United States Patent

Acker et al.

[15] **3,696,845**

[45] **Oct. 10, 1972**

[54] **CURTAIN**

[72] Inventors: **Josef Acker,** Seligenstadt; **Albert Hofmann,** Bischofsgruen; **Georg Frühholz,** Bischofsgruen-Wuelfersreuth, all of Germany

[73] Assignee: **Jacob Acker & Sohne oHG,** Seligenstadt, Germany

[22] Filed: **Nov. 12, 1969**

[21] Appl. No.: **875,820**

[30] **Foreign Application Priority Data**

Jan. 28, 1969 Germany .....G 69 03 060.0

[52] **U.S. Cl.** **139/383,** 139/416, 139/417

[51] **Int. Cl.** **D03d 23/00,** D03d 25/00

[58] **Field of Search**.....139/383, 384, 416, 417, 425

[56] **References Cited**

UNITED STATES PATENTS

764,208	7/1904	Ronsdorf	139/384
1,817,716	8/1931	Stam	139/416
2,065,309	12/1936	Hamer	139/417
914,362	3/1909	Palmer	139/384
1,686,630	10/1928	Loveman	139/384
2,079,831	5/1937	Bauer, Jr. et al.	139/384 X
2,093,187	9/1937	Burke et al.	139/394 X
2,125,422	8/1938	Bosworth	139/383
2,998,829	9/1961	Horowitz	139/384
3,259,151	7/1966	Schmitz	139/425

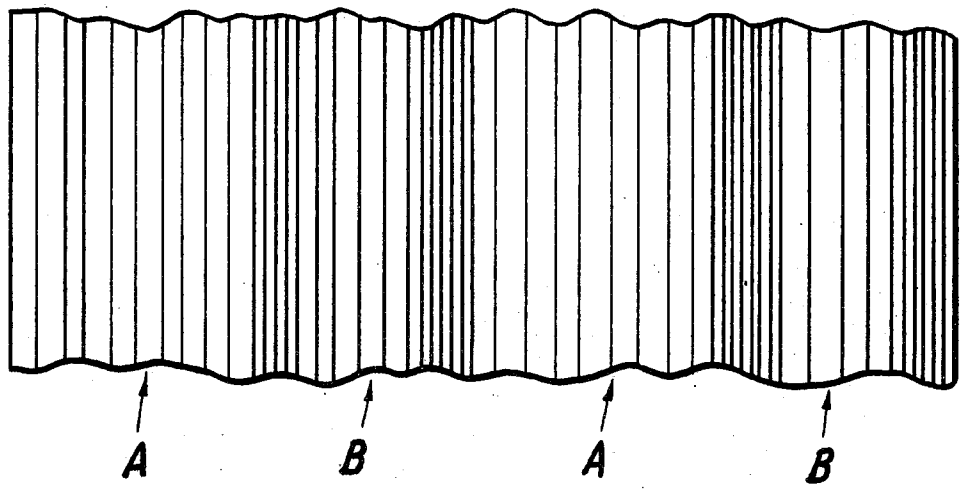
Primary Examiner—James Kee Chi

Attorney—Hane & Baxley

[57] **ABSTRACT**

A curtain made of a transparent curtain material has wavy or undulating selvage at its bottom edge and lengthwise panels. The weft threads of the fabric extend lengthwise and the density of these threads is increased in alternate panels from the lengthwise midline of the panels toward the edges of the adjacent panels and the crosswise warp threads are alternately convexly and concavely curved from panel to panel whereby the curtain while actually flat presents when hung the optical appearance of a curtain having the folds of a pleated curtain.

8 Claims, 4 Drawing Figures



PATENTED OCT 10 1972

3,696,845

SHEET 1 OF 2

Fig. 1

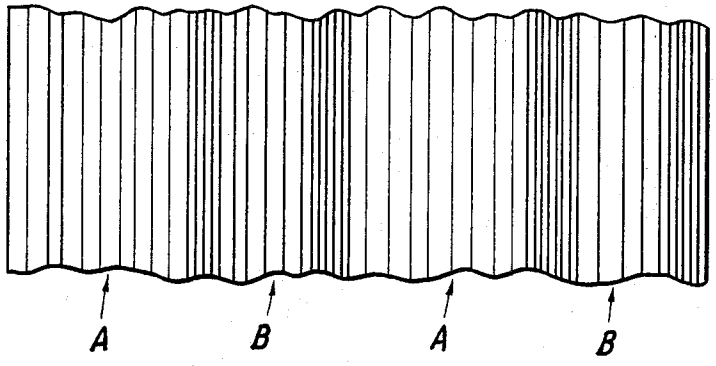
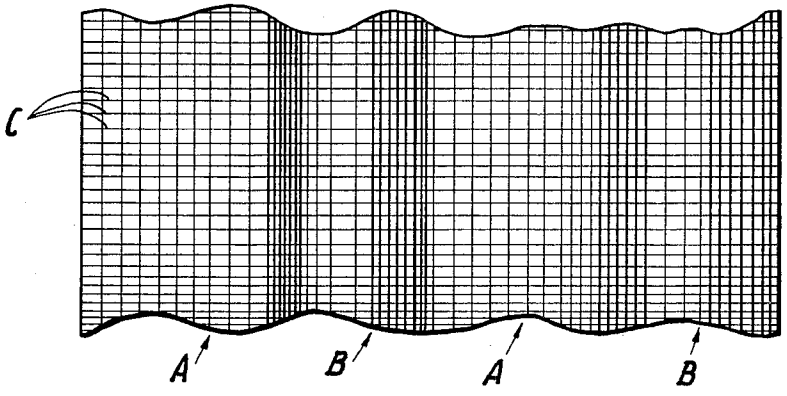


Fig. 2



INVENTORS

JOSEF ACKER
ALBERT HOFMANN
GEORG FRÜHHOLZ

BY Hane and Baxley

ATTORNEYS

Fig. 3

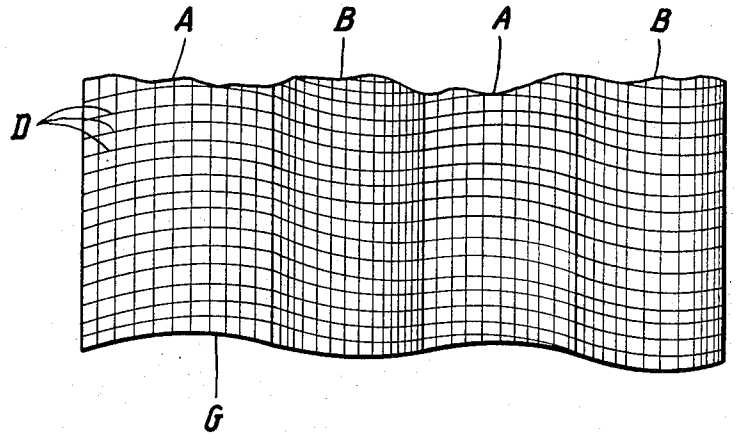
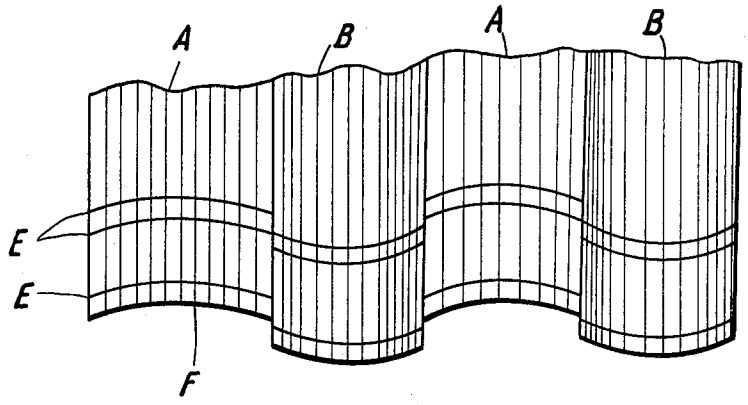


Fig. 4



INVENTORS

JOSEF ACKER
ALBERT HOFFMAN
GEORG FRÜHHOLZ

BY Hane and Baxley

ATTORNEYS

CURTAIN

The invention relates to window curtains and particularly to curtains made of semi-transparent fabrics such as marquisette, tulle, etc.

BACKGROUND

Practically all curtains of the general kind above referred to are hung as folded curtains. The folds are obtained by pleating the curtain material along the heading of the curtain by sewed pleats, pleater hooks or gathering the curtain material by pull strips adhered to the heading. The purpose of the folds is to enhance the ornamental appearance of the curtain and also to reduce the possibility of seeing through the same.

As is evident, pleating of the curtain material by any of the conventional means reduces the initial width of the curtain material correspondingly. For instance, formation of triple pleats in a curtain for covering a window that is two meters wide, requires an initial width of the curtain material of about 6 meters. Accordingly, richly folded curtains are rather expensive due to the required amount of material. Pleating of the curtain material to form the folds is also time consuming thereby further increasing the costs of such curtains. Moreover, washing and ironing of pleated curtains requires considerable skill.

It is also known to provide ornamental patterns extending crosswise though not in a straight line across the width of the curtain. However, patterned curtains of this kind do not present the ornamental appearance of a folded curtain.

THE INVENTION

It is an object of the invention to provide a novel and improved curtain of the general kind above referred to which has substantially the same ornamental appearance and gives the same protection against seeing through the curtain as conventional pleated curtains without requiring the amount of material needed for a conventional pleated curtain and also eliminates the substantial amount of work heretofore needed for producing the folds in the curtain.

A more specific object of the invention is to provide a novel and improved curtain of the general kind above referred to which while presenting the visual appearance of a folded or pleated curtain that is, of a three-dimensional curtain, is in fact, a flat or two-dimensional curtain.

SUMMARY OF THE INVENTION

The afore-pointed-out objects, features and advantages and other objects, features and advantages which will be pointed hereinafter are obtained by providing in the selvege constituting the bottom edge of the curtain a succession of curved portions. Such curved portions create the optical illusion that there are lengthwise folds in the curtain even though the same is actually flat. The appearance of the curtain as having folds can be amplified by forming in the curtain material alternate lengthwise panels with different density of the lengthwise threads. Preferably, the thread density increases in the respective panels from the lengthwise midline thereof toward the edges of the adjacent panels.

A further improvement in the ornamental appearance of the curtain can be obtained by also including in the crosswise threads of the curtain curved portions, preferably alternately convexly and concavely curved portions. Moreover, the crosswise threads and also the selvage at the bottom can preferably include portions which are staggered or set-off with reference one to another.

DETAILED DESCRIPTION OF THE INVENTION

In the accompanying drawing several embodiments of the invention are shown by way of illustration and not by way of limitation.

In the drawing:

FIG. 1 shows a mid portion of a curtain according to the invention;

FIG. 2 shows a mid portion of a modification of the curtain;

FIG. 3 is the bottom portion of still another modification of the curtain; and

FIG. 4 is a bottom portion of a still further modification of the curtain.

Referring now to the figures more in detail, the curtains in all figures are made of a flat woven piece of preferably transparent curtain material.

According to FIG. 1, lengthwise panels A alternate with lengthwise panels B. Panels A may be wider than panels B, or vice versa but all panels may also have the same width. The lengthwise threads of all panels A are woven with the same density, that is, the same transverse distance between the threads while in panels B the density of the threads increases preferably from the lengthwise midline of each panel B toward the adjacent edges of the adjacent panels A; the transverse distance between the threads in panels B may be reduced to any desired degree toward the edges of the panels.

In the curtain of FIG. 1 and also in the subsequently described curtains the upper edge and the bottom edge of the curtains when hung, are selvage edges. The vertical or lengthwise threads are the weft threads and conspicuous while the crosswise threads (not shown in FIG 1) are the warp threads of the fabric.

According to FIG. 2 panels A and B are woven in the same manner as in FIG. 1 and the warp threads C extend straight across the width of the curtain.

Instead of the straight crosswise thread of FIG. 2 patterned crosswise threads may be provided. Special looms for weaving patterns are well known in the market.

According to FIG. 3 the lengthwise panels A and B are formed in the same manner as described in connection with FIGS. 1 and 2. However, the crosswise or warp threads D include curved portions. These portions are alternately convex and concave with reference to the bottom edge G. This bottom edge is undulating and more specifically includes alternate convex and concave curves. The threads D extend continuously through the entire width of the curtain and thus constitute a horizontal pattern.

It has been found that curved crosswise threads especially in conjunction with a matchingly curved bottom edge markedly increase the optical illusion of a folded curtain though, in fact, the curtain material remains flat.

According to FIG. 4 the crosswise threads E are not continuous but interrupted and set-off from panel to panel. Similarly, the bottom edge F is also interrupted and set-off from panel to panel. The crosswise threads E and also the bottom edge F again include curved portions preferably alternately convexly and concavely curved thereby further increasing the optical illusion of a folded or three-dimensional curtain.

Two or more conspicuous cross threads may be provided to form horizontal patterns in the curtain.

As is apparent from the previous discussion, the concept of the invention includes any number of variations of the thread density in the lengthwise panels and in the arrangement and configuration of the crosswise threads. In the curtain of FIG. 4 the thread densities in all lengthwise panels may be equal as the curved and set-off crosswise threads as such, in conjunction with the also curved bottom edge already create the impression of a folded curtain. Similarly, the density and the thickness of both the warp threads and the weft threads can be varied in many other ways to create the appearance of a folded curtain. The concept of the invention resides primarily in selecting thread combinations which create the desired three-dimensional or folded appearance of an actually two-dimensional curtain.

What is claimed is:

1. A curtain comprised of a piece of soft woven fabric including lengthwise and crosswise threads extending across the length and width respectively of said piece of woven fabric, the lengthwise threads defining a plurality of lengthwise panels, alternate ones of said panels having the same density of the lengthwise threads across the width of the respective panels and a varying density of the lengthwise threads decreasing from the lengthwise edges toward the middle of the respective panels, and having at one side a selvage including a plurality of alternately concavely and convexly curved portions to give the curtain material when hung with the curved selvage as the bottom edge the optical appearance of having the lengthwise folds of a pleated curtain.

2. The curtain according to claim 1 wherein said crosswise threads include curved thread portions.

3. The curtain according to claim 1 wherein said crosswise threads extending across the panels include straight and curved portions.

4. The curtain according to claim 1 wherein said crosswise threads extending across said panels are alternately concavely and convexly curved.

5. The curtain according to claim 4 wherein the crosswise threads are convexly curved with reference to the bottom edge portion of panels woven with a varying density of the lengthwise threads and concavely curved with reference to the bottom edge portion of panels woven with a uniform density of the lengthwise threads.

6. The curtain according to claim 1 wherein said crosswise threads extend across the panels at different levels with reference to the bottom edge.

7. The curtain according to claim 6 wherein the curved bottom edge portions are set off with reference to one another.

8. The curtain according to claim 1 wherein said panels having the same density of the threads are of equal width but of a width different from the width of the panels having the varying density of the threads.

* * * * *