

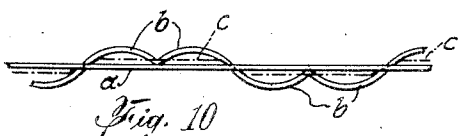
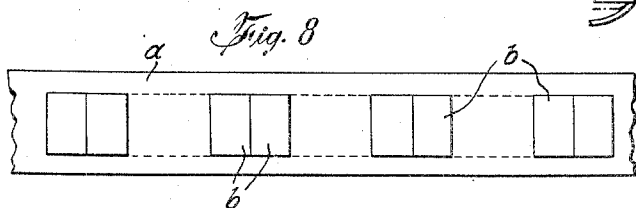
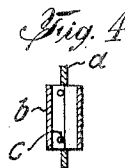
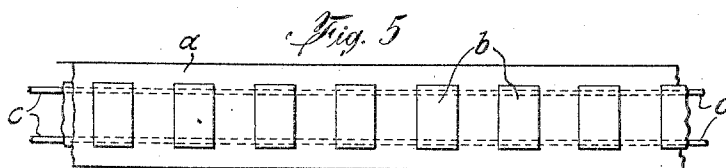
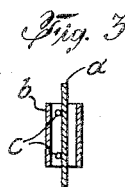
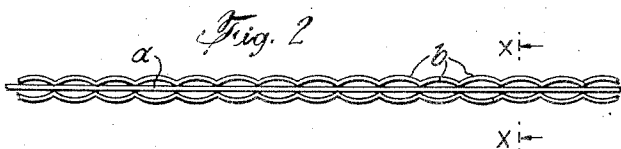
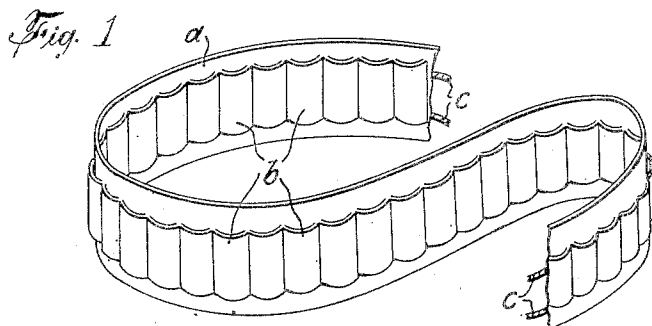
June 30, 1942.

G. F. FRENCH
CURTAIN HEADING TAPE

2,288,397

Filed Aug. 20, 1940

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

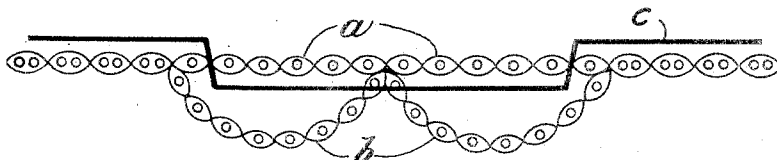
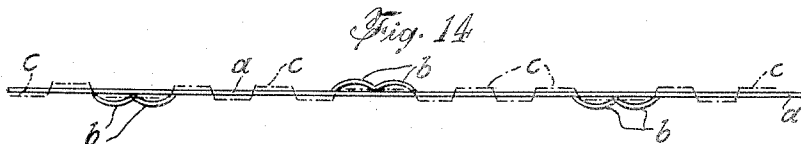
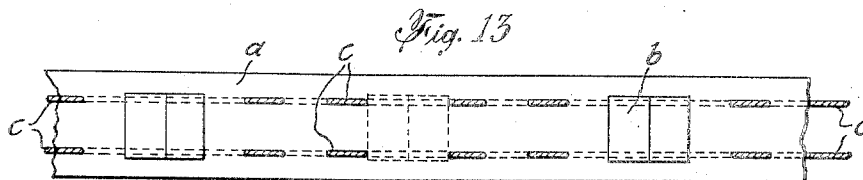
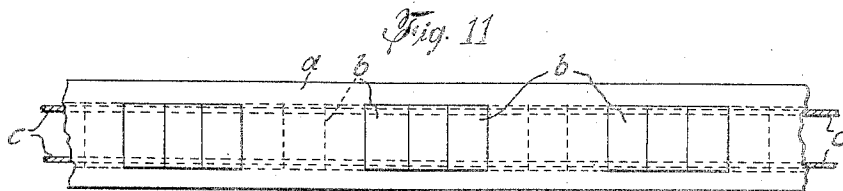


Fig. 18.

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2,288,397

CURTAIN HEADING TAPE

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Application August 20, 1940, Serial No. 353,430
 In Great Britain August 19, 1939

10 Claims. (Cl. 139—384)

This invention refers to curtain heading tape of the kind having open-ended hook tubes or loops joined or formed integrally with the tape, and for use in suspending curtains, with or without drawcords for pleating the curtains.

The main object of the invention is a curtain heading tape of the kind named which allows of its being applied to a curtain with either side next the curtain, and either way up, four ways in all. A further object is a tape which allows of easy pleating while affording the advantage of the pleats once formed not being easily disturbed. Another object is a method of weaving the tape which permits of ready production and preferably without flaws in the edges of the tape.

According to the invention, the improved tape comprises a main length of tape of the usual width, and a plurality of open-ended hook-tubes or loops on both sides of the said main length, the hook-tubes or loops lying side by side, or being arranged singly, or in groups, at spaced intervals, and that, or those on one side of the tape lying opposite that, or those on the opposite side, or opposite the intermediate plain parts on such other side, in some cases, a hook-tube or group of hook-tubes on one side of the tape starting where a like hook-tube, or group of hook-tubes finishes on the opposite side.

The tape will be single ply where the tape does not form a backing for a hook-tube or loop, and two or more ply where it does form a backing for a hook-tube or loop, according to the particular weave and disposition of the hook-tubes.

The tape will usually be provided with drawcords for pleating purposes, and such drawcords will either simply pass in and out of the selvages or margins of the tape, or, preferably, lie between the tape and the hook-tube straps so as to be out of sight, or nearly so, and not allow suspension hooks to engage the drawcords only, instead of engaging the hook-tubes. Alternatively, the drawcords could pass in and out of each hook-tube strap at two or more points and through the tape between successive hook-tubes.

In one example, the improved tape is formed with hook-tube straps on both sides, and lying contiguous or nearly so one with another. The tape may be formed of 3 ply in the centre, that is to say, so that the tape forms a back for the hook-tubes on each side, or the tape proper may only extend from the edges of the hook-tubes, so that the hook-tubes on one side are backed by those on the other side through openings on the tape.

In another example, the tape is formed with

a succession of hook-tube straps on each side, and lying at a distance apart equal to the length of a hook-tube strap, and those on one side opposite the spaces between those on the other side.

5 In this and the previous examples, the drawcords pass through the points in connection between the tape and the hook-tube straps.

In a further example, the hook-tube straps are arranged in groups of two, three or more, on one side of the tape, and in like or unlike groups on the opposite side, and either one group on each side could start where the next group on the other side finishes, or any other desired spacing such as opposite groups or single hook-tubes could be adopted. The groups of hook-tubes on each side of the tape may start at a distance beyond the finishing points of the groups of hook-tubes on the other side, the intermediate parts of the tape being left plain. Such plain part (i. e., where there are no hook-tubes) may be woven with a double weft in each warp shed, and thus expedite production.

The weaving of the improved tape and hook-tubes will be performed as a continuous operation preferably using two shuttles, one for the tape proper, and the other for the hook-tube straps, or by any other convenient method. In the case of the tape with hook-tubes (single, or in groups) on one side starting where those on the other side finish, all the warps used to form the hook-tube straps will pass through the tape proper or nearly so and form the front and rear hook-tube straps in turn, or some, or all of the strap warp threads may interchange with some tape warp threads. The tape will most conveniently be made in a two-shuttle loom, though it could be made with a single shuttle, with or without a back to the pockets or tubes.

In the case of the tape with groups of hook-tubes on opposite sides, the warps of the straps will be bound to the tape proper after each single hook-tube strap is formed.

Upon the accompanying drawing—

Fig. 1 illustrates, in perspective, a portion of one example of the improved curtain heading tape, folded upon itself in order to show the two opposite sides of the tape.

Fig. 2 illustrates a geometric plan or edge view of the same example of tape in the straight.

Fig. 3 illustrates a vertical cross-section of Fig. 2 on line X—X, and

Fig. 4 illustrates an alternative cross-section.

Fig. 5 illustrates a face view, and

Fig. 6 a plan or edge view of another example of the improved heading tape.

Fig. 7 illustrates an enlarged sectional plan of a portion of the tape shown in Figs. 5 and 6.

Fig. 8 illustrates a face view, and

Fig. 9 a plan or top edge view of a further example of the improved heading tape.

Fig. 10 is a plan view of a part of Fig. 9 drawn to a larger scale in order to illustrate the application of drawcords thereto.

Figs. 11, 12, 13 and 14 are face and top edge views respectively of further examples of the improved heading tape.

Figs. 15, 16 and 17 are face views of various examples of hook-tube straps that may be formed on each side of the tape, and

Fig. 18 is a cross-sectional view taken along the line 18—18 of Fig. 13.

Referring now to Figs. 1 and 2, the example of heading tape therein shown comprises a length of tape *a*, on both sides of which are formed hook-tube straps *b*, *b*, and those on each side lying contiguous or nearly so one with another. The hook-tubes are all one size, and those on one side of the tape lie opposite to those on the other side, see Fig. 2. As shown in Fig. 3, the tape and hook-tube straps will provide three thicknesses, the tape proper forming the back of each hook-tube. Alternatively, the tape may be woven so as to consist of marginal or selvedge portions only where each hook-tube comes as shown in Fig. 4, and those portions of the tape behind each hook-tube strap consist of weft threads only, the hook-tube strap on one side of the tape being virtually backed by the hook-tube strap on the other side.

The drawcords *c* when used may be threaded through the marginal parts of the tape, or they may pass between those parts of the tape enclosed by the hook-tubes, and the hook-tubes and also pass through the tape at the points where the hook-tubes are joined thereto.

In Figs. 5 and 6, the hook-tube straps *b*, *b* on each side of the tape *a* are spaced a distance apart equal to the length of a hook-tube strap, and those on one side lying opposite the spaces between those on the other side. The drawcords *c* will be applied to the tape in like manner to their application to the tape shown in Figs. 1 and 2, and as shown in Fig. 7.

In Figs. 8 and 9 the hook-tube straps *b*, *b*, are arranged in groups of two on one side of the tape, and in like groups on the opposite or reverse side of the tape, and where the groups on one side finish, the groups on the other side start. When drawcords *c* are used they may be applied as shown in Fig. 10.

Instead of groups of two hook-tube straps on each side of the tape, there may be groups of three hook-tube straps, *b*, *b* as shown in Figs. 11 and 12, and, instead of the hook-tube straps on one side starting where those on the other side finish, they may start at a distance beyond the finishing points of the groups of hook-tube straps on the other side, the intermediate parts of the tape being left plain, as shown in Figs. 13, 14 and 18. Such plain parts of the tape may be woven with two or more wefts in each warp shed and thereby expedite production. Of course, instead of there being like groups on each side of the tape, there may be unlike groups such as groups of two on one side and groups of three on the other side.

The manner of threading or passing the drawcords through the tape is preferably such as to cause a pleat to be formed where each single hook-tube comes, or where each group of hook-

tubes comes, and those on one side lying in a rearward pleat channel, and those on the opposite side lying in a forward pleat channel. Or, those on one side may lie on a rearward pleat ridge, and those on the other side lie on a forward pleat ridge. Again, some may be on a ridge and others in a channel. Where there is a length of tape between single hook-tubes or groups of tubes, this length could also be pleated, or pleating could be confined to such length.

By applying hook-tubes to both sides, the tape pleats regularly and evenly, and there is no tendency of the tape, when pleated, to curl lengthwise, as is the case with tape having the hook-tubes on one side only, a feature of importance in the correct pleating and supporting of curtains.

In all cases of a two-play tape, i. e., where each hook-tube has a back, the connections between the tape and a strap may extend the full width (height) of the strap, see Fig. 15, or a short distance from each, the top and bottom edges of the strap only, see Fig. 16, and in such latter event the tape will have a longitudinal channel or passage between the hook-tube straps and tape.

Instead of the hook-tube straps being connected for their full width (height) to the tape, they may be connected along the central parts only, and leave the top and bottom edges free, as shown in Fig. 17, such free edges facilitating the finding of the hook-tubes when requiring to insert the suspension hooks.

By means of the improved tape better pleating is obtainable, and with hook-tubes on both sides of the tape, and usable either way up, the possibility of the tape being wrongly fixed to a curtain is removed. Moreover, with the drawcords passing through the points where the tape and straps join each other, they, the drawcords, usually become nipped against the inner face of the strap by the suspension hook and thereby hold the pleats against disturbance.

The hook-tube straps may be of different colour from the tape, and those on one side may be a different colour from those on the other side.

What I claim is:

1. A curtain heading tape comprising a relatively long main tape of interwoven warp and weft threads and a series of small groups of open-ended hook-tubes woven of warp and weft and integrally with said main tape, an approximately equal number of the hook-tubes lying on each face of said main tape, said tubes alternating singly or in small groups on opposite sides of said tape, the adjacent hook-tubes being contiguous, the hook-tube straps being formed from a single undivided set of warp threads interwoven with said tape, whereby the tape may be applied to a curtain with either of its sides next the curtain, and either way up.

2. A curtain heading tape as claimed in claim 1, wherein the hook-tubes on one side of the tape start where the hook-tubes on the other side of the tape finish.

3. A curtain heading tape as claimed in claim 1, wherein the warps of the hook-tube straps on one side of the tape cross over and form the straps on the other side of the tape.

4. A curtain heading tape comprising a relatively long main tape of interwoven warp and weft threads and a series of small groups of open-ended hook-tubes woven of warp and weft and integrally with said main tape, and an approximately equal number of the hook-tubes

lying on each face of said main tape wherein single open-ended hook-tubes are formed on opposite sides of the tape, said tubes alternating singly or in small groups on opposite sides of said tape, those on one side lying opposite the intermediate plain parts of the other side of the tape.

5. A curtain heading tape comprising a relatively long main tape of interwoven warp and weft threads and a series of small groups of open-ended hook-tubes woven of warp and weft and integrally with said main tape, and an approximately equal number of the hook-tubes lying on each face of said main tape wherein spaced groups of open-ended hook-tubes are formed on opposite sides of the tape, said tubes alternating singly or in small groups on opposite sides of said tape, and those on one side lying opposite the intermediate plain parts of the other side of the tape.

6. A curtain heading tape comprising a relatively long main tape of interwoven warp and weft threads and a series of small groups of open-ended hook-tubes woven of warp and weft and integrally with said main tape, and an approximately equal number of the hook-tubes lying on each face of said main tape wherein open-ended hook-tubes each consisting of a strap and a portion of the tape proper, are formed on each side of the tape, said tubes alternating singly or in small groups on opposite sides of said tape, and wherein the hook-tube straps lie at spaced intervals apart, also wherein draw-cords pass through the tape and between the tape and the hook-tube straps and are thereby gripped by the tape and straps when the tape is pleated thereon.

7. A curtain heading tape comprising a relatively long main tape of interwoven warp and weft threads and a series of small groups of open-ended hook-tubes woven of warp and weft and integrally with said main tape, an approximately equal number of the hook-tubes lying on each face of said main tape, said tubes alternating singly or in small groups on opposite sides of said tape, said hook-tubes lying at spaced intervals apart and those on one side lying opposite the plain parts of the tape on the other side, and those parts of the tape between the hook-tubes being woven with multiple weft threads in each warp shed of the said intermediate parts.

8. A curtain heading tape comprising a rela-

tively long main tape of interwoven warp and weft threads and a series of small groups of open-ended hook-tubes woven of warp and weft and integrally with said main tape, an approximately equal number of the hook-tubes lying on each face of said main tape, said tubes alternating singly or in small groups on opposite sides of said tape, whereby the tape may be applied to a curtain with either of its sides next the curtain, and either way up, at least one hook-tube being formed from a set of warp threads woven with weft on one side of said tape, said warp threads then passing through said tape and woven with weft to form at least one hook-tube on the opposite side of said tape, said warp threads then again passing through said tape and repeating the cycle.

9. A curtain heading tape comprising a relatively long main tape of interwoven warp and weft threads and a series of small groups of open-ended hook-tubes woven of warp and weft and integrally with said main tape, an approximately equal number of the hook-tubes lying on each face of said main tape, said tubes alternating singly or in small groups on opposite sides of said tape, whereby the tape may be applied to a curtain with either of its sides next the curtain, and either way up, the hook-tubes on one side starting at a point beyond the finishing points of the hook-tubes on the other side, the intermediate parts of said tape being plain and being woven of warp and weft, there being at least two wefts in each shed in said intermediate parts.

10. A curtain heading tape comprising a relatively long main tape of interwoven warp and weft threads and a series of small groups of open-ended hook-tubes woven of warp and weft and integrally with said main tape, an approximately equal number of the hook-tubes lying on each face of said main tape, said tubes alternating singly or in small groups on opposite sides of said tape, whereby the tape may be applied to a curtain with either of its sides next the curtain, and either way up, the hook-tubes being contiguous on both sides of said tape, the hook-tubes being formed of two sets of warp woven with weft, one set forming the successive hook-tubes on one side of said tape and the other set forming the successive hook-tubes on the other side of said tape.

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