figure 8.

The opposite end of the body 25 of the fastener 20 is bent at 25¹ into a two-strand hook formation 29 spaced from the body 25 so as to snugly accommodate the folded tucks of the tape 4, as shown in Figure 8, this two-strand hook having a terminal outwardly and upwardly directed nose 30 and merging at its opposite end into a side 31 of a three-sided rod mount 32.

The fastener 25 is applied to the tucked formation of the tape 4 through two series of vertically-spaced and horizontally-aligned preformed holes 21 and 22 formed in the tape panel portions 6, as indicated in Figure 5. These two series of holes 21 and 22 each consist of a plurality of pairs of holes of which each hole in each series is vertically aligned with a hole of the other series, the holes of each pair of any one series being upon opposite sides of and somewhat spaced from the apex or score line 18 of a tuck 11. The holes of the upper series 21 are of gradually decreasing length from one end of the series to the other, running from an elongated oblong hole at one end to a small circular hole at the opposite end, the tops of the holes 21 being in horizontal alignment. The holes 22 of the lower series are medium length oblong holes of uniform size. The bends 25¹ and 28¹ of the fastener 20 are spaced apart substantially the distance between the top of a hole 21 and a vertically-aligned hole 22.

The fastener 20 is applied by passing the terminal part 28 thereof progressively through the longest hole 21 and into and through the aligned holes 21, when the tucks are held in closely finger-folded condition, the fastener 20 being moved upwardly until the nose part 30 is aligned with the hole 22 adjacently below the largest hole 21 which is about the time the biased bowed part 28² commences to exert pressure on the upper parts of the folded tucks 11. Then the nose 30 is passed into and through the holes 22 and upon continued upward movement of the fastener 20 the base or bend 25¹ of the hook 29 engages the tucked material at the top of the holes 22. Simultaneously the bend 28¹ between the fastener parts 28 and 23 engages the material of the tucks at the top of the holes 21, all as shown in the position of the fastener 20 in Figure 8. In this position of the fastener 20 the double-strand hook 29 securely holds the lower portions of the tuck formations in closely folded condition and the biased portion 28² of the fastener tightly holds the upper parts of the tuck formations which are seated in the joint between the fastener parts 25 and 28. It is clear from Figures 9 and 10 that the part 32 of the fastener which is biased toward the fastener parts 25 and 31 can snugly engage the rod 3 and yet can be slid therealong manually or secured to suitable traversing means to provide for the traversing of the drapery.

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The fact that the two series of holes 21 and 22 are preformed in the tape 4 guarantees that the pleating will always be uniform irrespective of how many times the fastener 20 may be removed and replaced.

If it is desired to assure an appearance of fullness to the bottom of the draped material 1, each set of pleats 2 can be pinched together at the bottom and stitched, as is shown by "9" for the left-hand pair of pleat sets in Figure 1.

The material of the tape 4 is impregnated with any suitable material insuring a hard-wearing surface for the walls of the holes 21 and 22 so that the material constituting these walls is not frayed by repeated insertion and removal of the fasteners 20.

The rod-engaging fastener 36 at the two ends of the tape 4, one of which is shown in Figures 12 and 13, consists of a part of the fastener 20, vis., the rod mount 31 and 32 at one end and the elongated body part 25, the latter in the fastener formation 36 comprising the other end of the fastener. The fasteners 36 are passed through the tape-aligning holes 17 between the rear faces of the four-ply hemmed drapery edges and the front or inside face of the ends of the tape 4, as clearly seen in Figure 13.

The plain drapery material 1, in the open condition shown in Figure 4, may be laundered without removing the tape 4 therefrom.

It is often desired in ornamental draping that there be the least abrupt transition from the bottom of the pleats 2 into the fullness of the underlying material, and a scoring formation for this purpose is shown in Figure 14. This modification consists in slightly tapering the two middle stitching lines 12¹ toward each other from top to bottom. The elements marked "4¹," "6¹," "7¹," "14¹," "15¹," "16¹," and "18¹" shown in Figure 14 correspond to the several elements marked "4," "6," "7," "14," "15," "16," and "18" shown in Figure 5.

Also, there is shown a further modification in Figure 14 consisting in a second and additional series of holes 21¹ and a second and additional series of holes 22¹, formed in the bottom portion of the tape 4¹. When tucks are formed by finger-folding the tape 4¹, the holes 21¹ and 22¹ are located further down on the tucks than the respective holes 21 and 22.

The holes 21¹ and 22¹ are formed substantially centrally of the spaces between the adjacent scored lines 18¹ and the stitching lines 12¹. The holes 21¹ and 22¹ accommodate a second fastener 20 and provide for an additional tightening of the folds of the tucks adjacent the bottom of the tucks and, in addition to providing for a securely tight maintenance of the tucks from top to bottom, also assist in insuring a less abrupt transition in the drapery material from the bottom of the pleats into the fullness of the underlying material. The holes 21¹ and 22¹ can be utilized alone for a single fastener 20, if desired, instead of using the upper holes 21 and 22 shown in Figures 7-11.

What I claim is:

1. A tape for attachment to drapery fabric to facilitate pleating of the latter comprising a panel of stiff foldable fabric material having indicia on one face for a series of spaced vertical stitch lines for attachment of the tape to the drapery fabric, said indicia including indicia for the attachment of the tape at its side edges, the tape being also scored on the opposite face to provide fold lines, the score lines alternating with

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the stitch indicia and being substantially parallel therewith, the stitch indicia intermediate the "opposite face" score lines being also score lines, the tape upon the two opposite sides of each "opposite face" score line being formed with a pair of aligned openings for the passage and seating of a fastener for holding bunched tape material formed by the folding thereof along the "opposite face" score lines.

2. A tape for attachment to drapery fabric to facilitate pleating of the latter, characterized as in claim 1, in which the openings formed in the panel progressively vary in size from one end of the series of openings to the opposite end thereof.

3. A tape for attachment to drapery fabric to facilitate pleating of the latter, characterized as in claim 1, in which the tape is formed with two series of openings, and in which the several openings of one series are substantially identical in form and size, and in which the openings of the other series vary in size from one end of the series of openings to the opposite end thereof.

4. A tape for attachment to drapery fabric to facilitate pleating of the latter, characterized as in claim 1, in which the tape is formed with four series of openings, the respective openings of each series being aligned with an opening of another series, and in which the openings of two series are spaced a greater distance from the respective score lines therebetween than the openings of the other two series.

5. A tape for attachment to drapery fabric to facilitate pleating of the latter, characterized as in claim 1, in which indicia are provided for at least four stitch lines and score lines for at least three folds intermediate the respective adjacent two of the stitch line indicia, and in which the indicia for the adjacent intermediate stitch lines taper downwardly toward each other from end to end.

6. A tape for attachment to drapery fabric to facilitate pleating of the latter, characterized as in claim 1, in which indicia are provided for a plurality of stitch lines and score lines are provided intermediate the respective adjacent two of the stitch line indicia, and in which the tape is additionally scored on the stitch line face intermediate the respective outside stitch line indicia and the adjacent score lines, whereby, by a folding of the tape, tape tucks are formed projected in both directions from the plane of the fabric and an arcuate pleated fabric formation is made which is secured at its side edges to the fabric and between its edges is secured to the adjacent ends of the folded tucks.

7. A tape for attachment to drapery fabric to facilitate pleating of the latter, characterized as in claim 1, in which there are indicia for a plurality of series of stitch lines and a plurality of complementary series of score lines, each two adjacent series of stitch indicia and score lines being spaced apart by a plain panel portion, the panel having stitch line indicia adjacent the upper edge of each plain panel portion, this plain panel stitch line connecting the exterior stitch indicia of the two adjacent scored panel portions, the several pairs of tape openings of the series being in alignment for the passage and seating of respective individual fasteners.

8. A tape for attachment to drapery fabric to facilitate pleating of the latter, characterized as in claim 1, in which there are indicia for a plurality of series of stitch lines and a plurality of complementary series of score lines, each two adjacent series of stitch indicia and score lines be-

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ing spaced apart by a plain panel portion, in which the panel has stitch line indicia adjacent the upper edge of each plain panel portion connecting the exterior stitch indicia of the two adjacent scored panel portions, and in which the panel has a plurality of aligned holes extended transversely of each scored panel portion adjacently below the upper edge thereof, and in which each plain panel portion has a plurality of series of vertically aligned holes.

9. A tape for attachment to drapery fabric to facilitate pleating of the latter, characterized as in claim 1, in which the spaced stitch line indicia are at least four in number, and in which the spacing of the stitch line indicia provide a panel portion, foldable upon the central score line, wider than the remaining foldable panel portions,

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whereby a forward projection of the central fabric pleat is effected.

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