Feb. 24, 1953 A. McD. HESS 2,629,436

PLEATING TAPE FOR DRAPERIES

Filed July 22, 1948 2 SHEETS—SHEET 1

Fig. 1.

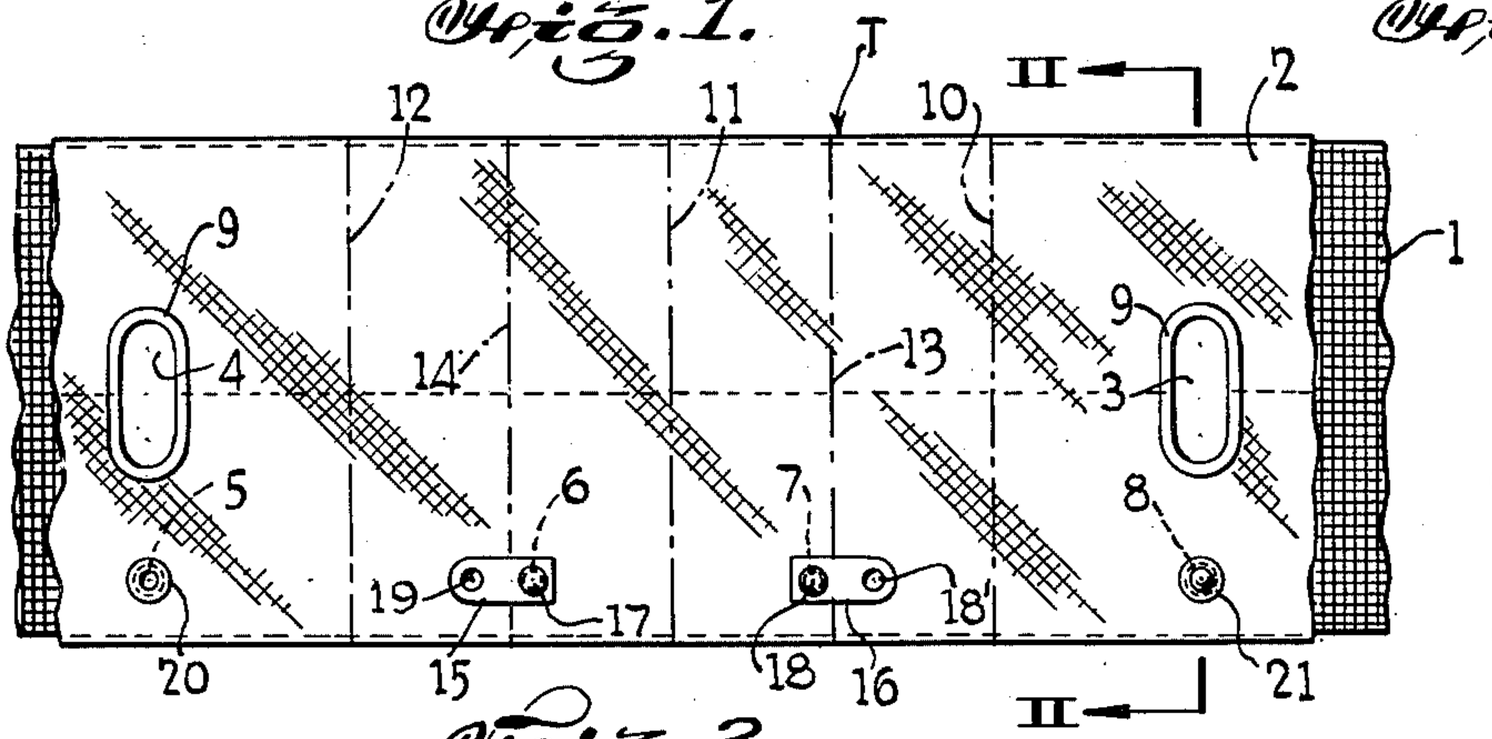

Fig. 2.

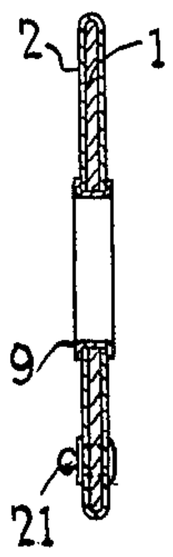

Fig. 3.

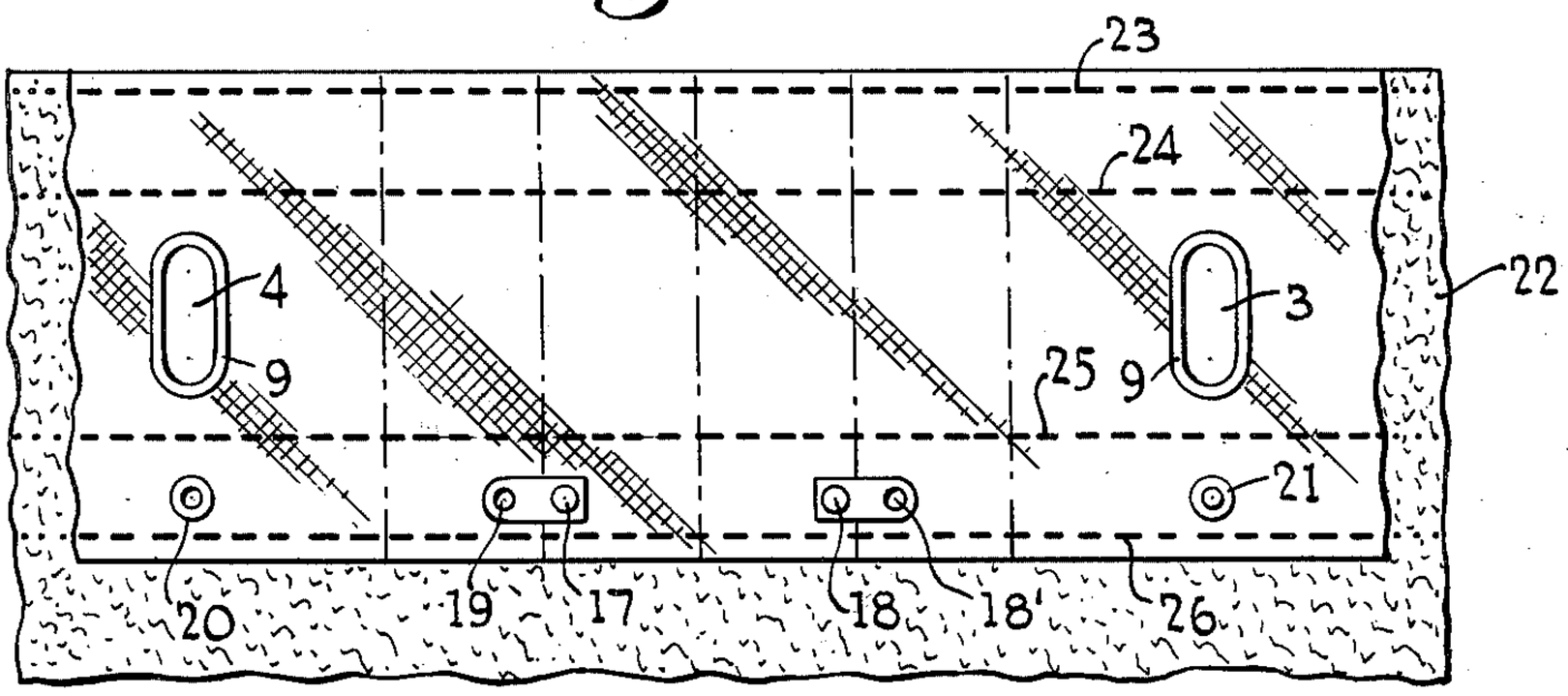

Fig. 4.

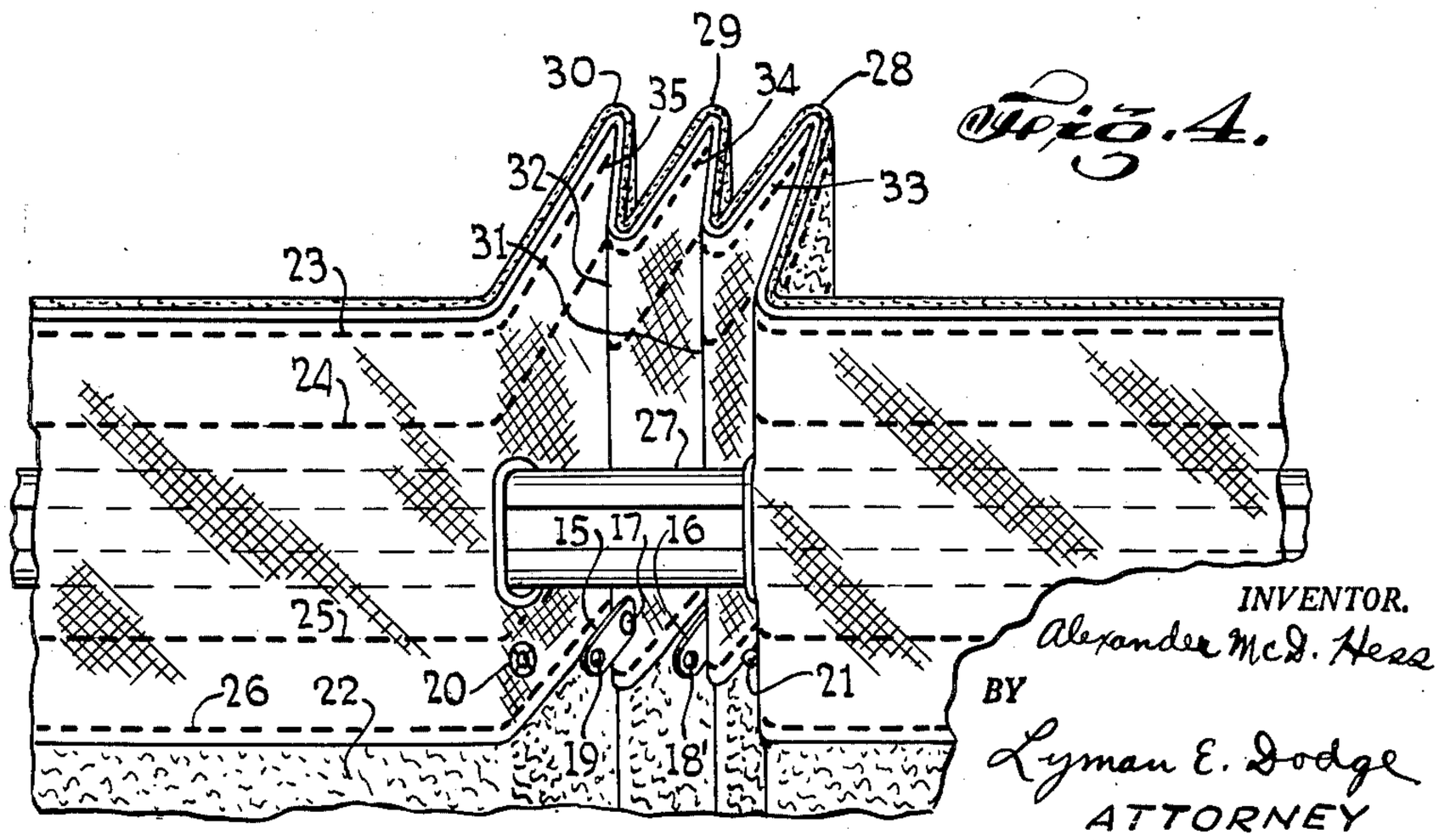

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Fig. 5.

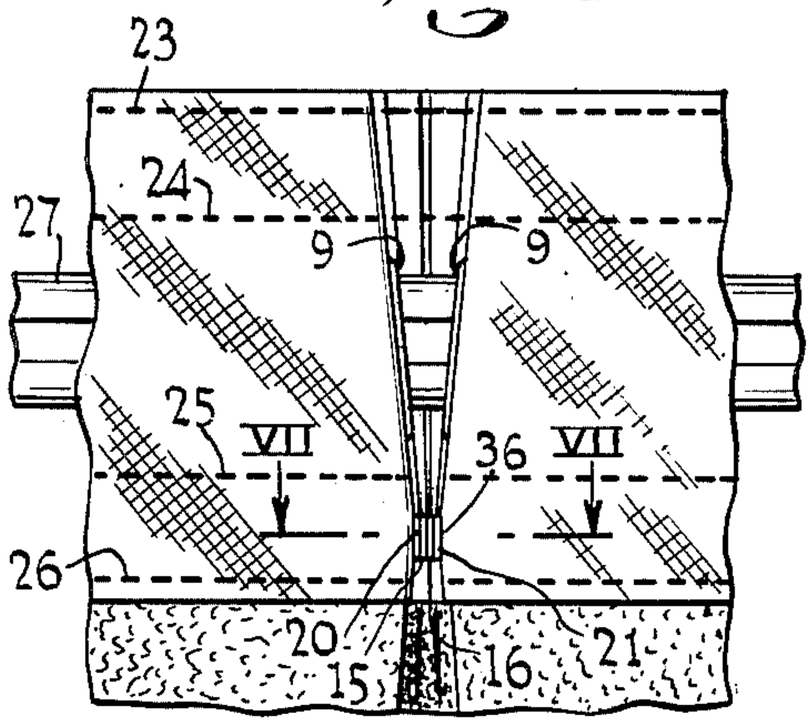


Fig. 6.

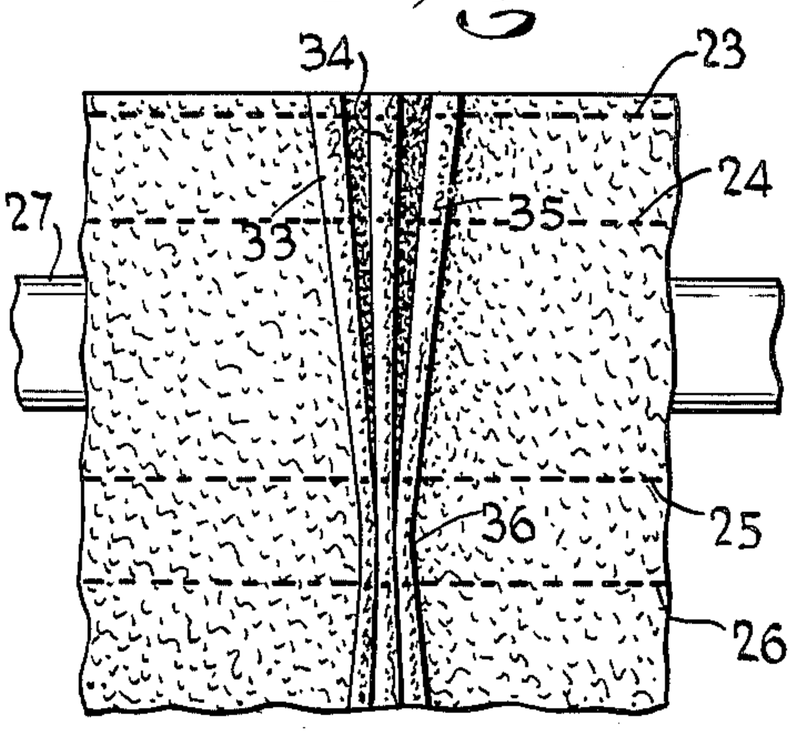


Fig. 7.

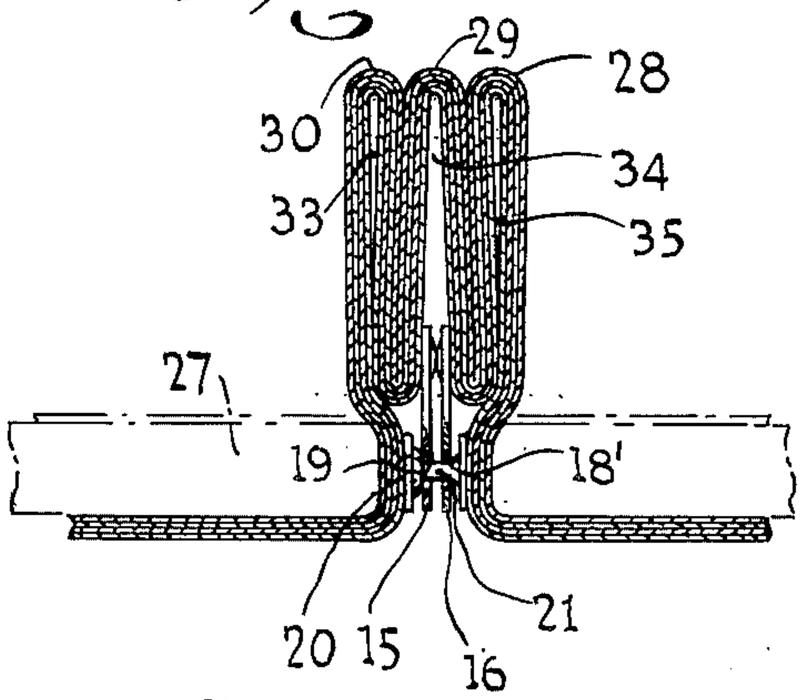
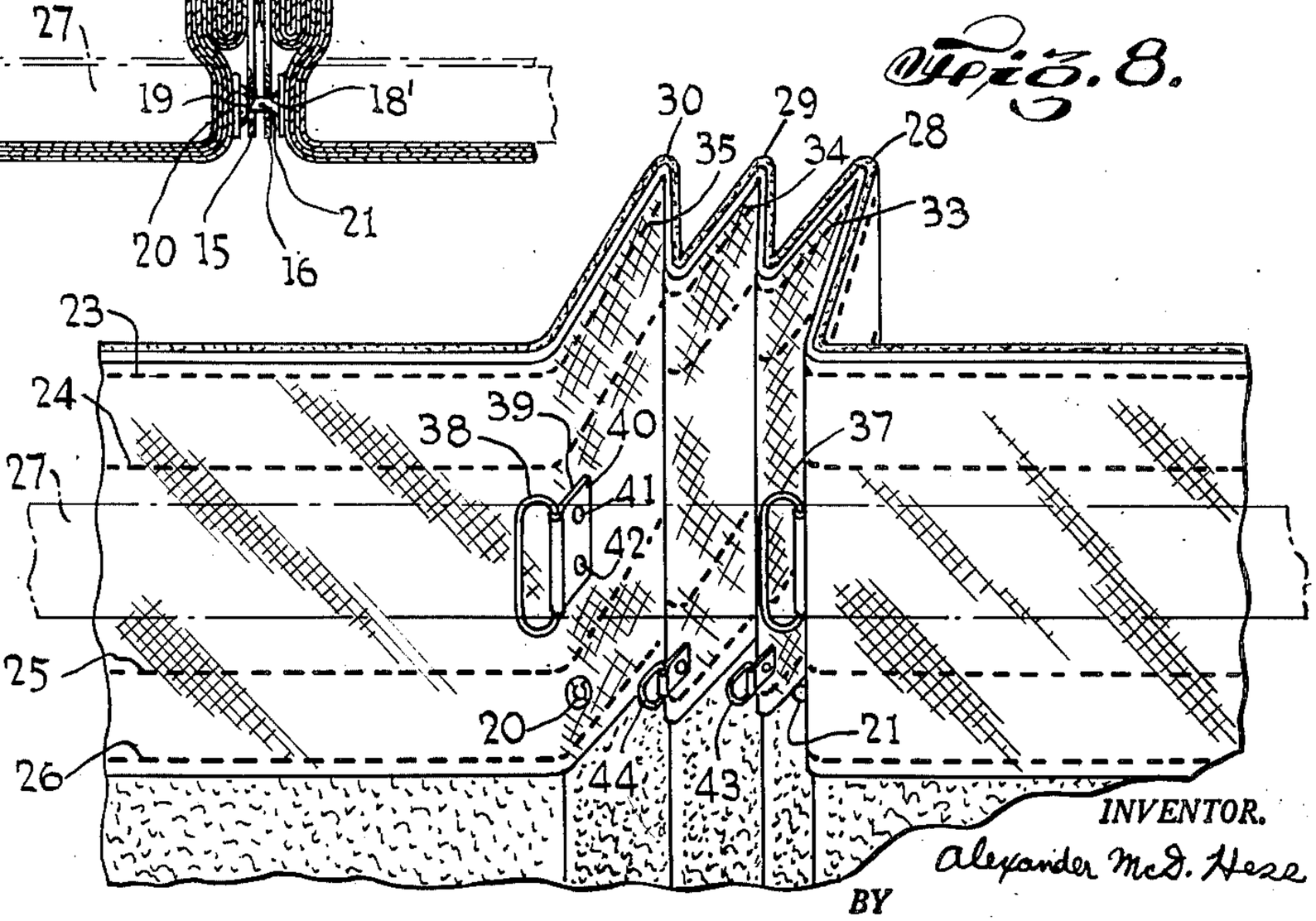


Fig. 8.



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Patented Feb. 24, 1953

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UNITED STATES PATENT OFFICE

2,629,436

PLEATING TAPE FOR DRAPERIES

Alexander McDonald Hess, New York, N. Y.

Application July 22, 1948, Serial No. 40,061

1 Claim. (Cl. 160—348)

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This invention relates to closures, particularly to flexible closures and more especially to the hanging or drape type.

A principal object of this invention is to provide a device which, when assembled, may be suitably attached to a desired drape material in a convenient way as by sewing or by the use of a heat sensitive adhesive and thereby produce a flexible hanging drape or closure which may be completed and the pleats pinched at the bottom to simulate a French pleat without the necessity for any manipulative skill whatsoever.

A further object of this invention is to produce a tape-like body provided with the necessary attachments which may be attached to drape material to form a closure of such form that the drape may be shipped flat or folded in wide folds, with no necessity of tissue paper or like substances to keep pleats from being crushed.

A further object of the invention is to provide a tape-like body with the necessary attachments which may be attached to a drape material to form a closure of such form and construction that after the drape has been completed and hung it may be unhung, spread out flat, dry-cleaned and pressed flat, and may then again be hung and the original pleats, simulating French pleats, formed therein by one having no manipulative skill whatsoever.

A further object of the invention is the provision of a tape-like body so constructed that it may be made inexpensively.

Other objects and advantages will appear as the description of the particular physical embodiment selected to illustrate the invention progresses and the novel features will be particularly pointed out in the appended claim.

In describing the invention in detail and the particular embodiment selected to illustrate the invention, reference will be had to the accompanying drawings and the several views thereon, in which like characters of reference designate like parts throughout the several views, and in which:

Figure 1 is a face view of a draping means or tape-like body formed in accordance with my invention; Fig. 2 is a cross sectional view of the device of Fig. 1 on the plane indicated by the line II—II, viewed in the direction of the arrows at the ends of the line; Fig. 3 is a rear face view of a drape material having my device of Fig. 1 attached thereto; Fig. 4 is a somewhat perspective view illustrating a preliminary step in the hanging of a drape such as that shown by Fig. 3; Fig. 5 is a further view illustrating the completion of the pleating of a drape of which Fig. 4 shows the initial step of hanging; Fig. 6 is a view of the front or face side of the drape of which the rear side is illustrated by Fig. 5; Fig. 7 is a cross sectional view of the device as shown by Fig. 5 on the plane indicated by the line VII—VII viewed in the direction of the arrows at the ends of the line; Fig. 8 is a view similar to Fig. 4 but showing modified forms of attachments.

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For many years attempts have been made by various manufacturers to provide the unskilled housewife with means whereby she could take a desired selected drape material and form of that drape material a closure of a desired size suitable and arranged for hanging on a rod or similar device and exhibiting a simulation of the well-known custom-made pinched French pleat effect.

My prior Patent No. 1,958,436, granted May 15, 1934, was one attempt to provide the housewife with means for forming a drape with pleated effect. This invention provided means whereby a housewife could make a single pleat at a definite position or a plurality of pleats at a definite position. This invention provided means for making a plurality of pleats at one position but provided no means for maintaining the pleats intermediate the end pleats in place. They could sag outwardly because there was nothing to hold them. Furthermore there was no provision to pinch the pleats at the lower portion thereof as is customary in the usual French pleats. Various expedients could be used by the housewife to make the pleats more closely approach the French pleat but this required a certain aesthetic eye and a certain manipulative skill not always possessed by the ordinary housewife.

My prior Patent No. 2,302,630, dated November 17, 1942, was a further approach to a solution of the problem. This invention provided a pleating tape which could be easily applied by the unskilled housewife to drape material. A plurality of pleats in accordance with the French pleat idea could easily be formed by the housewife with this tape. The intermediate pleats were held from falling out or sagging by straps. These straps were effective for the purpose designed, that is, to prevent sagging of the pleats, but, unfortunately, they also prevented the close approach of all the pleats one to another so that instead of the finished article simulating the French pleat with all the pleats closely together it was only a very rough approximation to the appearance of the French pleat. Furthermore there was nothing by which the pinched effect at the bottom of the pleat could be accomplished

unless the housewife used supplementary means and an aesthetic eye to sew or pin the lower portion of the pleats closely together. In order to do this she was hindered by the straps before mentioned.

At the present time, manufacturers provided with all the necessary gauges and skilled workmen, manufacture pleats exhibiting the true French pleating with the pinched effect. The great difficulty for the manufacturers is that in order to ship these drapes, so made, it is necessary to pack them singly, very carefully, meticulously, and using such material as crushed tissue paper to support the French pleats so that they will not be crushed. This necessity for carefully and expensively packaging the factory made French pleated drapes very largely increases their cost.

My present invention is designed to obviate the difficulties both of the housewife and of the manufacturer and to provide means for forming a flexible hanging drape as a closure highly useful both to the housewife and to the manufacturer. My invention will enable the ordinary housewife to perfectly simulate a drape with a French pleat and a pinched effect even if without any considerable manipulative skill. It will also enable the manufacturers to make a drape and ship it entirely flat or folded in large folds which, when received by the ultimate customer, may, without any manipulative skill whatsoever, be hung and formed into a drape exhibiting a perfect simulation of the French pleat with the pinched effect.

My aid to the housewife and to the manufacturer is shown in Figs. 1 and 2. Numeral 1 designates a suitable material of somewhat stiff properties. It may well be a textile material. It might well be a suitable thickness of buckram. This buckram is preferably covered with a more ornate or finish textile 2. This material 2 may be any material desired which will harmonize or match closely adjacent material of an intended drape. The material 2 covers one entire side of the base or core buckram 1 and is brought over the other side, preferably to a position where it will be engaged by other devices hereinafter described although it could be stopped a short distance from the top edge of the core 1 and attached in any suitable manner as by sewing or an adhesive.

After the covering or lining 2, if one is used, is in place on a long strip of the core 1, or is suitably fed thereto as strap 1 is advanced in manufacture, the finished material and the core 1 have orifices formed therein as at 3, 4, 5, 6, 7 and 8 which may be produced in any usual or ordinary manner as by punching or cutting. After the orifices 3 to 8 inclusive are formed, in each of the orifices 3 and 4 a grommet or eyelet is placed, such as 9. This annulus or grommet or eyelet may be of cord or plastic or metal and be suitably attached. I prefer to use a metal eyelet and upset the edge thereof. This eyelet being upset on both sides of the buckram 1, retains itself in place and being upset over the finish material 2, also retains that in place on both sides of the buckram or core 1. These grommets or eyelets 3 may be of any suitable or desired shape. I prefer a shape somewhat approximating an ellipse which would be suitable for receiving the usual curtain or drape hanging rod. The eyelets, as 3 and 4, would be positioned all along the length of the core 1. They would be in what might be called pairs. The distance between any two of a pair would be regulated by the number and dimensions of pleats to be formed between them. In Fig. 1, I have arranged the dimensions so that there would be apices of three pleats formed between eyelet 3 and eyelet 4. This conforms to ordinary custom. The space between 3 and 4 would be divided up as shown by the dot and dash lines so that an outer apex of a pleat would come on each of the lines 10, 11 and 12 and the inner apex of a pleat would come upon the lines 13 and 14. The distance between pairs would be governed by the distance one required between each group of pleats and would probably be more than the distance between 3 and 4.

At the hole 5, a receptacle 20 for a metal fastener would be positioned. At hole 8 a stud 21 for cooperation with the receptacle 20 would be positioned. The receptacle and stud would be attached in any usual or ordinary manner.

Just to one side of lines 13 and 14 on the inner side thereof the holes 6 and 7 would receive any suitable sort of fastener for attaching tabs 15 and 16. The rivets 17 and 18 could be put through each of these holes attaching the tabs 15 and 16 to the core 1. Each of the tabs 15 and 16 are formed with holes 18' and 19 through the other ends of such size that the stud in the hole 8 may pass therethrough.

The device, a fragment only of which is illustrated in Fig. 1, would probably be made in long lengths and could be cut transversely to the desired size. The desired size would be the width of the drape to be hung. Having secured a proper portion of the draping tape, designated as a whole by T, it is placed on any suitable drape material 22, as best shown in Fig. 3, and then attached thereto in any suitable or appropriate manner. I prefer to attach it by stitching as along the dash lines 23, 24, 25 and 26, but, if desired, the side of the tape next to the drape could be furnished with a heat sensitive or other adhesive so that the tape could be secured to the drape by merely passing a hot body, such as an iron, thereover while pressing tightly against the tape.

The drape material and the tape having been secured together, a suitable rod 27, as best shown in Fig. 4, is then passed through the eyelets, as 3 and 4, that is, looking at Fig. 3, the rod is passed under the right hand end of the tape between the tape and the drape and then through the orifice 3 and then on the side of the tape towards the viewer in Fig. 3 and then into and through the orifice 4 back of the tape and between the tape and the drape, that is, the rod would show at the back of the drape only at those positions where a pleat is formed, as well shown in Fig. 4.

In Fig. 4, the first step in forming the pleat is illustrated. The material both of the drape and the tape between the orifices 3 and 4, is gathered and folded so as to form three outer apices 28, 29 and 30 which will be exhibited in the finished article, when hung, on the front side, and two rear apices 31 and 32. The rear apices 31 and 32 will be folded along the lines 13 and 14 of Fig. 1 and will cause the tabs 15 and 16 to project as somewhat of a prolongation of the folds of the pleat. After all parts are in the position as shown in Fig. 4, the pleats 33, 34 and 35 are squeezed or pinched together at the lower portion thereof, as best shown in Fig. 5. This brings the tabs 15 and 16 right together and the stud 21 and the receptacle 20 close to the tabs, so that a very slight movement only is necessary to

push the stud 21 through the holes 17 and 18 of the tabs 15 and 16 and into the receptacle 20 thereby holding all parts in the close pinched together condition as shown in Figs. 5 and 7 and in front view of Fig. 6. The pleats 33, 34 and 35 will flare at the top, as shown in Fig. 6, and be pinched together at the base at 36, perfectly simulating the custom made pinched French pleat. The apices 31 and 32 of the pleats do not extend inwardly so far as to interfere with the connection of 20 and 21. They are just short of the rod 27, so that an unsightly bunched effect is not caused and the pinching at 36 may easily be done.

From the hereinbefore given description it will be understood that I have produced a device which may be placed in the hands of a housewife and even if the housewife is of very slight manipulative skill she may attach this tape to any suitably selected drape material and then, upon hanging the material as a drape, may form a tripple French pleat having the pinched effect as is usual. Furthermore if the drape becomes soiled, it may be removed from the rod, the stud 21 may be removed from receptacle 20 and the entire drape removed from the rod 27, then dry-cleaned and then ironed or smoothed flat. After being suitably reconditioned, the drape may be returned to position and the pleats formed therein just as before.

In the case of a manufacturer, drapes may be made up, using my tape, and the drapes, instead of being carefully and meticulously packed with tissue paper singly, may be placed with a plurality in one receptacle and shipped without fear of any damage to the pleats, thereby very largely decreasing the cost of packing and shipping the drapes and with assurance that no accident can happen which will militate against the forming of perfect French pleats by the ultimate customer.

Although I have suggested eyelets of the grommet form as suitable for the orifices 3 and 4 and tabs 15 and 16, preferably made of metal for attachment at the holes 17 and 18, nevertheless, I believe that the modified form shown in Fig. 8 has a very considerable merit. In Fig. 8 I have shown the rod receiving orifices as rings 37 and 38. These rings could well be made of metal or plastic or in fact any suitable or appropriate material. I prefer metal. The rings 37 and 38 are each attached or held between the two leaves 39 and 40 of an attaching means. The two leaves 39 and 40 may well be of metal. They could be of plastic. They are preferably attached by forming orifices through the core and finishing material and inserting pins only slightly longer than the thickness of the core as rivets 41 and 42 therein.

The modified form of tabs are very similar to the modified eyelets 37 and 38, that is, the tabs have small rings 43 and 44 which are held just like the rings 37 and 38 and may be attached in the same manner to the core 1. These rings 43 and 44 affords a passageway for the stud 21 to enter the receptacle 20.

The form of rod attachment shown in Fig. 8 is perhaps superior to the form shown in Fig. 1 in some respects, but the form in Fig. 1 has the virtue that when the rod is passed through the orifices 3 and 4 it virtually constrains the core 1 to diverge at substantially a right angle to the rod at both orifices so that it assists very greatly in forming the pleats 33 to 35 inclusive.

Although I have particularly described one particular physical embodiment of invention and explained the construction and principle thereof, nevertheless, I desire to have it understood that the form selected is merely illustrative, but does not exhaust the possible physical embodiments of the idea of means underlying my invention.

What I claim as new and desire to secure by Letters Patent is:

A pleating tape formed of a relatively stiff core material, a finish covering thereon and metal eyelets in pairs passing through both and securing both together, said eyelets of each pair being spaced apart a distance sufficient to leave material therebetween sufficient to form a plurality of pleats in a material to which the tape is attached, a fastener receptacle in line with the axis of one eyelet and a cooperating fastener stud in line with the axis of the other eyelet, the receptacle and stud being positioned to co-operatively engage when the material between the eyelets is pleated, tabs attached to the tape intermediate the fastener, each tab formed with a through hole through which the stud passes whereby pleats formed between the eyelets are prevented from sagging outwardly.

ALEXANDER McDONALD HESS.

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The following references are of record in the file of this patent:

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