

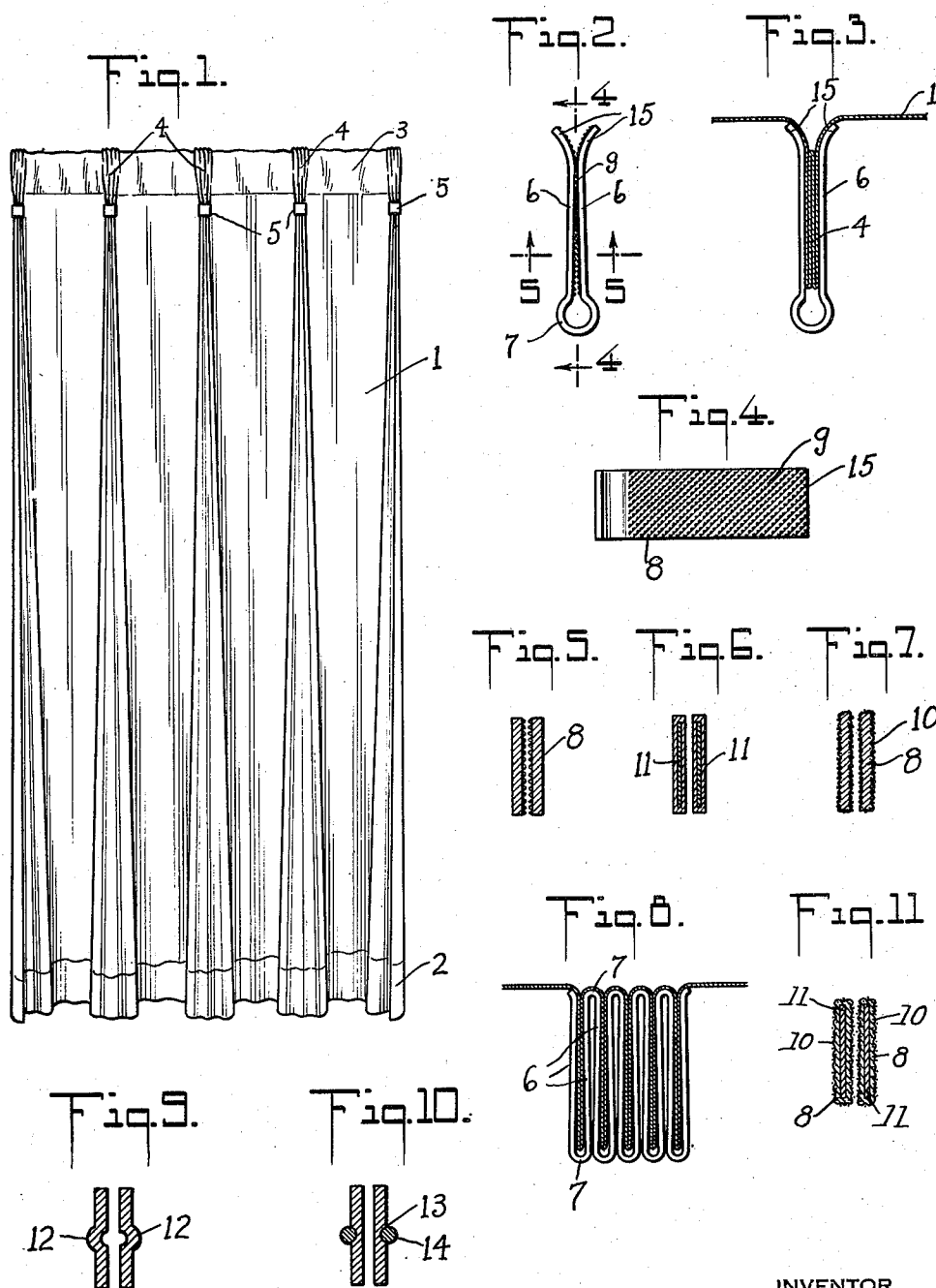
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DRAPERY CLIP

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## UNITED STATES PATENT OFFICE

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## DRAPERY CLIP

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This invention relates to an attachment for curtains, drapes, portieres and like hangings, which attachment is designed to hold pleats and folds in the hangings without requiring any stitching or other permanent fastening means.

An object of the invention is the production of an attachment for temporarily holding pleats and folds in curtains, drapes, etc. Another object of the invention is the production of pleated drapes in which the pleats may be readily changed at will, and which have no sewn pleats, thereby permitting easier laundering. Other objects of the invention will appear from the following detailed description and drawing.

In the drawing, wherein like reference numerals refer to the same or similar elements;

Fig. 1 is a perspective view of a curtain having folds held in place by a clip in accordance with this invention,

Fig. 2 is an elevational view of one form of a clip, made in accordance with this invention,

Fig. 3 is an elevational view, partially in section, of a section of a curtain held in the folded form by the clip,

Fig. 4 is a side view taken on the line 4—4 of Fig. 2,

Fig. 5 is a sectional view taken on the line 5—5 of Fig. 2,

Fig. 6 is a sectional view, similar to Fig. 5, of another form of the clip,

Fig. 7 is a sectional view, similar to Fig. 5, of still another form of the clip,

Fig. 8 is a plan view of a modified form of clip with a curtain held in place thereby,

Fig. 9 is a sectional view, similar to Fig. 5 of a corrugated clip,

Fig. 10 is a sectional view, similar to Fig. 5, of a clip having a metal reinforcing member surrounding the same, and

Fig. 11 is a sectional view of a modified form of my invention wherein the metal reinforcing member is embedded in plastic material and then covered with a fabric.

It has been customary to form drapery pleats for windows and displays by forming hems on the sheet material, then forming the folds, such as pleats, etc., and sewing these folds in place. I have now found that the folds may be held in place by means of clips in such a way that no sewn pleats are necessary. This means of temporarily holding the folds in place makes for easier laundering, no needle holes and ease in changing the type and number of folds at will.

In accordance with my invention, I retain in position folds, pleats, etc. in drapes, curtains,

portieres and like decorative and utilitarian hangings by means of a resilient clip. Also, in accordance with my invention, I produce a clip formed at least in part of a plastic material, which plastic material may be coated with suitable fabrics, or treated in other ways, for producing non-slipping surfaces. The clip may be reinforced, if desired, with metallic inserts, etc. to increase the resilience thereof.

This invention is adaptable to all types of hangings. It is particularly applicable to drapes for displays in store windows and booths where the drape design is changed periodically, say, weekly or semi-weekly. For instance, the folds of the drape may be readily changed to harmonize with furniture of any period. The material of the drape may be any suitable woven, knitted, netted or knotted textile material formed of filaments, fibres, ribbons, etc. of cotton, silk, linen, wool, artificial textile materials and the like.

This invention is also particularly applicable to the formation of drapes from non-fabric sheet material such as substantially continuous sheets of foil of regenerated or reconstituted cellulose (Cellophane), metallic foil, surfaced papers, such as parchment paper, crepe paper, glassine, etc. While such sheets are of sufficient strength to withstand normal handling, however, when they are sewn together to form drapes of the desired size or to form a hem on the drapes, the stitching punctures the sheets, thus weakening the same at the seams so that they are easily torn. The use of the clip as a holding means for non-textile sheet material is of advantage in that no stitching is required.

The invention will now be described with particular reference to the drawing. Referring to Figs. 1 and 3, there is shown a curtain formed of a sheet material 1. This sheet material may be any suitable fabric, or non-textile pliable sheet material such as foils, treated papers and the like. This sheet material may be formed with hems at the bottom 2, and at the top 3. It is preferable to place these hems in the sheet material by means such as is described in my co-pending application S. No. 45,891, filed October 21, 1935. However, when working with textile materials these hems may be placed in the material by means of stitches. A plurality of folds are placed in the sheet material as at 4. These folds are held in place by means of a clip 5. As will be obvious from the description of the clip given below, these clips may be employed to hold folds of any desired shape in the drapery.

Such folds may be, for example, French tri-pleats, box pleats and even accordion pleats.

The clip 5 is formed of two or more registering gripping fingers 6 which are forced toward each other by a resilient hinge 7 integral there-with and forming a substantially cylindrical member. The gripping fingers 6 and the hinge 7 may be formed of a continuous strip of thermo-plastic or thermosetting material 8, as shown in Figs. 4 and 5. The contacting faces 9 of the fingers may be scored for the purpose of more firmly gripping the material and preventing the material from slipping over the fingers. If desired, other means of preventing the slipping of the material retained in the fingers may be employed, such as that shown in Fig. 7 wherein a fabric 10 is coalesced into the thermoplastic material of the fingers 6 in such a manner as to leave the texture of the cloth on the outer surface substantially unmodified. The fabric 10 may be coalesced on to the thermoplastic material 8 by surrounding the fingers and, if desired, the hinge with the fabric and then subjecting the article to heat and pressure, preferably in the presence of a softening or swelling agent for the thermo-plastic material.

For the purpose of adding strength and resiliency to the hinge member 7 of the fingers 6, metal reinforcing members 11 in the form of a continuous metallic strip may be embedded in the thermoplastic or thermosetting material during the formation thereof. The clips may be made with a metal insert by molding the plastic material around the insert by any suitable method known in the art. Furthermore, a metal strip formed to shape, or prior to forming to shape, may be dipped into a solution of thermoplastic or thermosetting material in a volatile solvent. The dipping may be repeated any number of times to place upon the metal strip the desired thickness of the thermoplastic material.

As shown in Fig. 11, the thermoplastic or thermosetting material 8 surrounding the metallic strip 11 may be covered by a fabric 10.

In place of employing a metal reinforcing member, the drapery clip may be formed from a strip of thermoplastic or thermosetting material, as shown in Fig. 9, having corrugations 12 disposed in such a manner as to add strength to the hinge, or the plastic material may be grooved as at 13 in Fig. 10 and a metallic member 14 placed in the groove. In any form of the clip it is preferable to have the ends of the fingers 15 curved outwardly to facilitate the placing of the clip on the folds of the drape.

If desired, the clip may have more than two fingers, as shown at Fig. 8. In such a construction, each pair of fingers 6 is connected by a hinge 7. In this modified form of the invention, a clip having any number of fingers may be produced.

The fingers and hinges of the clip may be formed of any suitable resilient material. It is preferable, however, to form the same from thermoplastic materials, such as cellulose nitrate, organic esters of cellulose, mixed organic esters of cellulose, cellulose ethers, or ether-esters of cellulose. Examples of organic esters of cellulose are cellulose acetate, cellulose formate, cellulose propionate and cellulose butyrate, while an example of a mixed organic ester of cellulose is cellulose acetate-propionate. Examples of cellulose ethers are ethyl cellulose, methyl cellulose and benzyl cellulose, while an example of an ether-ester of cellulose is methyl cellulose acetate.

The fabric 10 used as a means of decoration and as a means of reducing the slipperiness of the fingers may be of any suitable fabric. For instance, it may be a fabric formed of threads or filaments of organic derivatives of cellulose or it may be a fabric of non-thermoplastic materials, such as linen, cotton, wool, etc.

The metal reinforcing members 11 and 14 may be of springy steel, brass, copper or other metal having a resiliency greater than that of the thermoplastic material.

The thermoplastic material may be made of a material to match or harmonize with the material employed in the drapes or it may be of a transparent glass color, or it may be white, black or variegated colors. The plastic material of the clip may be formed of a plurality of laminated sheets, some of said sheets differing in color transparency or design from others, thus producing pleasing ornamental patterns, designs, etc.

The plastic material may be extruded or formed into a strip having the general cross-section of that shown in Fig. 2 and then cut into sections, or the material may be cut into strips and then bent to the desired shape under the influence of heat.

Other methods of forming the clip may be employed.

It is to be understood that the foregoing detailed description is given merely by way of illustration and that many variations may be made therein without departing from the spirit of my invention.

Having described my invention, what I desire to secure by Letters Patent is:

1. A pleating clip for drapery and the like comprising at least two drapery engaging fingers and a resilient hinge continuous with said fingers, said fingers and hinge being made of a thermoplastic material, and the fingers being covered with a fabric made of a thermoplastic derivative of cellulose.

2. A pleating clip for drapery and the like comprising at least two drapery engaging fingers and a resilient hinge continuous with said fingers, said fingers and hinge being made of a thermoplastic material, and the fingers having fused thereon a fabric made of a thermoplastic derivative of cellulose.

3. A pleating clip for drapery and the like comprising at least two drapery engaging fingers and a resilient hinge continuous with said fingers, said fingers and hinge being made of a thermoplastic material, and the fingers being covered with a fabric made of cellulose acetate.

4. A pleating clip for drapery and the like comprising at least two drapery engaging fingers and a resilient hinge continuous with said fingers, said fingers and hinge being made of a thermoplastic material, and the fingers having fused thereon a fabric made of cellulose acetate.

5. A pleating clip for drapery and the like comprising at least two drapery engaging fingers and a resilient hinge continuous with said fingers, said fingers and hinge being made of cellulose acetate, and the fingers being covered with a fabric made of cellulose acetate.

6. A pleating clip for drapery and the like comprising at least two drapery engaging fingers and a resilient hinge continuous with said fingers, said fingers and hinge being made of cellulose acetate, and the fingers having fused thereon a fabric made of cellulose acetate.

7. A pleating clip for drapery and the like comprising at least two drapery engaging fingers and

a resilient hinge continuous with said fingers, said fingers and hinge being made of a metal strip embedded in a thermoplastic material, and the fingers being covered with a fabric made of a thermoplastic derivative of cellulose.

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8. A pleating clip for drapery and the like comprising at least two drapery engaging fingers

and a resilient hinge continuous with said fingers, said fingers and hinge being made of a metal strip embedded in a thermoplastic material, and the fingers having fused thereon a fabric made of a thermoplastic derivative of cellulose.

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