

May 26, 1964

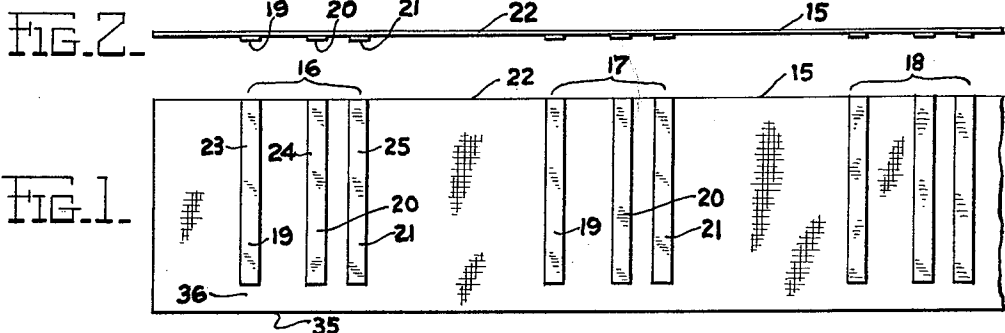
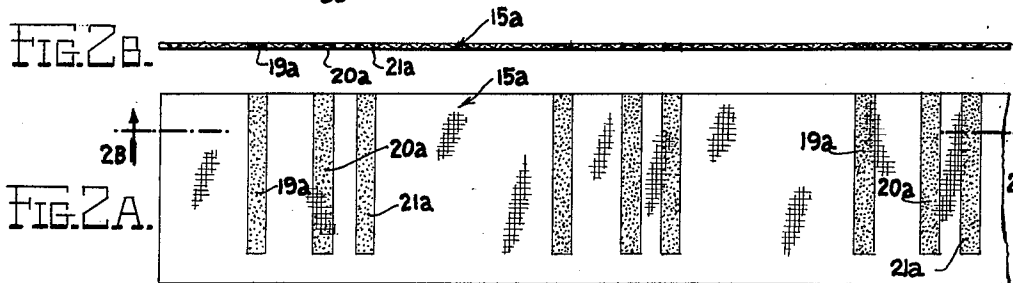
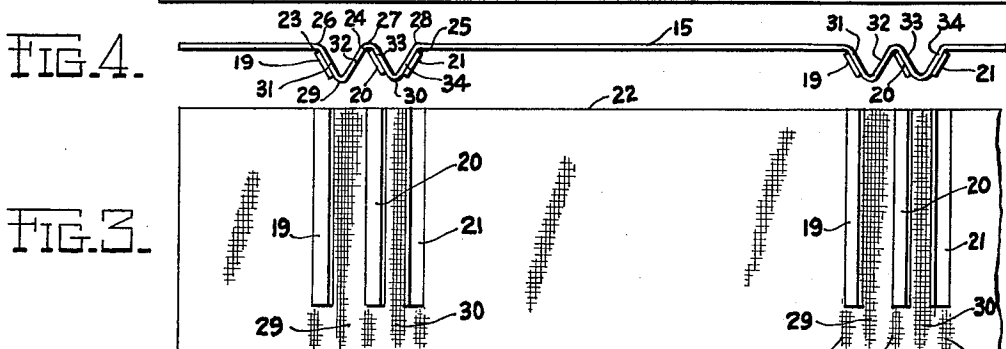
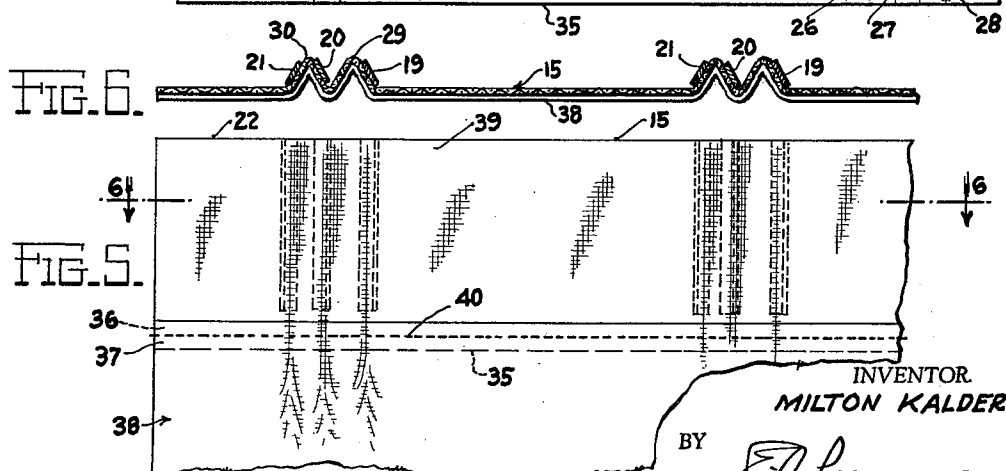
M. KALDER

3,134,348

CURTAIN HEADING CONSTRUCTION

Filed April 10, 1962

2 Sheets-Sheet 1



INVENTOR.
MILTON KALDER

BY

E. P. Poma
ATTORNEY.

May 26, 1964

M. KALDER

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2 Sheets-Sheet 2

FIG. 7.

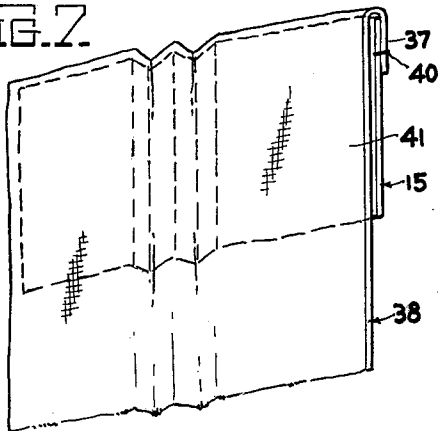


FIG. 8.

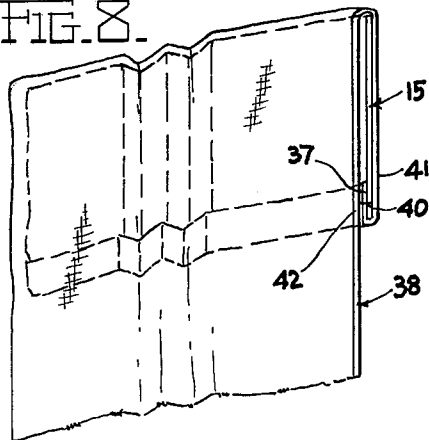


FIG. 9.

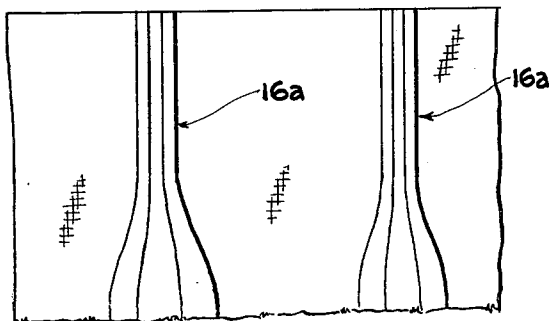


FIG. 10.

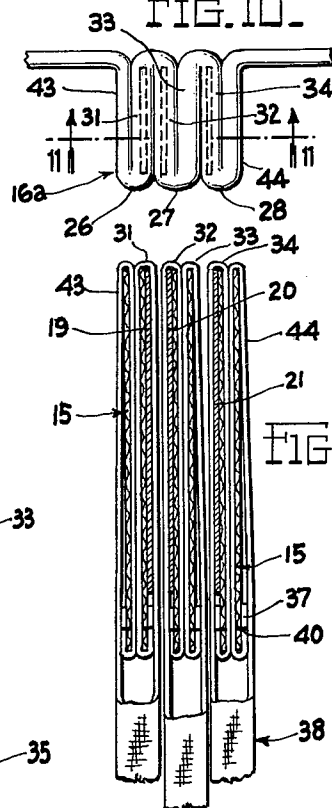


FIG. 12.

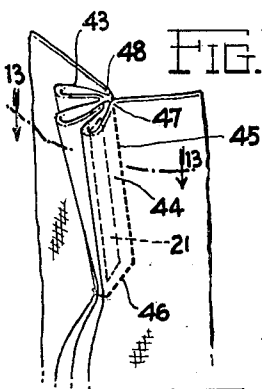


FIG. 14.

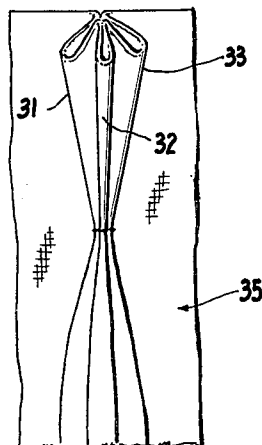
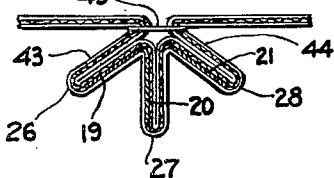


FIG. 11.

INVENTOR.
MILTON KALDER
BY
E. H. Posnack
ATTORNEY.

FIG. 13.



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3,134,348

CURTAIN HEADING CONSTRUCTION
Milton Kalder, 1333 51st St., Brooklyn, N.Y.
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7 Claims. (Cl. 112-427)

This invention relates to curtain headings, particularly to headings having pinch-pleated sections therein.

Headings of the above category generally contain a buckram sheet as a stiffener member, the pinch-pleated folds in the buckram serving to maintain the overlying sections of the relatively limp drape material in their pinch-pleated configuration. It has been found, however, that the stiffness of the buckram is frequently reduced to such an extent due to washing or dry-cleaning operations, or changing atmospheric conditions, or repeated opening and closing operations of the drapes, as to result in a collapse of the buckram along various portions thereof. Said collapse most frequently occurs as breaks extending transversely across the pinch pleat folds. Attempts have been made to eliminate the occurrence of said breaks by applying a stiffening film along the entire extent of the buckram, but it has been found that this expedient has certain serious shortcomings, in that when the film or reinforcing layer is sufficiently stiff to prevent a collapse of the buckram, it is also resistant to the penetration of a needle through the body of the buckram during the operations of attaching thereto the curtain or drape material and sewing together the folded portions of the pinch-pleat; and when the stiffening film or layer is made so that it will permit the operative penetration of a needle, it becomes ineffective as a stiffening medium.

It is an important objective of my invention to provide an effective buckram heading construction without the aforesaid shortcomings. Specifically, it is an object of this invention to provide the buckram sheet with stiffening means in the regions of the pinch-pleat sections of sufficient stiffness or rigidity as to prevent a collapse thereof during washing or the other conditions hereinabove mentioned, and yet which will not interfere with any of the necessary sewing operations in connection with attaching the curtain material to the heading or forming folds in the pinch-pleat sections. And in this aspect of my invention it is my objective to enable said stiffening means to hold the buckram and curtain members in a predetermined "butterfly" configuration, with the upper fold portions separated and the lower portions attached together by stitching or other suitable means.

It is another object of this invention to so construct or process the buckram material as to give it the required stiffening properties and yet permit a flexing of the material, thereby facilitating handling thereof and improving the appearance of the finished product.

Another object of my invention is to provide a structure, and a method of producing said structure, whereby stiffening members are applied to predetermined spaced sections of the buckram while it is in its flat state, said members also serving as guides for creating the required pinch-pleat folds in the material. In the accomplishment of this objective, I employ either preformed stiffening members, or stiffening means impregnated into the material, said members being so positioned and proportioned as to enable them to serve their stiffening functions without interfering with the sewing operations for forming the said pinch-pleat sections. And in this aspect of my invention, it is my objective to enable the pinch-pleat folds to be sewn together in regions outside of the area of said stiffening members.

It is also my objective to provide a simple method of forming said stiffening pinch-pleat sections in the buckram, so that the cost of producing headings of this char-

acter may be reduced by the employment of mass production techniques.

Other objects, features and advantages will appear from the drawings and the description hereinafter given.

Referring to the drawings,

FIG. 1 is a rear view of a fragmentary portion of a buckram sheet with stiffener strips used with my invention.

FIG. 2 is a top view of FIG. 1.

FIG. 2A is a rear view of a modified form of buckram sheet used with my invention.

FIG. 2B is a section of FIG. 2A taken along line 2B-2B.

FIG. 3 is a rear view of the sheet of FIG. 1 with pinch-pleat folds formed therein.

FIG. 4 is a top view of FIG. 3.

FIG. 5 is a fragmentary front view of the sheet of FIG. 1 with drapery material attached thereto after the first step of the assembling operation.

FIG. 6 is a section of FIG. 5 taken along lines 6-6.

FIG. 7 is a fragmentary perspective view of the assembly of FIG. 5 after a subsequent folding operation.

FIG. 8 is a fragmentary perspective view of the assembly of FIG. 5 after a further folding operation.

FIG. 9 is a fragmentary front view of FIG. 8 with the folds of the pleated sections in close configuration.

FIG. 10 is a fragmentary top view of FIG. 9.

FIG. 11 is a fragmentary section of FIG. 10 taken along the line 11-11, the cross-hatching of the drapery material having been omitted for purposes of clarity.

FIG. 12 is a fragmentary perspective view of a portion of the assembly shown in FIGS. 9-11 after the operation of stitching together the pleated section.

FIG. 13 is a section of FIG. 12 taken substantially along line 13-13, the cross-hatching of the drapery material having been omitted for purposes of clarity.

FIG. 14 is a fragmentary front view of FIG. 12.

In the form of my invention illustrated, I employ an inner heading supporting member 15, preferably made of a sheet of buckram, said supporting member serving as a backing sheet for curtain or drapery material wrapped thereover. Said sheet has along its longitudinal extent a plurality of spaced pinch-pleat sections identified by the reference numerals 16, 17 and 18. Each of said sections contains a plurality of spaced reinforcing or stiffener strips 19, 20 and 21, said strips extending downwardly from the region of the upper edge 22 of sheet 15, and in parallel relation. In the form of my invention illustrated in FIGS. 1 and 2, the said strips are separate members of relatively stiff and preferably resilient properties, suitable materials for such strips being various known plastics not affected by the usual detergents or soaps used for washing of fabrics. An alternative form of said reinforcing or stiffening means is illustrated in FIGS. 2A and 2B, said means comprising relatively stiff and resilient plastic material known to those skilled in the art, said material being impregnated into portions 19a, 20a and 21a of the buckram sheet 15a. For the purpose of this specification, reference will be made to the form of heading support illustrated in FIGS. 1 and 2, although the said alternative construction may be employed with equal effectiveness.

The said strips 19, 20 and 21 are secured to the rear surface 22 of sheet 15, the distance between strips 19 and 20 being greater than between 20 and 21—these distances being controlled by the predetermined width of the pleated portions. In the specific form illustrated, the edges 23 and 24 of the respective strips 19 and 20 determine the positions of two front fold lines of the pinch-pleat section, and edge 25 controls the position of another fold line of said section. Thus, by referring to FIGS. 3 and 4, it will be seen that edge 23 is disposed at the fold line 26,

edge 24 being disposed at the fold line 27, and edge 25 at the fold line 28. Said fold lines 26, 27 and 28 are at the front surface of the sheet 15, there being other fold lines 29 and 30 disposed behind the plane of the sheet 15, as shown in FIG. 4. The arrangement is such as to form the successive pinch-pleat walls 31, 32, 33 and 34, said strips 19, 20 and 21 being attached, by adhesive or other suitable securing means, to the respective walls 31, 33 and 34. In the preferred form of my invention, the said strips 19, 20 and 21 extend downwardly from said upper edge to a level above the bottom edge 35 of sheet 15, leaving a marginal portion identified by the reference numeral 36.

In assembling the curtain or drapery material to the buckram, the first step is to sew the marginal portion 37 of the drapery material 38 to the front surface 39 of sheet 15 along the said marginal portion 36 thereof, the line of stitching being indicated in FIG. 5 by the reference numeral 40. Thereafter the buckram sheet 15 is turned down to the position shown in FIG. 7; and then the said sheet together with the overlying portion 41 of material 20 38 is again folded down to the position shown in FIG. 8. At this position said marginal portion 37 and said overlying portion 41 of said drapery are in flanking relation to the buckram sheet 15, said marginal portion 37 being in adjacent relation to portion 42 of the drapery material 38. The said portion 42 of the drapery material is then brought into close engagement with the adjacent marginal portion 37 and the attached buckram sheet 15, to form a relatively flat assembly; and the pinch-pleat sections are then formed by bringing together the folded edges 26, 27 and 28 as shown in FIG. 10. It will be noted that the pinch-pleated section, identified by the reference numeral 16a, consists of the said sides 31, 32, 33, 34 together with the sides 43 and 44 folded inwardly from the front surface of wall 15 and the overlying drapery material. The said pinch-pleat section is now ready for the final sewing operation.

The sewing is performed in the form of my invention illustrated, entirely outside of the said stiffening members 19, 20 and 21. As clearly shown in FIG. 12, the opposite lateral sides of the pinch-pleated portion are sewn together by the vertical line of stitching 45 and the horizontal line of stitching 46. More specifically, the rearmost portions 47 and 48 of the respective walls 43 and 44 of the pinch-pleat section are brought into engagement, as shown in FIGS. 12 and 13, and the stitching 45 performed at such contiguous portions. The lower portions of the wall constituting said pinch-pleat section are then secured together by the said line of stitching 46, said latter line of stitching occurring in the marginal portion 36 below the lower edges of said stiffener strips 19, 20 and 21. This sewing operation thus creates a "butterfly" pleat, substantially as shown in FIGS. 13 and 14, with their lower portions close together and the upper portions spread outwardly in substantially V-shaped formation.

It will be noted that the said stiffening strips, although operatively disposed in position, have not interfered with the sewing operation, since that was performed outside of the area of said strips. In other words, the strips, being positioned slightly forwardly of said contiguous portions 47 and 48 of the pinch-pleat section, offer no obstruction to the vertical line of stitching 45, and being disposed above the said marginal portion 36 of the buckram sheet, do not interfere with the horizontal line of stitching 46. The arrangement is hence such that permanent pinch-pleated sections are formed into the heading, with stiffening portions therein that will resist collapse to a far greater extent than would be effected by the buckram alone.

It has been found that curtain headings of the above described construction, made by the method of my invention, can readily be fabricated on a mass production basis, and draperies provided with these headings can readily be washed, dry-cleaned or handled without danger of collapse.

In the above description, the invention has been dis-

closed merely by way of example and in preferred manner; but obviously many variations and modifications may be made therein. It is to be understood, therefore, that the invention is not limited to any form or manner of practicing same, except insofar as such limitations are specified in the appended claims.

I claim:

1. In a curtain heading construction, an assembly of a sheet of curtain material and a supporting sheet of relatively stiff flexible material, said assembly of sheets having a pinch-pleat section comprising a plurality of successive pinch-pleat walls with front and rear edges, stiffener means extending vertically along certain of said walls and having edges adjacent and defining the said front edges of said pinch pleat walls, and stitching means operatively securing together said walls in folded pinch-pleat configuration, said stitching means being outside of the regions of said stiffener means.

2. In a curtain heading construction, an assembly of a sheet of curtain material and a supporting sheet of relatively stiff flexible material, said assembly of sheets having a pinch-pleat section comprising a plurality of successive pinch-pleat walls, stiffener means extending vertically along certain of said walls and defining certain of the edges of said walls, the bottom of said stiffener means being above and in spaced relation to the bottom of said supporting sheet, whereby a lower marginal portion of said pinch-pleat section is presented that is unobstructed by said stiffener means, and stitching means operatively securing together said walls in folded pinch-pleat configuration, said stitching means being outside of the regions of said stiffener means, a portion of said stitching means extending across said marginal portion.

3. In a curtain heading construction, an assembly of a sheet of curtain material and a supporting sheet of relatively stiff flexible material, said assembly of sheets having a pinch-pleat section comprising a plurality of successive pinch-pleat walls, stiffener means extending vertically along certain of said walls and defining certain of the edges of said walls, the bottom of said stiffener means being above and in spaced relation to the bottom of said supporting sheet, whereby a lower marginal portion of said pinch-pleat section is presented that is unobstructed by said stiffener means, and stitching means operatively securing together said walls in folded pinch-pleat configuration, said stitching means comprising a substantially vertical line of stitching extending adjacent to but outside the regions of said stiffener means, and another line of stitching extending substantially horizontally across said marginal portion.

4. In a curtain heading construction, an assembly of a sheet of curtain material and a supporting sheet of relatively stiff flexible material, said assembly of sheets having a pinch-pleat section comprising a plurality of successive pinch-pleat walls with front and rear edges, stiffener means extending vertically along certain of said walls having edges adjacent and defining said front edges of said walls, the bottom of said stiffener means being above and in spaced relation to the bottom of said supporting sheet, whereby a lower marginal portion of said pinch-pleat section is presented that is unobstructed by said stiffener means, and stitching means operatively securing together said walls in folded pinch-pleat configuration, said stitching means comprising a substantially vertical line of stitching connecting the laterally opposite walls of said pinch-pleat section behind and out of engagement with said stiffener means, and another line of stitching extending substantially horizontally across said marginal portion and connecting together all said pinch-pleat walls.

5. In a curtain heading construction, an assembly of a sheet of curtain material and a supporting sheet of relatively stiff flexible material, said assembly of sheets having a pinch-pleat section comprising a plurality of successive pinch-pleat walls, stiffener means extending vertically along certain of said walls and defining certain of the

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edges of said walls, the bottom of said stiffener means being above and in spaced relation to the bottom of said supporting sheet, whereby a lower marginal portion of said pinch-pleat section is presented that is unobstructed by said stiffener means, and stitching means operatively securing together said walls in folded pinch-pleat configuration, said stitching means being of L-shaped configuration and comprising a vertical line of stitching extending from substantially the top of said pinch-pleat section to said marginal portion, and a horizontal line of stitching extending across said marginal portion, said stitching means being outside of the regions of said stiffener means.

6. In a curtain heading construction, an assembly of a sheet of curtain material and a supporting sheet of relatively stiff flexible material, said assembly of sheets having a pinch-pleat section comprising a plurality of successive pinch-pleat walls defined by a plurality of fold lines, lengths of stiffener means extending vertically along certain of said walls and defined by substantially vertical lateral edges and relatively narrow upper and lower edges, said upper edges being adjacent the top of said supporting sheet, said lower edges being above and in spaced relation to the bottom of said supporting sheet, whereby a lower marginal portion of said pinch-pleat section is presented that is unobstructed by said stiffener means, certain of said vertical edges of said stiffener means being adjacent to and defining certain of said fold lines of said pinch-

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pleated section, and stitching means operatively securing together said walls in folded pinch-pleat configuration, said stitching means being outside of the regions of said stiffener means, a portion of said stitching means extending across said marginal portion.

7. A curtain heading support comprising a sheet of relatively stiff material having a pinch-pleat section comprising a plurality of preformed pinch-pleat fold lines therein defining a set of four successive pinch-pleat walls therebetween, and three stiffener members of elongated configuration on two adjacent walls of said set and on the wall one wall removed from said two adjacent walls, said stiffener members having corresponding terminals in spaced relation to an edge of said sheet, whereby a marginal portion of said sheet is presented that is unobstructed by said stiffener members.

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