Dec. 25, 1956 A. C. WILLIFORD ET AL. 2,775,295

ARTICLE OF FABRIC AND METHOD AND MEANS FOR MAKING THE SAME

Filed March 30, 1953

2 Sheets-Sheet 1

Fig. 1

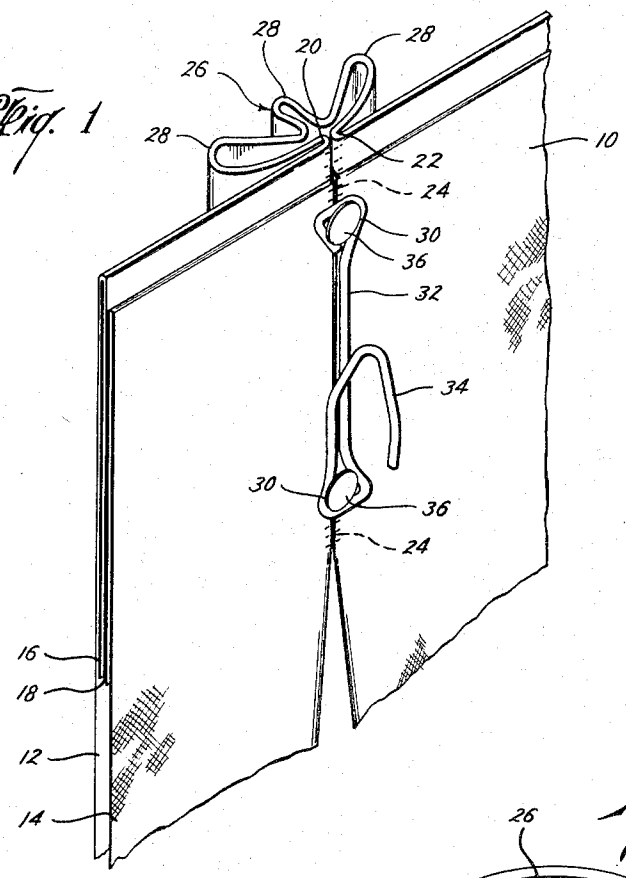


Fig. 9

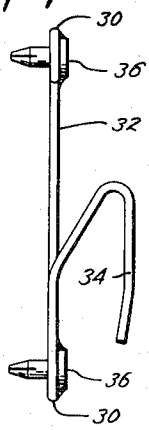


Fig. 2

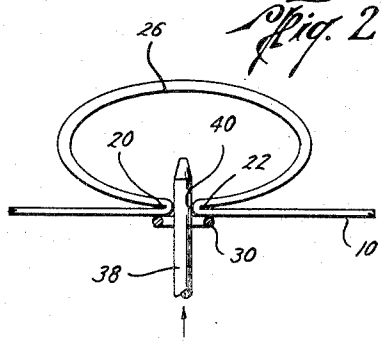
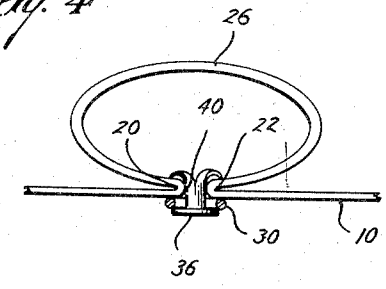


Fig. 4



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Fig. 5

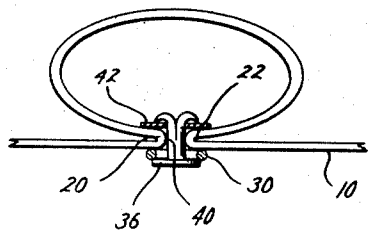


Fig. 6

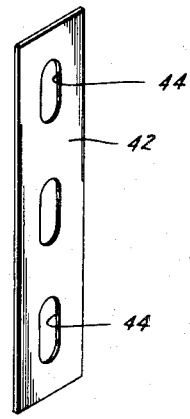


Fig. 7

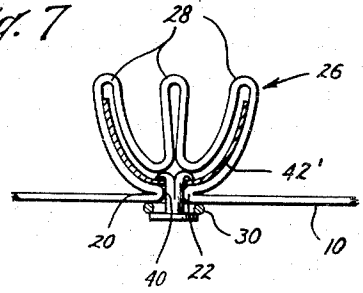


Fig. 8

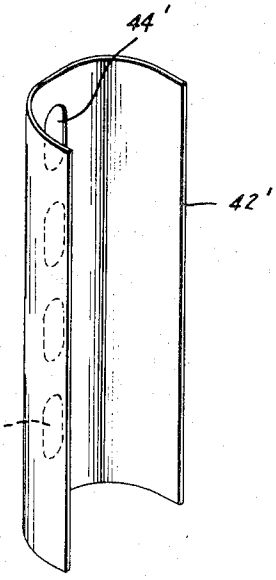
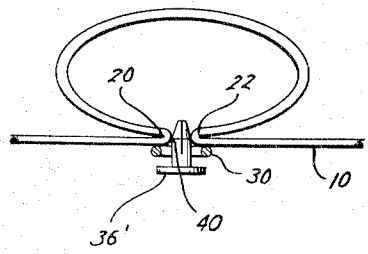


Fig. 3



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2,775,295

ARTICLE OF FABRIC AND METHOD AND MEANS FOR MAKING THE SAME

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Application March 30, 1953, Serial No. 345,482

2 Claims. (Cl. 160—348)

This invention relates to an article of fabric, and method of and means for making the same, and more particularly to an improved drapery or curtain and a method of and means for securing folds or pleats in the same, and attaching supporting elements thereto.

The invention is capable of general application to articles of fabric or the like for securing together folds or pleats therein and for attaching supports, such as drapery hooks or the like to such articles.

Heretofore in the making of draperies, curtains and similar fabric articles it has been customary to form folds or pleats therein, usually at the top of the article and extending in a vertical direction thereof, by stitching the fabric, and in many cases drapery hooks or similar supporting means are sewed to one side of the article at the line of stitching where the folds are made in order to form a secure means of supporting the drapery in a vertical position from suitable supports, such as curtain rods or the like.

The time and labor involved in the sewing of the folds and the attaching of the hooks has heretofore formed a very large item of expense in the manufacture of articles of this kind, so that the cost of the same often makes it impossible to sell such articles profitably.

Various devices have been proposed for overcoming the above difficulty, such as, by the use of pins which may be inserted through the fabric without sewing and having hook portions by which the fabric can be supported on curtain rods or the like, but devices of this character present the serious disadvantage that they are unsatisfactory for use with heavy draperies because of the strain placed upon the fabric at the place where the pin is inserted, which causes the fabric to tear or stretch, and no completely satisfactory means has heretofore been discovered for attaching drapery hooks without sewing.

The present invention has for an important object the overcoming of the above described difficulties by the use of a method by which the sewing of the fabric may be entirely dispensed with in forming the forming of the pleats therein and in securing the supporting means thereto.

Another object of the invention is to provide a method of forming and securing folds or pleats in fabric articles without the use of sewing.

A further object of the invention is the provision of a method of securing folds in fabric articles to form pleats therein, which method makes use of rivets or similar fastening means to secure the folds without perforating or otherwise damaging the fabric.

Another object of the invention is to provide a drapery article, or the like, wherein means is provided for securing a supporting hook or the like to the fabric without sewing the same to the fabric and by the use of fastening means which does not penetrate the fabric.

A further object of the invention is to provide a drapery article, or the like, including means for securing a supporting hook, or the like, to the fabric, which means

extends between opposed portions of adjacent folds in the fabric to clamp such folds together, and also including backing means cooperable with said securing means for engaging a portion of the fabric and which may be clamped to the fabric to hold said portion in a pleated condition.

A further object of the invention is the provision of means for securing pleats in an article of drapery, or the like, and which means is cooperable with fastening means to securely clamp together and hold opposed folds in the fabric and which may be engaged by bending portions of said means to hold pleats in said fabric.

A still further object of the invention is to provide a method of and means for attaching articles, such as drapery hooks, to fabrics, such as draperties by means of rivets without penetrating or perforating the fabric, or otherwise damaging the same.

The above and other important objects and advantages of the invention, will best be understood from the following detailed description constituting a specification of the same when considered in conjunction with the annexed drawings, wherein—

Figure 1 is a fragmentary perspective view, showing a portion of an article of drapery made in accordance with a preferred form of the invention;

Figure 2 is a fragmentary plan view partly in cross-section of the form of the invention illustrated in Figure 1, showing the appearance of the article at an intermediate stage of the method of making the same;

Figure 3 is a view similar to that of Figure 2, showing the article in another intermediate stage of the method of making the same;

Figure 4 is a view similar to that of Figure 2, showing the article in its completed condition;

Figure 5 is a view similar to that of Figure 4, illustrating a somewhat different form of the invention;

Figure 6 is a perspective view, showing a preferred form of backing plate used in the form of the invention illustrated in Figure 4;

Figure 7 is a view similar to that of Figure 4, illustrating a further modification of the invention;

Figure 8 is a view similar to that of Figure 6, illustrating a preferred form of backing and clamping plate used in the form of the invention shown in Figure 6; and

Figure 9 is a side elevational view showing a combined support element and fastener unit made in accordance with the invention.

Referring now to the drawings in greater detail, wherein like parts are designated by the same reference numerals, the invention is illustrated in connection with the manufacture of articles of drapery, such as curtains, or the like, but it will be understood that the method and means employed are capable of general application to the securing together of folds or layers of fabric, or like material, by the use of fastening elements which do not penetrate or otherwise damage the fabric. In the present illustration the numeral **10** designates a piece of fabric, such as drapery material, which may consist of one or more layers of fabric, as indicated at **12** and **14**, in Figure 1, which layers may be formed with or without hem portions, as indicated as **16** and **18**, respectively, at their upper marginal portions. The layer of fabric **12** may be of decorative material, forming the front of the drapery, while the layer **14** may take the form of a lining forming the rear face of the drapery.

In order to form decorative pleatts on the drapery, and to provide means for supporting the same from suitable supports, such as curtain rods, or the like, the layers of fabric may be formed into folds, at spaced intervals, along its upper margin, as indicated at **20** and

22, such folds forming edges positioned in opposed parallel relation, as clearly seen in Figure 1. In forming the folds 20 and 22 the fabric may be stitched together, if desired, to retain the edges of the folds permanently in parallel opposed relation. The formation of the folds 20 and 22 will provide a continuous portion 26, of the fabric, extending forwardly of the front surface of the drapery, which connects the folds and which is adapted to be folded into pleats 28, to present an ornamental or decorative effect.

Suitable supporting elements, such as drapery hooks 30, of conventional design, having spaced apart eyes 30, on a shank 32, and also formed with a hook portion 34, are attached to the drapery in the location where the edges of the folds 20 and 22, are positioned, in the manner indicated in Figure 1, and these support elements are secured to the fabric by means of rivets 36, or similar fastening means, which extend through the eyes 30 and are inserted between the opposed edges of the folds.

In attaching the support elements to the drapery any suitable implement, such as a round-nosed punch 38, or the like, is forced between the opposed edges of the folds 20 and 22 to separate the edges at the desired location and form openings through which the rivets 36 may be inserted, without penetrating or perforating the fabric, or otherwise injuring the same, and the rivets may then be inserted through the eyes 30 of the support elements and through the openings 40, and set or crimped into binding engagement with the support elements and the fabric folds to securely attach the support elements to the drapery. The rivets 36 may be inserted through the openings 40 to secure the support elements to the fabric, without the use of any backing means, as illustrated in Figure 4, so that the folds of fabric are clamped between the crimped ends of the rivets and the corresponding eyes 30 of the support elements, or if desired a backing plate 42, such as that indicated in Figure 6, may be positioned inside of the portion 26 of the fabric, against the folds 20 and 22, and this backing plate may be provided with suitable openings 44, through which the rivets 36 may be extended, so that the rivets may be set or crimped into clamping engagement with the plate 42 and the eyes 30 of the support element to securely clamp the folds 20 and 22 between the plate and eyes, thereby securely attaching the supporting element to the fabric. The openings 44 in the plate 42 may be of any desired shape, and may be somewhat elongated, to allow for slight variations in the distances between the eyes 30 of the support element, or the openings 40, with which the openings 44 are brought into registration, in carrying out the method of attaching the elements to the fabric.

A somewhat different form of backing plate is illustrated in Figures 7 and 8, which take the form of a channel, whose bottom wall is provided with openings 44', similar to the openings 44 of the plate 42 previously described, and for the same purpose.

In this form of the invention, the channel 42' is positioned in the manner indicated in Figure 7, in contact with the folds 20 and 22 of the drapery, with the openings 44' in registration with the openings 40 between the opposed edges of the folds, and the rivets 36 are inserted through the eyes 30 of the support element and through the openings 40 and 44' and set or crimped into clamping engagement with the plate 42' and the eyes 30, to securely clamp the folds 20 and 22 and attach the support element to the article. When the channel backing plates 42' have been so attached to the drapery, the portion 26 of the same may be folded into the inside of the channel, as indicated in Figure 7, whereupon the opposite sides of the channel may be pinched together at some convenient location to securely hold the pleats in the folded condition illustrated in Figure 7, whereby it is unnecessary to sew or otherwise secure the pleats.

In carrying out the method of the invention the sewing of the folds 20 and 22 by the stitches 24 may be dispensed with, if desired, and the folds may merely be formed and held in position by any suitable means, not shown, with their edges in opposed parallel relation, and the support elements may be positioned on the folds, as indicated in Figure 3, and suitable securing means such as the round nosed rivets 36', may be pushed through the eyes and between the edges of the folds so that the rivets may be set or crimped in position, to clamp the folds together without the use of stitching or any other securing means. This method of making the drapery article may, of course, be carried out with or without any of the backing plates described, and in this manner and article of drapery may be formed entirely without sewing, thus accomplishing a great saving in time and labor and greatly reducing the cost of the manufacture of such articles.

By omitting the backing plate and the supporting element, the rivets may be employed alone, by extending them between the opposed parallel edges of the folds and crimping or setting them into clamping relation with the opposite sides of the folds as a method of and means for securing the folds together. Other suitable fastenings not shown, having means which may be brought into clamping relation with the opposite sides of the folds, may, of course, be used in place of the rivets 36 or 36', if desired, to secure the folds together with or without the use of the backing plate and the support element, or with the support element or backing plate alone.

In Figure 9 there is shown a combined support element and fastener unit, in which the support element having the eyes 30 connected by the shank 32 and formed with the hook portion 34, is provided with the rivets 36, or other suitable fastening means, which may be permanently attached to the element by clamping the eyes about the rivets, or by spot welding, or otherwise, to form a unitary structure which may be applied in the same manner as the support element previously described. By thus forming the support element and fastening means in a unit the cost of manufacture of the drapery article can be substantially reduced and a saving of time and labor effected.

It will be appreciated that any suitable means, such as an anvil and hammer, of any conventional type not shown, may be used for inserting and setting the rivets 36 or 36', so that the method of the invention may be carried out very economically, without the necessity of special tools of any kind.

It will thus be seen that the invention, as described above, provides an improved article of drapery, and a method of and means for manufacturing the same, whereby such articles may be easily and cheaply manufactured in great quantity, and sold at a substantial profit over similar articles manfactured by the use of the methods and means heretofore used for that purpose.

While the invention has been disclosed herein in connection with certain specific embodiments of the same, it will be understood that this is intended by way of illustration only, and that numerous changes can be made in the construction and arrangement of the various parts, without departing from the spirit of the invention or the scope of the appended claims.

Having thus clearly shown and described the invention what is claimed as new and desired to secure by Letters Patent is:

1. The method of making an article of drapery which comprises forming a piece of flexible fabric into folds, a portion of the fabric connecting said folds on one side of said piece, positioning the edges of the folds in opposing parallel relation, providing a channel shaped backing plate of deformable material having longitudinally spaced

openings in the bottom wall thereof and a support element having openings therethrough corresponding to the openings of the backing plate, positioning the outer face of the bottom wall of said backing plate in contact with said folds on one side of said piece, positioning one side of said support element in contact with the folds on the other side of said face, inserting deformable fastening means through corresponding openings in said plate and element and between said edges deforming said means into clamping engagement with the inner face of said bottom wall and with the other side of said element, folding said connecting portion into pleats, inserting said pleats between the sides of said plate and bending said sides inwardly into clamping engagement with said pleats.

2. The method of making an article of drapery which comprises stitching together two layers of flexible fabric, folding the layers of fabric along the line of stitching to form folds whose edges are positioned in opposed parallel relation, providing a channel shaped backing plate of deformable material having longitudinally spaced openings in the bottom wall thereof and a support element having openings therethrough corresponding to the openings of the backing plate, forming spaced apart openings between the stitches, between said edges, which are spaced apart at the same distance as the openings in said bottom wall and said element, positioning the outer face of the bottom wall of said backing plate in contact with said

folds on one side of said piece, positioning one side of said support element in contact with the folds on the other side of said piece, said openings in said bottom wall and said element being in registration with said openings between said stitches, inserting deformable fastening means through the corresponding openings in said plate and element and between the stitches, deforming said means into clamping engagement with the inner face of said bottom wall and with the other side of said element, inserting said connecting portion between the sides of said plate to form pleats in said connecting portion, and bending said sides inwardly into clamping engagement with said pleats.

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